







SONOMA DEVELOPMENTAL CENTER SPECIFIC PLAN

SDC SPECIFIC PLAN OUR VALLEY OUR FUTURE

Final Environmental Impact Report

SCH # 2022020222 | OCTOBER 2022

Sonoma Developmental Center Specific Plan

Final Environmental Impact Report

October 2022

Prepared for:
The County of Sonoma

Prepared by:

DYETT & BHATIA
Urban and Regional Planners

This page is intentionally left blank.

Table of Contents

1 Introduction 1-1
Purpose 1-1
CEQA Process 1-2
Modifications to the Proposed Plan 1-2
Validity of the EIR Analysis for the Modified Plan 1-11
Organization 1-13

2 Public Comments and Responses 2-1
Master Responses 2-1
Comments Received 2-25
Responses to Comments 2-36

3 Revisions to the Draft EIR 3-1
Project Description 3-1
Biological Resources 3-2
Cultural and Tribal Cultural Resources 3-9
Hazards and Hazardous Materials 3-9
Hydrology and Water Quality 3-10
Public Services and Recreation 3-10
Transportation 3-14
Utilities and Service Systems 3-14

This page is intentionally left blank.

1 Introduction

In accordance with the California Environmental Quality Act (CEQA), this document provides responses to comments received on the Draft Environmental Impact Report (Draft EIR) for the proposed Sonoma Developmental Center Specific Plan (Proposed Project) in Sonoma County, California, and it includes revisions to the text in the Draft EIR made in response to comments. The Draft EIR identified significant impacts associated with the Proposed Project and examined alternatives and proposed Standard Conditions of Approval that could avoid or reduce potential impacts.

This document will constitute the Final EIR if the Board of Supervisors certifies it as adequate and complete under CEQA.

Purpose

As described in Sections 15089 and 15132 of the State CEQA Guidelines, the lead agency must prepare a Final EIR before approving a project. The purpose of a Final EIR is to provide an opportunity for the lead agency to respond to comments made by the public and agencies. Pursuant to CEQA Guidelines Section 15132, a Final EIR must contain the following:

- The Draft EIR or a revision of the Draft;
- A list of persons, organizations, and public agencies commenting on the Draft EIR;
- Comments and recommendations received on the Draft EIR;
- The response of the Lead Agency to significant environmental points raised in the review process; and
- Any other information added by the Lead Agency.

The EIR is intended to disclose to Sonoma County decision makers, responsible agencies, organizations, and the general public the potential impacts of implementing the Proposed

Project using a program level of analysis. This Final EIR amends and incorporates by reference the Draft EIR, which is bound separately. As required under CEQA, this document includes comments and responses to comments on the Draft EIR, and minor corrections and clarifications to the Draft EIR.

The Final EIR and the Draft EIR are available for review at https://www.sdcspecificplan.com/documents.

CEQA Process

Sonoma County is the lead agency for this EIR. According to CEQA, lead agencies are required to consult with public agencies having jurisdiction over a Proposed Project, and to provide the general public with an opportunity to comment on the Draft EIR. The Draft EIR was made available for public review on August 10, 2022. The Draft EIR was distributed to local and State responsible and trustee agencies and the general public was advised of the availability of the Draft EIR through public notice published in the local newspaper and on the County's website and the project website as required by law.

Copies of all written comments received on the Draft EIR are contained in this document. These comments and responses to these comments are included in Chapter 2 of this Final EIR.

Modifications to the Proposed Plan

During the public comment period on the Draft EIR, which ran from August 10, 2022 through September 26, 2022, the County received feedback from residents, businesses, and property owners. Based on the input received and planning decisions recommended by Sonoma County staff, edits and additions proposed to be made to the Draft Specific Plan in response to comments received are shown on Table 1-1. Deletions are shown in ~~strikethrough~~ and additions are shown underlined in red.

Table 1-1: Edits and Additions to the Proposed Plan in Response to Public Comments

Chapter	Page	Edit
Entire Plan		Rename Fire House Commons to Sonoma House Commons Rename Eldridge North to Eldridge Place
Chapter 1	1-6	Revise Figure 1.1-3 in the preferred Specific Plan document so that it shows the Eldridge Cemetery in the correct location by the curve of Orchard Road near its base.
Chapter 2	2-8	The first known inhabitants of the Planning Area were Native American members of the Coast Miwok, and Pomo~~, and Winton~~ tribes, who intermingled in Sonoma Valley.
Chapter 2	2-9	2-1 Ensure that land shown In Figure 2.2-1 as Preserved Open Space is dedicated or maintained as permanent public open space, and the Managed Landscape/Fire Buffer is designed and maintained for that purpose. The owner/operator of the Preserved Open Space shall prepare an open space plan, to be approved by the County to manage the rich diversity of resources on site, including habitat, vegetation, wetlands, native species, and other critical resources, balanced with recreation and wildfire protection needs. As part of the open space plan development, conduct a formal aquatic resources delineation for habitat protection, and consider delineating a cohesive system of trails and pathways that balances recreation and wildlife conservation.
Chapter 2	2-9	2-4 Realign and upgrade the trails to improve the user experience and accessibility, including designated parking areas for trail users, while minimizing impacts to open space.
Chapter 2	2-10	2-6 Remove existing development along the north edge of the Core Campus, from area shown as Open Space in Core Area in Figure 2.2-1, and re-introduce compatible native species to expand the wildlife corridor. This includes removing existing buildings Paxton, Thompson/Bane, and Residence 126 and buildings on the northeast side of campus and ensuring that new development remains within the smaller development footprint as shown in Figure 2.2-1. Ensure that the wildlife corridor is not further restricted at its narrowest point along the north side of the campus. The project sponsor shall be responsible for demolishing buildings within the expanded wildlife corridor and establishing new planting and landscaping to support expanded

		wildlife movement and safety, prior to Certificate of Occupancy on any redevelopment on the eastside of Arnold Dr.
Chapter 2	2-11	2-13 Restrict access to the wildlife corridor and creek corridor to designated pedestrian paths marked with clear signage and delineated by strategic wildlife-permeable fencing. Do not construct new paths or recreational areas in the area where the wildlife corridor is narrowest between the Core Campus and Lake Suttonfield, with the exception of a permeable-surface pedestrian trail on one side of Sonoma Creek.
Chapter 2	2-11	2-16 All fencing within the open space must be wildlife permeable, with at least 18 inches of clearance between the ground and the bottom of the fence, and shall not cross or bisect streams or otherwise discourage wildlife movement. For any barbed wire fences, a smooth bottom wire at least 18 inches above the ground must be used, and the maximum height of the upper strand must be no higher than 48 inches.
Chapter 2	2-12	2-20 Require that the project sponsor work with an arborist to develop a tree planting plan that retains existing mature healthy trees and supplements the existing tree canopy with a diverse range of native and/or low water trees that provide shade and habitat. Locate new construction and public realm improvements around existing landscaping features that are retained.
Chapter 2	2-12	2-26 Prohibit the use of pesticides, rodenticides, and poisons in materials and procedures used in landscaping, construction, and site maintenance within the Planning Area, and require ongoing use of Integrated Pest Management site-wide. This restriction should be included in all Declarations of Covenants, Conditions and Restrictions (CC&Rs) to ensure that future homeowners are aware of the requirements.
Chapter 2	2-12	2-27 Ensure that all development adheres to Sonoma County Municipal Code Sec 26-65 on riparian corridor protection. Further, maintain and enhance connectivity between water features, including lakes, creeks, vernal pools, and intermittent streams, through vegetated native plant cover, absence of roads along the water features, ditches, and other barriers to water or animal movement, and absence of human presence. Maintain water-related features, including swales, intermittent drainages, and seasonal waterways as open-air channels and avoid undergrounding waterways whenever possible.
Chapter 2	2-13	2-31 Construct and maintain a managed landscape buffer along western and eastern edges of the Core Campus to aid in fire

		defense consisting of a shaded fuel break in wooded areas and grazed or mown grassland. Shrubs and chaparral should be limited within the managed landscape buffer. Management of this landscape buffer should aim to enhance biodiversity, reverse weed invasion, and protect water resources.
Chapter 2	2-15	2-37 Prohibit wooden fencing in the Planning Area. Encourage property owners to consult with CDFW, install wildlife friendly fencing, and provide for roadway undercrossings and oversized culverts and bridges to allow movement of terrestrial wildlife.
Chapter 2	2-17	2-J ~~Native People~~ Tribal Cultural Preservation: ~~Preserve the heritage and legacy of the native people in the area through land stewardship and preservation of cultural resources on the site.~~ Work in consultation with local tribes culturally and geographically associated with the planning area to protect and preserve cultural resources and Tribal Cultural Resources, both within the core campus and for activities within the open space.
Chapter 2	2-17	2-48 Provide resources and learning opportunities for residents and visitors about all phases of the history of the site. Materials should be accessible to all ages and abilities and could include posted signs, fliers, or informational sessions, among other things. Materials must be developed in coordination with local tribes culturally and geographically associated with the planning area.
Chapter 2	2-17	2-52 Develop a plan, in consultation with local tribes culturally and geographically associated with the planning area, to identify and manage cultural and tribal cultural resources (e.g., Cultural Resources Management Plan, cultural resource survey, treatment testing plan, etc.). Require any unanticipated discovery of archeological or paleontological resources to be evaluated by a qualified archeologist or paleontologist, in coordination with local tribes culturally and geographically associated with the planning area.
Chapter 2	2-18	2-55 Ensure that any future roadways or pathways built in the open space do not introduce lighting that would adversely impact wildlife.
Chapter 2	2-18	2-56 The owner(s) of the property shall collaborate in good faith with any surrounding properties to improve wildlife habitat and permeability across property boundaries, up to and including the eventual construction and maintenance of a wildlife overpass or underpass across Highway 12.

Chapter 2	2-18	2-57 Ensure that any agricultural use in the open space is limited to the historic agricultural area on the east side of the preserved open space area, and is focused on community gardening, education, or integrated with farm-to-table needs of SDC residents and businesses. Do not permit large-scale commercial agricultural uses.
Chapter 3	3-6	3-5 Reuse the existing street network to the greatest extent feasible. Improve multi-modal access from SDC to SR 12 by exploring the feasibility of providing an additional east-west ~~emergency access~~ connection from the site that includes high quality pedestrian and bicycle facilities. If the connection is planned as emergency evacuation only, it should be integrated with a permeable-surface bike route.
Chapter 3	3-11	3-27 Price off-street parking within the Core Campus to encourage alternative mode use. ~~Provide no free parking within campus.~~
Chapter 4	4-10	The Preserved Open Space designation is intended to preserve open spaces outside of the Core Campus for public use and benefit, including habitat, active and passive recreation and minor park amenities, ecological services and water resources, and limited agricultural use. This space also contains some infrastructure, including water infrastructure, that is important for the continued functioning of local water systems. Hotels, wineries, tasting rooms, commercial agriculture, concessions, residential uses, and other buildings for human occupancy, with the exception of utility or for firefighting, are not permitted.
Chapter 4	4-11	Table 4-1: SDC Specific Plan Land Use Density and Intensity Standards

Land Use Classification	Density Range (Units per Gross Acre)	Maximum Allowed Overall Average Floor Area Ratio	Maximum Allowed Floor Area Ratio by Site
Low/Medium Density Residential	6-14	0.5	1.0
Medium/Flex Density Residential	8-30	0.75	2.0
Employment Center	n/a	0.5	2.0
Flex Zone	8-30	1.0	2.0
Institutional	n/a	0.5	2.0
Utilities	n/a	1.0	2.0

Note: Maximum Allowed Overall Average FAR is calculated over the entirety of the core campus, while Maximum Allowed FAR by site is calculated on a site-by-site scale. For example, a new development in the Flex zone can have an FAR up to 2.0, but overall development in the Flex zone cannot exceed an FAR of 1.0.

Chapter 4	4-12	Notes on Table 4-2: 1. Up to 10% deviations from the minimum and maximum by district are subject to approval by the ~~Community Development Director~~ Planning Director.
Chapter 4	4-12	A footnote has been added to Table 4-2 of the Specific Plan, as follows. "This table provides a range for the total number of

housing units within each Specific Plan district to provide implementation flexibility. It is not anticipated that development would be built to the maximum of the range in every district. The total number of housing units anticipated under the Specific Plan is 1,000."

Chapter 4 4-13 Revised Table 4-3: Permitted Uses

Chapter 4 4-16 New Table 4-4: Project Specific Plan Buildout by Land Use and Size

Table 4-4: Projected Specific Plan Buildout

Land Use	Land Use Area (Acres)	Assumed Average Residential Density (du/acre)	Assumed Average Overall FAR	Non-Residential Development (sf)	Units
Low/Medium Density Residential	29	12	-	-	350
Medium/Flex Density Residential	23	24	-	-	560
Employment Center	16	-	0.3	190,000	-
Flex Zone	9	10	0.9	160,000	90
Institutional	3	-	0.3	40,000	-
Utilities	3	-	-	20,000	-
Active Open Space	11	-	-	-	-
Buffer Open Space	43	-	-	-	-
Other Core Campus Open Space	58	-	-	-	-
Preserved Open Space	750	-	-	-	-
Total	**945**	**-**	**-**	**410,000**	**1,000**

Chapter 4 4-21 Revised Figure 4.3-1 to improve map clarity.

Chapter 4 4-23 4-8 ~~Designate at least five parcels to build homes for persons with developmental disabilities, prioritizing parcels closer to open space areas.~~ Dedicate a total of five residential parcels for individuals with developmental disabilities within at least three of the five districts: Agrihood, Eldridge Place, Creek West, Core North or South. Parcels shall be identified as part of any future subdivision application. Exemptions to design standards may be required for personal safety of individuals with developmental disabilities.

Chapter 4 4-24 4-13 Sonoma County staff shall review all development to ensure consistency with the Specific Plan and all of the policies, conditions, and other requirements in the Specific Plan. To assist in this effort, the County shall prepare a checklist to be used for all proposed projects at the SDC site to ensure consistency with Plan policies and Supplemental Standard Conditions of Approval, as detailed in Appendix A. The

		Supplemental Standards of Approval should be updated by County staff over time to reflect changing conditions, new information, and compliance with changing local and State laws and guidelines.
Chapter 4	4-25	Policy 4-16 ~~Spread the inclusionary housing throughout the site and c~~Co-locate ~~with the~~ inclusionary and ~~-~~market-rate housing, rather than clustering inclusionary housing within one district. Inclusionary housing and market-rate housing should be fully integrated within the same buildings, but recognizing that financing for these may come from different pools, ensure that inclusionary housing is ~~built as~~ located in two or more ~~discrete~~ buildings. Regardless, ~~E~~ensure that inclusionary ~~and affordable units are~~ housing is integrated into the overall fabric of the community and has ~~ve similar~~ the same look and feel ~~to other new buildings on site~~ as market rate housing. Inclusionary housing units to be completed prior to or concurrently with completion of the market rate housing units.
Chapter 4	4-26	4-20 Preserve and reuse the two historically significant buildings, the Main Building (PEC) and the Sonoma House Complex, including its six support structures. When rehabilitation projects for these two individual historic resources or new work immediately adjacent to the historic resources are proposed, identify potential impacts to the historic resources.
Chapter 4	4-27	4-24 Preserve and reuse buildings at both the north and south terminus of Sonoma Avenue, including Wagner, Dunbar and Wright to the north, and ~~Walnut and~~ Hatch to the south.
Chapter 5	5-13	Revise Figure 5.3-2 to add a setback line along the west side of Arnold Drive.
Chapter 5	5-15	5-11 Sidewalks must have a six-foot minimum width; see Street Cross Sections Illustrations and Policy 5-15, below, for requirements for specific streets.
Chapter 5	5-23	5-K Arnold Drive Overlay: Along Arnold Drive, development should maintain the existing mature vegetation and trees, current building setbacks, and cottages on the western edge. Maintain a variety of building types and scales and views into the ballfield and other portions of the SDC site.
Chapter 5	6-10	6-12 Disconnect, abandon, replace or rehabilitate existing portions of the sewer system that has been determined deficient, based on the nature of the defect. Construct ~~of~~ new wastewater sewer laterals and mains (including the portion of building sewers extending to building envelopes of existing

		buildings to remain) as needed to reduce the inflow and infiltration to an acceptable level to meet SVCSD standards. ~~to meet Sonoma Valley County Sanitation District standards and maintain these pipelines and appurtenances to ensure that inflow and infiltration is not a problem for the SVCSD in the future.~~
Chapter 5	6-10	6-14 Continue to clean and video-inspect the existing sewer infrastructure that has not yet been inspected and could remain in service to mitigate sanitary sewer overflows, locate deficiencies, reduce inflow and infiltration and reduce leaks and contamination.
Chapter 7	7-2	As described in Policy 4-13, Sonoma County staff will review all proposed development to ensure consistency with the Specific Plan and all of its policies, conditions, and requirements prior to approval. This would include consistency checks for all Specific Plan policies such as number of preserved historic contributing resources, consistency with the overall development program, and provisions of wildlife corridor buffers and creekside setbacks. To assist in this effort, the County will prepare a checklist to be used for all proposed projects at the SDC site to ensure consistency with Plan policies and Supplemental Standard Conditions of Approval, as detailed in Appendix A. The Supplemental Standard Conditions of Approval will be updated by County staff over time to reflect changing conditions, new information, and compliance with changing local and State laws and guidelines. This Specific Plan is intended to supersede prior Local Guidelines (LG) within the Core Campus, as it represents a more tailored approach to standards for the type of land uses and development envisioned at SDC. Outside of the Core Campus, within the Preserved Open Space, the existing Taylor/Sonoma/Mayacamas Mountains (LG/MTN) Combining District LGs will remain in effect. A Design and Site Plan Review or Administrative Design and Site Plan Review Permit shall be required prior to construction permit issuance to implement the provisions of the Specific Plan. This design and site plan review requirement is in addition to any other required permits (Building Permit, Zoning Permit, Conditional Use Permit, Subdivision, etc.). The review authority shall be the highest review authority designated by Section 26-92-060 (Concurrent Processing of Related Applications). Where only a Building, Grading, or Drainage Permit is required, the Director shall be the review authority for the Administrative Design Review.

Appendix A	Rename Standard Conditions of Approval to "SDC Specific Plan Supplemental Conditions of Approval"
Appendix A	**GEO-4 Halt Work if Cultural Resources or Human Remains are Encountered and Evaluate ~~Resource~~.** Developers of projects in the Planning Area shall halt all work if cultural resources are encountered during excavation or construction of a project and retain a qualified archaeologist to evaluate and make recommendations for conservation and mitigation. The developer shall notify the Director, and the Director shall notify and provide an opportunity to consult to all tribes culturally and geographically associated with the planning area to aid in the evaluation, protection, and proper disposition of the resource. If human remains or suspected human remains are discovered, all ~~such~~ recommendations related to the discovery of human remains shall be in accordance with section 5097.98 of the California Public Resources Code, and section 7050.5 of the California Health and Safety Code, as applicable, to ensure proper disposition of the human remains or suspected human remains, including those identified to be Native American remains.
Appendix A	**GEO-5 Inadvertent Discovery Protocol**. In the event an archaeological resource is encountered during excavation or construction activities for projects within the Planning Area, the construction contractor shall halt construction within 50 feet of the find and immediately notify the ~~City~~ County. Construction activities shall be redirected and the project proponent shall, in consultation with the ~~City~~ County that must notify and provide an opportunity to consult to all tribes culturally and geographically associated with the planning area, retain a qualified professional archaeologist to 1) evaluate the archaeological resource to determine if it meets the CEQA definition of a historical or unique archaeological resource and 2) make recommendations about the treatment of the resource, as warranted.

Appendix A	**GEO-6 Conduct Cultural Resources Awareness Training.** Prior to the start of any ground disturbance or construction activities, developers of projects in the Planning Area shall retain a qualified professional archaeologist to conduct cultural resource awareness training for construction personnel. This training shall include an overview of what cultural resources are and why they are important, archaeological terms (such as site, feature, deposit), project site history, types of cultural resources likely to be uncovered during excavation, laws that protect cultural resources, and the unanticipated discovery protocol.
Appendix A	**GEO-7 Tribal Monitor and Consultation.** All local tribes culturally and geographically associated with the planning area ~~contacted per SB 18 and AB 52 must~~ shall be given the opportunity to monitor ground disturbance activities, including demolition, and must be consulted during Plan implementation in accordance with SB 18 and AB 52 ~~of the Proposed Plan~~.
Appendix A	**LU-3** i) A historical report shall be prepared, in consultation with local tribes culturally and geographically associated with the planning area, that provides a property description and summarizes the history of the SSHHD and its historical significance, and briefly describes each tribal cultural resource, contributing building and landscape feature. Documentation shall adhere to National Park Service standards for "short form" HABS/HALS documentation, and shall include the 2019 DPR forms as an appendix.

Validity of the EIR Analysis for the Modified Plan

The review process mandated by CEQA is iterative, including multiple opportunities for public comment and for project changes in response to those comments. It is not uncommon for a proposed project to evolve during the EIR process, so that the project presented at the time of the Draft EIR has been revised by the time of the Final EIR. CEQA Guidelines Section 15088.5 addresses this situation, explaining how to evaluate whether changes to the project/plan (and to the Draft EIR's analysis and conclusions) necessitate recirculation of the Draft EIR prior to preparation of a Final EIR.

Under CEQA, recirculation of a Draft EIR is required when there is significant new information about the project or its impacts. Significant new information means disclosure of either a new significant impact, a substantial increase in the severity of an impact (unless mitigation measures are adopted that reduce the impact to a level of insignificance), or a feasible alternative or mitigation measure considerably different from others already analyzed that would clearly lessen significant impacts of the project but that the project proponents decline to adopt. Recirculation is also required if a Draft EIR is so inadequate that meaningful public review and comment was precluded. However, recirculation is not required where the new information added to the EIR merely clarifies, amplifies or makes insignificant modifications to an adequate EIR.

In the current instance, the edits and additions to the Proposed Plan listed above in Table 1-1 and made as a result of comments received during the public review period do not constitute significant new information pursuant to Section 15088.5 of the CEQA Guidelines. All of the edits and additions listed are minor text edits and additions made to clarify or correct information in the Proposed Plan.

The following policies are newly added to the Draft Sonoma Developmental Center Specific Plan in response to public input:

2-55 Ensure that any future roadways or pathways built in the open space do not introduce lighting that would adversely impact wildlife.

2-56 The owner(s) of the property shall collaborate in good faith with any surrounding properties to improve wildlife habitat and permeability across property boundaries, up to and including the eventual construction and maintenance of a wildlife overpass or underpass across Highway 12.

2-57 Ensure that any agricultural use in the open space is limited to the historic agricultural area on the east side of the preserved open space area, and is focused on community gardening, education, or integrated with farm-to-table needs of SDC residents and businesses. Do not permit large-scale commercial agricultural uses.

Policies 2-55, 2-56, and 2-57 would further ensure that wildlife habitat, permeability, and designated open space would not be significantly impacted by future development. As such, the inclusion of these policy would not change the findings of the DEIR. Overall, the edits and additions to the Proposed Plan described above, together with the revisions to the Draft EIR detailed in Chapter 3 of this document, merely clarify, and make insignificant

changes to an adequate EIR. As a result of these changes, there would be no new significant or substantially more severe impacts or new mitigation measures that were not already included in the Draft EIR, and consequently recirculation of the Draft EIR is not required. Information presented in the Draft EIR and this document support this determination.

Organization

This document contains the following components:

- **Chapter 1 Introduction.** This chapter discusses the use and organization of the Final EIR.
- **Chapter 2 Public Comments and Responses.** Lists all of the agencies, organizations and individuals that submitted written comments on the Draft EIR; reproduces all comments; and provides a unique number for each comment in the page margin. Provides numbered responses to comments on the Draft EIR keyed to the comment letters, as well as revisions to the Draft EIR where necessary to clarify or amplify in the order that responses appear. Where such revisions are warranted in response to comments on the Draft EIR, deletions are shown in ~~strikethrough~~ and additions are shown underlined in red in the matrix of comments and responses.
- **Chapter 3 Revisions to the Draft EIR.** Provides errata with revisions to the Draft EIR where necessary to clarify or amplify. Revisions are organized by Draft EIR section and by page number. Where such revisions are warranted in response to comments on the Draft EIR, deletions are shown in ~~strikethrough~~ and additions are shown underlined in red in the matrix of comments and responses.

2 Public Comments and Responses

This chapter contains copies of the comment letters received on the Draft EIR during the public comment period, which began on August 10, 2022 and ended on September 26, 2022, as well as responses to comments that pertain to environmental issues and the merits of the analysis in the Draft EIR.

Master Responses

Numerous comments raised common concerns or questions that are most appropriately answered or clarified in one comprehensive or "master" response. For this Final EIR, the issues listed in Table 2-1 are addressed in Master Responses, lettered MR-1 to MR-9. The intent of the Master Responses is to give a single, comprehensive response to the recurring comments to improve readability of the document by avoiding repetition and multiple cross-references. Many of the individual responses refer back to these Master Responses.

Table 2-1: Master Response List

Master Response	Title	Page Number
MR-1	Adequacy of a self-mitigating Specific Plan	2-2
MR-2	Need for more time/selection of a developer before finalizing the Specific Plan	2-3
MR-3	Level of detail of analysis and programmatic nature of the Draft EIR	2-4
MR-4	Inadequacy or disagreement with wildfire evacuation analysis	2-6
MR-5	Lack of, or inadequacy of, or disagreement with water supply analysis	2-11

MR-6	Inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts	2-12
MR-7	Adequacy of impacts on wildlife movement or disagreement with analysis/findings	2-19
MR-8	Historic Preservation Alternative	2-20
MR-9	Mitigation Monitoring/Performance Standards	2-24

Master Response 1: Adequacy of a self-mitigating Specific Plan

The Specific Plan notes that "[t]he Proposed Plan aims to be self-mitigating. Thus, all proposed policies aim to address environmental impacts to the to the greatest extent feasible and no mitigation measures are required." (Footnote to table ES-2 [p. 39]; see also Section 2 [p. 51] and Section 5.3 [p. 605].)

A plan is self-mitigating if it has policies and programs included as part of the proponent's project designed to avoid or mitigate environmental impacts.

CEQA Guidelines Section 15126.4(a)(1)(A) notes that an EIR shall describe feasible measures which could minimize significant adverse impacts and that the discussion of mitigation measures shall distinguish between the measures which are proposed by project proponents to be included in the project and other measures proposed by the lead, responsible or trustee agency or other persons which are not included but the lead agency determines could reasonably be expected to reduce adverse impacts if required as conditions of approving the project.

Public Resources Code Section 21081.6(b) and CEQA Guidelines Section 15097(b) establish that when a project examined in an EIR is a plan (such as a Specific Plan), policy, regulation, or other public project, mitigation measures may be incorporated into the plan, policy, regulation, or project design.

The proposed Specific Plan and this EIR have been prepared concurrently, and the impacts analysis factors into policy development of the proposed Specific Plan such that the policies and programs of the proposed Specific Plan - included in the project by the County as the proponent - are designed to avoid or mitigate environmental impacts that would otherwise occur without the added policies or programs. This EIR demonstrates how the impacts of future development in the Planning Area will be reduced or avoided

through implementation of the policies and programs incorporated into the proposed Specific Plan as features of the project itself and identifies any residual impact after implementation of these proposed policies and programs, measured against the significance criteria established for each impact area. As such, the Specific Plan is considered self-mitigating due to the project components/design features. These Specific Plan policies and programs that avoid or mitigate environmental impacts are fully enforceable.

Furthermore, the Specific Plan policies require compliance with applicable regulatory standards which in some instance provides for avoidance or lessening of potential impacts. Compliance with established regulatory requirements and standards is a legitimate basis for determining that the project will not have a significant environmental impact. (*See Oakland Heritage All. v. City of Oakland*, 195 Cal. App. 4th 884, 904 (2011).

As stated above, the Specific Plan has been developed to be self-mitigating in that the policies and programs are designed to protect, preserve and enhance the environment and environmental resources. The Specific Plan does not approve any specific development. As a result, with the implementation of policies identified in the project, the impacts solely on the basis of implementation of the proposed Specific Plan are limited as described therein. The Specific Plan includes Standard Conditions of Approval as environmental mitigations that will be applied to all future development within the Planning Area further avoiding and lessening impacts of future potential development in the planning area.

Master Response 2: Need for more time/selection of a developer before finalizing the Specific Plan

In light of the statewide affordable housing crisis, State law stipulates that the SDC Specific Plan prioritize housing, especially affordable housing and housing for individuals with developmental disabilities per Government Code Section 14670.10.5. The legislation also acknowledges the importance of the significant open space areas of the SDC site and requires permanent protection of the SDC site's open space and natural resources to the greatest extent feasible. State law seeks to achieve these objectives while retaining flexibility in its actions, including through "...sale, lease, exchange, or other transfer" of the property to achieve the desired outcomes, and directs the Director of the California Department of General Services (DGS) that, "A transfer, sale, or final disposition of any portion of the property or property interest authorized pursuant to this section shall not

occur until the director has determined that the county has granted necessary approvals to rezone the property, approved a specific plan or plans for the property, and approved any necessary development agreements needed for disposition of all or any portion of the property, or the director has determined that the transfer, sale, or final disposition is in the best interests of the state."

Government Code Section 14670.10.5 authorized DGS to enter into an agreement with the County ("Land Use Planning Agreement") for the County to develop a specific plan for the property and manage the land use planning process, integrated with a disposition process for the property to be carried out by DGS. This Land Use Planning Agreement allocated a $3.5 million budget to assist the County in expediting its planning of future land uses for the site to reduce the adverse impacts of closure to the community and avoid added costs resulting from delays in repurposing the Subject Property. As stated in Government Code Section 14670.10.5, "the planning and disposition process is expected to be of a three-year duration."

In December 2019, DGS and the County finalized the three-year agreement for the County to develop a Specific Plan and related Environmental Impact Report (EIR), complete technical studies, and provide for robust community engagement in land use planning to facilitate disposition of the property as contemplated by the Authorizing Statute. Therefore, pursuant to the State legislature, the SDC Specific Plan and EIR must be developed and approved by the County before the end of 2022 and integrated with the disposition of the property.

Master Response 3: Level of detail of analysis and programmatic nature of the Draft EIR

The SDC Specific Plan EIR is a program EIR, defined in Section 15168 of the CEQA Guidelines as: "[An EIR addressing a] series of actions that can be characterized as one large project and are related either: (1) Geographically; (2) A[s] logical parts in the chain of contemplated actions; (3) In connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental impacts which can be mitigated in similar ways."

The CEQA Guidelines in Section 15618 further provide a discussion of the advantages of a program EIR, the use with later activities, use with subsequent EIRs and negative declarations, and noticing for later activities:

Advantages. Use of a program EIR can provide the following advantages. The program EIR can: (1) Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action; (2) Ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis, (3) Avoid duplicative reconsideration of basic policy considerations, (4) Allow the Lead Agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts, and (5) Allow reduction in paperwork.

Use with Later Activities. Subsequent activities in the program must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared. (1) If a later activity would have effects that were not examined in the program EIR, a new Initial Study would need to be prepared leading to either an EIR or a Negative Declaration. (2) If the agency finds that pursuant to Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR, and no new environmental document would be required. (3) An agency shall incorporate feasible mitigation measures and alternatives developed in the program EIR into subsequent actions in the program. (4) Where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR. (5) A program EIR will be most helpful in dealing with subsequent activities if it deals with the effects of the program as specifically and comprehensively as possible. With a good and detailed analysis of the program, many subsequent activities could be found to be within the scope of the project described in the program EIR, and no further environmental documents would be required.

Use with Subsequent EIRs and Negative Declarations. A program EIR can be used to simplify the task of preparing environmental documents on later parts of the program. The program EIR can: (1) Provide the basis in an Initial Study for determining whether the later activity may have any significant effects; (2) Be incorporated by reference to deal with regional influences, secondary effects, cumulative impacts, broad alternatives, and other factors that apply to the program as a whole. (3) Focus an EIR on a subsequent project to permit discussion solely of new effects which had not been considered before.

Notice with Later Activities. When a law other than CEQA requires public notice when the agency later proposes to carry out or approve an activity within the program and to rely on the program EIR for CEQA compliance, the notice for the activity shall include a statement that: (1) This activity is within the scope of the

> program approved earlier, and (2) The program EIR adequately describes the activity for the purposes of CEQA.

A program EIR differs from a project EIR, which is the most common type of EIR and which examines the environmental impacts of a specific development project. A project EIR "should focus primarily on the changes in the environment that would result from the development project [and] examine all phases of the project including planning, construction, and operation." (CEQA Guidelines, Section 15161; *In re Bay Delta etc.* (2008) 43 Cal.4th 1143, 1169.)

A program EIR can be used as the basic general environmental assessment for an overall program of projects such as the SDC specific Plan intended to be developed over a 20-year planning horizon. A program EIR has several advantages. First, it provides a basic reference document to avoid unnecessary repetition of facts or analysis in subsequent project-specific assessments. Second, it allows the lead agency to look at the broad, regional impacts of a program of actions before its adoption and eliminates redundant or contradictory approaches to the consideration of regional and cumulative effects.

As a programmatic document, this EIR presents a comprehensive assessment of the potential impacts of the proposed SDC Specific Plan. It does not assess project-specific impacts of potential future projects under the proposed Plan, all of which are required to comply with CEQA as applicable.

As a program EIR, the preparation of this document does not relieve the sponsors of specific projects from the responsibility of complying with the requirements of CEQA. As noted, individual projects are required to prepare more precise, project-level analyses to fulfill CEQA requirements. The lead agency responsible for reviewing these projects shall determine the level of review needed, and the scope of that analysis will depend on the specifics of the particular project. These projects may, however, use the discussion of impacts in this EIR as a basis of their assessment of these regional, sitewide, or cumulative impacts. Appendix A of the Specific Plan also lays out standard conditions of approvals that would apply to all projects based on Specific Plan policies and CEQA analysis, regardless of whether subsequent environmental analysis is conducted or not.

Master Response 4: Inadequacy or disagreement with wildfire evacuation analysis

Numerous comments concerned the adequacy of the Draft EIR in assessing the potential impacts associated with wildfire evacuation travel times on development that would occur with implementation of the Specific Plan. Several comments call for the revision of wildfire evacuation impacts to reflect on-the-ground experiences during previous wildfires

when commenters said they experienced delays and new CAL FIRE Fire Hazard Severity Zone maps.

Sonoma County has experienced previous wildfires that have required evacuation. The Tubbs Fire of 2017 destroyed 5,600 structures and killed 22 people, with much of the devastation centered in Santa Rosa. The Nuns Fire of 2017 originated near Glen Ellen and resulted in evacuation of that area. The Kincade fire of 2019 consumed nearly 80,000 acres in Sonoma and Napa and led to the displacement of an unprecedented 190,000 persons. In many respects, this level of evacuation caught Sonoma County and other agencies and the community unprepared, with lack of defined evacuation zones and confusion between similar sounding street names. Following these fires, several actions have been taken to ensure more planned and orderly evacuation. This includes, for example, better readiness and coordination protocols, wildfire cameras to detect fires, and collaboration by the County and its nine cities in developing and in 2021 finalizing a map that divides each jurisdiction into formally defined, labeled tracts intended to expedite evacuation notices and public action in the event of wildfires or other crises. Some of these efforts were evident during the Glass Fire of 2020, where greater community preparedness resulted in smoother evacuation, and no one was killed. However, the trauma and difficulties in evacuation in previous fires remain etched in people's minds.

For the Draft EIR, an analysis of evacuation travel times in the Planning Area was conducted for conditions without and with the Specific Plan by an expert transportation engineering and planning firm in this field, Kittelson & Associates.

As further described under Impact 3.16-1 on page 512, the analysis used estimates of traffic generated by land uses and tracks traffic volumes relative to road capacities to calculate the associated levels of congestion and congested speeds. The analysis also includes tabulations of housing and employment in each part of Sonoma County, compiled by transportation analysis zones (TAZs).

Two potential fire scenarios were considered as illustrated on pages 513 and 514 in the Draft EIR:

- From the northeast, first approaching Kenwood and Glen Ellen
- From the southeast, first approaching Sonoma and Boyes Hot Springs

These fire scenarios were selected as representative of the most likely potential fires to impact Sonoma Valley given the valley's previous fire history and considering such variables including but not limited to wind speeds, direction, humidity, topography, and

rate of advancement. As identified in collaboration with the Sonoma Valley Fire District and other local officials, these scenarios represent a worst-case scenario through their impacts on the broader community and traffic congestion.

Evacuation patterns for each of the fire scenarios were provided by the Sonoma Valley Fire District and the Sonoma County Emergency Management Department. The evacuation patterns noted which Sonoma County evacuation zones would be under Evacuation Orders or Evacuation Warning during each hour after identification of fire conditions. The percentages of residents and employees who would evacuate under each condition were derived from a study on surveyed resident behavior during recent wildfires.

Four representative portions of the Planning Area were selected to measure potential evacuation time impacts:

- Glen Ellen
- Madrone/Proposed Plan area
- Boyes Hot Springs
- Sonoma Plaza

For each of the two fire scenarios, representative evacuation destinations were selected based on input from Sonoma County staff and locations used as evacuation centers during the 2019 Kincade Fire. For Scenario 1 Northeast, the representative destinations would be the Sears Point race-track to the southwest and various locations in the City of Napa to the east. For Scenario 2 Southeast, the representative destinations would be the Sonoma County Fairgrounds in Santa Rosa to the northwest and various locations in the City of Petaluma to the west.

The peak hour evacuation traffic was calculated for TAZs under evacuation orders or warnings, and this traffic was added to the typical weekday PM peak hour traffic already represented in the traffic model. For the TAZs under evacuation orders or warnings, it was assumed that 75 percent of typical weekday activity would not occur at the same time. The traffic volumes on each road segment were evaluated for level of congestion for three conditions:

- Typical weekday PM peak hour, no evacuation
- Peak hour with evacuation, no Proposed Plan
- Peak hour with evacuation, plus Proposed Plan

Travel times for the evacuation areas were measured from the origin TAZ to the first TAZ along the route to the evacuation destination that would be out of the potential evacuation area (areas that would be under evacuation orders or warnings during any hour). This travel time represents the time for residents and employees to reach safe conditions, even if there may be additional time required to reach the ultimate evacuation destination. See Table 3.16-1 on page 517 for travel time results.

The Draft EIR evacuation analysis is adequate; it incorporates evacuation patterns from recent wildfires through coordination with local officials as well as the most recent CAL FIRE Fire Hazard Severity Zone maps. Evacuation traffic with the Proposed Plan would increase travel times to most destinations, particularly towards the City of Napa. Evacuation traffic added by the Proposed Plan would increase travel times to areas beyond the evacuation areas by up to 1.2 minutes and by up to five percent, although the average increase will be 0.2 minutes (less than 15 seconds) and one percent.

The Proposed Plan would reduce some travel times from the Madrone/Proposed Plan area due to the planned additional connection to SR 12. The proposed project multimodal connection to SR 12 would provide an additional route for project traffic to evacuate the project site. This would reduce potential project traffic impacts on Arnold Drive which is generally a lower capacity road than State Highway 12 due to local driveway access. The two access routes would provide options and flexibility in evacuation routing in the event that one of the roads is blocked due to fire or traffic incidents. The estimated changes in travel times caused by the Proposed Plan would not require changes in current evacuation routes or plans. Thus, implementation of the Proposed Plan would not impair an emergency response or emergency evacuation plan and impacts would be less than significant.

See the following table that details evacuation times without the SR 12 connector. The primary difference would be for evacuation from the Madrone area and SDC project area. Without the connector, evacuation times would be one to three minutes longer. The elimination of the connector would very slightly increase evacuation times for other areas, generally by less than half a minute. The elimination of the connector would slightly improve evacuation times for some origin-destination pairs that use SR 12, as SDC project traffic would not be using as much capacity on SR 12. Examples are Scenario 1 Glen Ellen towards Sears Point and Scenario 2 Boyes Hot Springs to Santa Rosa.

Evacuation Area	*Travel Time: No Evacuation (minutes)*	*Travel Time: Evacuation without Proposed Plan (minutes)*	*Travel Time: Evacuation with Proposed Plan (minutes)*	*Travel Time Difference with Proposed Plan (minutes)*	*Travel Time Percent Change with Proposed Plan*
Fire Scenario 1: From Northeast					
Evacuation Towards Sears Point to South Edge of Evacuation Area					
Glen Ellen	14.7	15.1	15.9 (15.8)	0.8 (0.7)	5%
Madrone/SDC	9.8	10.1	10.0 (11.5)	-0.1 (1.4)	-1% (14%)
Boyes Hot Springs	5.3	5.4	5.6 (5.7)	0.2 (0.3)	4% (6%)
Sonoma Plaza	4.9	4.9	4.9	0.0	0%
Evacuation To Napa					
Glen Ellen	34.8	35.8	37.0 (36.9)	1.2 (1.1)	3%
Madrone/SDC	30.9	32.0	31.1 (33.9)	-0.9 (1.9)	-3% (6%)
Boyes Hot Springs	25.4	26.1	26.7 (26.8)	0.6 (0.7)	2% (3%)
Sonoma Plaza	21.6	21.9	22.0 (22.1)	0.1 (0.2)	0% (1%)
Fire Scenario 2: From Southeast					
Evacuation Towards Santa Rosa to North Edge of Evacuation Area					
Glen Ellen	15.6	15.7	15.9	0.2	1%
Madrone/SDC	15.9	16.0	15.7 (16.8)	-0.3 (0.8)	-2% (5%)
Boyes Hot Springs	19.0	19.1	19.6 (19.5)	0.5 (0.4)	3% (2%)
Sonoma Plaza	22.1	22.2	22.7 (22.6)	0.5 (0.4)	2%
Evacuation Towards Petaluma to West Edge of Evacuation Area					
Glen Ellen	19.5	19.8	19.9	0.1	1%
Madrone/SDC	13.9	14.2	14.2 (14.4)	0.0 (0.2)	0% (1%)

Boyes Hot Springs	10.3	10.6	10.7	0.1	1%
Sonoma Plaza	9.6	9.7	9.7	0.0	0%

Further, while the projected population and employment growth in the Planning Area would increase the number of people potentially exposed to impacts from wildfire, the Proposed Plan would not induce substantial unplanned population growth in the Planning Area. The Proposed Plan also includes fire-protection features such as a managed landscape buffer the east, widened riparian corridors, and fire-resilient construction. Therefore, as described in Section 3.16: Wildfire, the Proposed Plan would reduce wildfire impacts locally, and compliance with local and state regulations pertaining to wildfire would help reduce impacts regionally. Thus, the Proposed Plan's contribution to wildfire risks is not considered cumulatively considerable.

Master Response 5: Lack of, or inadequacy of, or disagreement with water supply analysis

Numerous comments concerned the impacts of water supply and use from implementation of the Specific Plan. Comments asserted that the Draft EIR did not include water supply analysis or account for all water users as well as the impacts of multiple drought years and climate change.

A Water Supply Assessment (WSA) was prepared for the Proposed Plan by EKI Water and Environment for the Valley of the Moon Water District (VOMWD); this document is included as Appendix D of the Draft EIR. This detailed analysis found that there is adequate water available for the project. Potential impacts on utilities and service systems are analyzed in the Draft EIR within the context of existing plans and policies, permitting requirements, local ordinances, the Sonoma County Municipal Code, and the policies included in the Proposed Plan. The analysis presented throughout the EIR accounts for the potential environmental impacts of both the new residential units and non-residential square footage.

Under CEQA, a significant impact would occur if the District would not have sufficient water supplies available to serve the Planning Area during normal, dry, and multiple dry years through 2045. Thus, this analysis accounts for multiple years of drought conditions. Potable water is presumed to be provided to the Planning Area by the VOMWD by treating onsite sources of water and distributing it for use within the Planning Area. On site, Fern Lake and Suttonfield Lake collectively provide 840 acre-feet of raw water

storage. The estimated full build-out water use within the Planning Area of 342 acre-feet/year is less than the average water use of 622 acre-feet/year during the historical period the SDC was operating at or near full capacity. This can be attributed to a reduction in resident population which was as high as 13,400 in 1968.

The WSA, which was developed in coordination with the Valley of the Moon Water District, concludes that (WSA page 50): "This WSA concludes that, provided that all surface water rights associated with the SDC Property are available to be utilized by VOMWD to serve the Proposed Project, the Proposed Project will not adversely affect water supply reliability within the VOMWD Service Area. Based on currently available information and conservative estimates of projected demand, the VOMWD expects to be able to meet all future demands within its existing service area, inclusive of the Proposed Project in normal and multiple dry hydrologic years from 2025 through 2045." Implementation of the Proposed Plan would not increase water demand within the Planning Area from historical peak amounts. Further, Policy 6-9 in the Specific Plan calls for working with Sonoma Valley County Sanitation District (SVCSD) to explore the feasibility of establishing a recycled water facility on-site to offset the use of potable water on the site and to provide recycled water for non-potable uses such as landscape irrigation and firefighting.

The Proposed Plan also includes multiple policies that support water conservation and efficiency to minimize additional demand, including policies 6-10, 6-11, and 6-15. These policies would further reduce demand by implementing measures such as greywater systems and water efficient plumbing fixtures. In addition, CALGreen, Sonoma County's General Plan, and Municipal Code include multiple provisions that support water conservation. Therefore, based on the findings of the WSA and adherence to local regulations and proposed policies, the District will have sufficient water supplies available to serve development pursuant to the Proposed Plan during normal, dry, and multiple dry years. As such, impacts to water supply would be less than significant.

Master Response 6: Inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Several comments concerned the adequacy of the Draft EIR in assessing traffic congestion impacts on Arnold Drive and Highway 12 from implementation of the Specific Plan. Several commentors stated that there are already crowded roads and that Highway 12 cannot handle more traffic. Other comments were concerned about transportation vehicle

miles traveled (VMT) generated from the hotel and other commercial uses as well as potential employees who do not live at the site.

Use of VMT rather than LOS for CEQA Analysis

First, it should be noted that under the California Environmental Quality Act (CEQA), traffic volume or level of service (LOS) can no longer be used, pursuant to Senate Bill 743 (Steinberg, 2013) as codified in Public Resources Code section 21099, which required changes to the guidelines implementing CEQA (CEQA Guidelines) (Cal. Code Regs., Title 14, Div. 6, Ch. 3, § 15000 et seq.) regarding the analysis of transportation impacts. With the California Natural Resources Agency's certification and adoption of the changes to the CEQA Guidelines, automobile delay, as measured by "level of service" and other similar metrics, no longer constitutes a significant environmental effect under CEQA. (Pub. Resources Code, § 21099, subd. (b)(3).)[1]

The Technical Advisory by OPR (see citation below), outlines VMT as the metric to be used for transportation analysis under CEQA.

Objectives CT-4.1 and CT-4.2 of the Sonoma County General Plan pertain to vehicle level of service (LOS) standards. As individual development projects occurring within the Specific Plan complete traffic impact studies as required by the Sonoma County Department of Transportation and Public Works (DTPW), the potential exists for identification of locations where LOS targets would be exceeded, either individually as a result of the project or (more typically) by contributing to cumulative LOS target deficiencies. Such effects are no longer considered in CEQA per PRC section 21099 (b)(2), which states "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment." See further discussion of traffic LOS later in this section.

VMT Findings in the Draft EIR: Would less housing or fewer jobs result in better VMT outcomes?

For the Draft EIR, an analysis of VMT in the Planning Area was conducted for conditions without and with the Specific Plan by an expert California traffic engineering firm in this field, W-Trans. The Sonoma County Travel Model 2019 (SCTM19) was used to estimate VMT efficiency metrics. SCTM19 incorporates existing countywide land use and transportation infrastructure tied to a 2019 base year. The model's 2040 cumulative year

[1] See Technical Advisory on Evaluating Transportation Impacts in CEQA, State Office of Planning and Research, December 2018. https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

includes growth that is consistent with adopted general plans within the County and with regional projections contained in Plan Bay Area 2040. Planning Area VMT Metrics are presented in Table 3.14-4 on page 446 of the DEIR.

This analysis looks at three different VMT metrics: Home-based VMT per capita for residential uses (home in the Planning Area), home-based commute VMT per worker for employment uses (job in the Planning Area), and total VMT per service population (combined effects of all land uses in the Planning Area). Of these three, the home-based commute VMT per worker associated with employment uses and the total VMT per service population are well within the significance threshold. Residential home-based VMT is below the Planning Area, Countywide, and Regional Baseline averages; it is not, however, 15 percent below the regional average and is thus called out as a significant impact. With a potential 15 percent reduction in VMT with transportation demand management (TDM) measures, home-based VMT will be less than the threshold. However, because this reduction cannot be guaranteed, it is not relied upon to make the significance determination.

Because VMT is measured as a per person performance metric, reductions in the number of housing units typically does not substantially change the projected per capita home-based VMT. When comparing the project and the Reduced Density Alternatives, the Draft EIR (page 560) notes, "While the Reduced Development Alternative would potentially result in a substantially lower total VMT than the Proposed Plan, the amount of home-based VMT generated per capita would likely be similar. This is because residential VMT is expressed as home-based VMT per capita, which is an efficiency metric wherein both the numerator (home-based VMT) and denominator (population) would be expected to decrease proportionately with reduced development levels." It is also noted that research[2] has found residential density levels (i.e., the number of housing units per acre) to inversely affect per capita VMT, meaning that areas with a larger number of units per acre generate lower VMT per capita. Accordingly, it can be concluded that reducing the number of residential units within a defined boundary such as the Planning Area would not be expected to reduce the amount of VMT generated per resident.

Increases in jobs in the Planning Area (with a higher jobs to housing ratio) would lead to improved (lower) home-based per capita VMT. The Draft EIR notes (page 569), " … a higher jobs-to-housing ratio in the Plan area may lead to slightly less per capita VMT generated by residents. This is likely attributable to a higher proportion of residents in the

[2] See *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*, California Air Pollution Control Officers Association (CAPCOA), 2021

Plan area being employed near their homes, which translates to lower average commute distances and miles traveled." Thus, if the number of housing units in the Project in the Planning Area is maintained but jobs are reduced, worse VMT impacts would result. Further, the same density relationship described above for residential uses also exists at employment-based uses, with increased employment densities resulting in lower VMT per employee. In other words, reducing the number of jobs within a defined boundary such as the Planning Area would not be expected to reduce the amount of VMT generated per worker.

Policies in the Specific Plan are designed to reduce VMT in the Planning Area through required TDM reductions, establishment of a TMA to oversee VMT reduction strategies and programs, multi-modal transportation improvements, and parking-related demand management strategies. Although the implementation of the above policies and strategies can be expected to reduce the total VMT generated by uses in the Planning Area, reducing development-related VMT impacts as well as offsetting induced VMT, their effectiveness cannot be accurately estimated since performance would vary according to the specific attributes of individual development projects and the synergies existing among them, which will evolve over time. The effectiveness of the required 15 percent reduction in development project VMT also cannot be guaranteed, and will need to be monitored over time, with ongoing adjustments made by the TMA in response to observed effectiveness and changes in uses that occur over the years. It may be particularly difficult for the earliest development projects within the Plan area to achieve TDM reductions sufficient to reduce VMT impacts to less than significant levels since it may take some time before aspects such as jobs/housing balances materialize, and since the number of feasible TDM strategies may be limited until a sufficient amount of development within the campus has occurred. Thus, this EIR conservatively assumes that the VMT reduction due to implementation of these strategies would be inadequate to reduce residential VMT per capita and induced VMT to less-than-significant levels. There are no other feasible mitigation measures available at this time. Impacts would be significant and unavoidable.

However, VMT impacts are considered significant and unavoidable in all the Alternatives presented in the DEIR. As stated in CEQA Guidelines, Section 15093(a), if the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable." Therefore, given that State law stipulates that the SDC Specific Plan prioritize housing at the site per Government Code Section 14670.10.5, the environmental impacts of implementation of the Specific Plan on VMT are acceptable.

It cannot be assumed that anyone living on the SDC site will be employed at the site; has this been considered in the VMT analysis?

The VMT analysis was conducted using the Sonoma County Travel Model 2019 (SCTM19) operated and maintained by the Sonoma County Transportation Authority (SCTA). The model includes extremely sophisticated algorithms to predict traveler behavior, and has been calibrated against real-world observations both through comparison of traffic volume projections versus observations, as well as aggregated "big data" obtained through mobile devices that provides real-world data on how residents, employees, and visitors travel within and beyond Sonoma County. As with all travel demand models, SCTM19 considers the proximity of housing, jobs, and services to one another, and accordingly does assume that some persons will both live and work within the proposed Specific Plan boundaries or adjacent areas. Such travel synergies are expected in areas with a mix of housing and employment, and attempting to override these assumptions in the VMT analysis would not only be speculative, but would substantially overstate potential impacts and mischaracterize the proposed Specific Plan's design, land use mix, and policies. The applied VMT analysis is a superior approach that reflects application of the best-available tools and information.

Why is downscaling or elimination of the hotel not considered part of VMT mitigation?

The hotel use identified in the proposed Specific Plan would contribute to the project's total VMT per service population as well as employee-related VMT per worker. Both of these VMT performance metrics would achieve the applied significance thresholds. The proposed Specific Plan would not meet VMT significance thresholds for residential uses; however, this performance metric is unaffected by the hotel use. Because downscaling or eliminating the hotel would have no beneficial effect in reducing residential VMT per capita, it was not considered as a mitigation strategy.

Why does the DEIR determine that there are no other feasible VMT mitigation measures when there are other measures such as a reduced scale alternative or elimination (or reduction in size) of the hotel or other commercial development?

VMT reductions intended to reduce the Specific Plan's VMT impacts are incorporated in Specific Plan Policies 3-41 and 3-42, which require development to implement TDM strategies, and the establishment of a TMA to develop and oversee trip reduction strategies. Policy 3-41 calls for development to reduce its daily trip generation by 15 percent below standard ITE rates, allowing individual developments flexibility in determining how those reductions are achieved. This strategy allows developments and the TMA to effectively

design trip reduction strategies that are tailored to the characteristics of each project as well as the synergies among individual uses that will evolve over time. This approach allows a wide range of VMT reduction strategies to be implemented as long as their effectiveness can be supported by evidence, and the DEIR's conclusion that there are no other feasible VMT mitigation measures must be considered in the context that the applied strategy already allows any viable measure(s) to be applied.

Impact of Highway 12 Connector

The Specific Plan includes implementation of a new roadway connection between the Core Campus area and Highway 12. While this connection is intended to function as a collector street, also providing an additional east-west emergency access connection and incorporating high quality pedestrian and bicycle facilities, rather than a high-speed/high-capacity highway, the potential exists for the added traffic capacity the connection provides to result in induced VMT. Induced VMT refers to the additional miles of travel generated by increasing roadway capacity, typically associated with drivers choosing to travel by car for a trip when they otherwise would not have if the added roadway capacity was not provided. According to the DEIR, the Highway 12 connector would be classified as a Class 3 facility in the County of Sonoma, with 0.78 added lane miles. Based on available methodologies to assess induced VMT, the roadway is estimated to result in 2.6 million additional VMT per year, or approximately 7,120 daily VMT. This would be considered a significant impact. Thus, if hypothetically the Highway 12 connector were in future to be removed from the Project or not constructed, the induced VMT impacts of the Project would be reduced.

How would the proposed Specific Plan fare if it excluded the Highway 12 connector road?

While the connector road to Highway 12 is a component of the proposed Specific Plan and is therefore included in all "plus project" transportation analyses, additional modeling was completed for informational purposes to gauge potential effects without the connection. Projected traffic volumes on roadway segments in the Planning Area are shown for scenarios without the connector road in Table 3.14-3 of the DEIR. Establishing the roadway link is projected to result in approximately 1,100 fewer daily vehicles through Glen Ellen than would occur without the link. With respect to the VMT generated by the proposed Specific Plan's land uses, the projected total VMT per service population (which includes the effects of all land use types) without the Highway 12 connector road would be 18.2 miles per person under cumulative plus project conditions, in contrast to 17.7 miles per person with the new connection as reported in Table 3.14-4 of the DEIR. This result

suggests that the new connection has a modest beneficial effect in reducing the VMT generated by the Specific Plan, likely attributable to the slightly reduced driving distances that the new connection would facilitate. With respect to the induced VMT created by the new roadway connection (the induced vehicle travel created by adding new roadway capacity), the proposed Specific Plan identifies a significant impact as described on page 447 of the DEIR. This induced travel impact is associated with added vehicular travel occurring areawide, not just that associated with the proposed Specific Plan, and would only occur if the new roadway connection were built. While the development related VMT per service population associated with the proposed Specific Plan is a performance metric that cannot be directly compared to the total VMT induced by the new roadway link, at a broad level, the positive effects of shorter driving distances created by the new roadway connection would likely be offset by the negative effects created by induced VMT.

Traffic Operations (LOS) and Consistency with County General Plan LOS Standards

As stated previously, traffic LOS can no longer be used as a metric in the EIR. However, separate from the EIR, W-Trans performed a traffic operations analysis and calculated LOS levels in SDC and adjacent areas. This analysis is available at the project website at https://static1.squarespace.com/static/5e44526401cadd5712640ee4/t/6317b5c9700b2b4827735924/1662498250512/Focused+Traffic+Operations+Analysis+for+the+SDC+Specific+Plan_unsecured.pdf This analysis shows (page 4), "While most of the study intersections are projected to meet the County's LOS D standard under future conditions with buildout of the SDC Specific Plan, modifications would be necessary to achieve acceptable operation at Arnold Drive/Harney Street and SR 12/New SDC Connector Road." The analysis also identifies that certain roadway segments including SR 12 between Arnold Drive and Trinity Road, and Arnold Drive between the SDC campus and Madrone Road, are projected to operate below the County's LOS C standard in the future both with and without the potential Specific Plan. The Arnold Drive roadway segment between Boyes Boulevard and West Verano Avenue is projected to operate in the LOS E-F range in the future both with and without the Specific Plan, though operation at these levels was previously identified in the County of Sonoma General Plan and is considered acceptable.

VMT will not be comparable to the historic SDC site.

The VMT analysis contained in the transportation section of the DEIR relies on no comparisons to the historical VMT generated at the former SDC facility. The VMT analysis treats all land uses proposed by the Specific Plan as new. Any references to

historical traffic characteristics contained in the DEIR are provided solely for informational purposes.

Master Response 7: Adequacy of impacts on wildlife movement or disagreement with analysis/findings

Several comments concerned the adequacy of the Draft EIR in assessing the potential Specific Plan development impacts on the protection of the wildlife corridor. Many comments were also concerned about how the new Highway 12 connector could intersect with the wildlife corridor. There were numerous calls to widen the wildlife corridor and reduce the housing units proposed at the site to mitigate impacts on the movement of wildlife.

Implementation of the Specific Plan would have a significant impact on migratory species, corridors, or nursery sites if the siting, construction, or operation of development allowed under the Specific Plan would impede on or remove migratory corridors or nursery sites. As discussed under Impact 3.4-4 on page 255, the Specific Plan includes some recreational trails, in or near habitats that include wildlife corridors. However, these recreational paths are considered to be uses consistent with open space management and are not considered substantial impacts to the wildlife corridor functionality on the site. In addition, the majority of the new development is sited in an already developed area that does not provide significant wildlife transit pathways. Because the Specific Plan preserves the overwhelming majority of the SDC parcel in open space, it ensures continuation of regional connectivity for wildlife, serving as a conduit for transit of wildlife between significant habitat blocks to the east and west.

The Specific Plan includes a full suite of policies to minimize the impact of future development and operations on wildlife and wildlife movement. The Specific Plan would preserve the entirety of the approximately 755 acres outside the Core Campus as open space, including improved open space within the Core Campus through 30-50 acres of buffer open space (including riparian, wildlife corridor, and Arnold Drive buffers). Lastly, the Specific Plan would also expand the Sonoma Valley Wildlife Corridor at the pinch point close to Suttonfield Lake by removing existing buildings in the northeastern portion of the Planning Area and providing that land for wildlife movement. The Specific Plan includes policies and implementation actions to ensure that adverse impacts to wildlife movement, special-status species, and sensitive natural communities are avoided and mitigated as development takes place. Other policies are designed specifically to minimize the impacts to wildlife at the interface of the built and natural environment (proposed policies 2-6 through 2-26). Such measures include implementing “dark skies” standards

for all public realm lighting, restricting development in the wildlife corridor and creek corridor to limited trails/paths and informational signage, prohibiting domestic animals in designated areas, adhering to residential nighttime noise standards, and requiring all fencing within the open space to be wildlife permeable.

Two generalized Highway 12 connector locations are identified in the Specific Plan (Specific Plan Figure 3.1-1), and the Specific Plan calls for more detailed study of Highway 12 connector alignment and design. While there is a possibility that the Highway 12 connector could intersect with the wildlife corridor, separate project level proposals, like the Highway 12 connector, would require separate CEQA review to identify and mitigate impacts as necessary. The Highway 12 connector would also be subject to Specific Plan policies, Conditions of Approval Measures, and existing regulations. Appendix A: SDC Specific Plan Standard Conditions of Approval lists two specific conditions for Highway 12: MOB-1, Construction of the Highway 12 connector should reuse the existing street network to the greatest extent feasible; and MOB-2, Construction of the Highway 12 connector should avoid damage to scenic and open space resources such as trees, rock outcroppings, and historic buildings to the greatest extent feasible.

Master Response 8: Historic Preservation Alternative

Numerous comments on the Draft EIR supported the Historic Preservation Alternative over the Proposed Plan. Several comments question the accuracy of the cost of adaptive reuse and analysis of the energy efficiency and greenhouse gas emissions associated with new construction compared to retrofitting of existing buildings on campus.

While the DEIR found the Historic Preservation Alternative to be environmentally superior to the Proposed Plan, the significance findings were largely aligned between the two plans. The largest difference between the two was found in the impacts to the proposed Historic District, which were rated as significant and unavoidable in the Proposed Project, and less than significant in the Historic Preservation Alternative. Impacts in other topical areas were largely similar, although the Draft EIR notes that the Project would be superior to the Historic Preservation Alternative in terms for biological resources.

GHG Emissions

Several comments focus on the DEIR analysis reporting that the Historic Preservation Alternative would have higher GHG emissions than the Proposed Project, citing a smaller

development footprint, lack of embodied energy of construction materials, and a smaller impact for new construction.

First it should be noted that the purpose of alternative analysis in CEQA is to identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1). Thus, "… the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project…" (CEQA Guidelines 15126.6).

GHG and Energy are not significant impacts of the Project, nor are these significant impacts of any alternative considered. The principal objective behind identification of the Historic Preservation Alternative is to explore methods to reduce the significant impacts related to historic resources of the Project. Thus, even if hypothetically the Historic Preservation Alternative produced fewer GHG emissions than reported in the Draft EIR or the Project, this would not change the significance of any impact of either the Project or the alternatives or alter identification of the Historic Preservation Alternative as the Environmental Superior Alternative.

Additionally, the metric for GHG impact analysis in the EIR is GHG per capita or per service population. Because the Historic Alternative has less than half the population of the Project, it has a much larger denominator in GHG impact calculation, affecting its comparative performance.

Many existing buildings are seismically unsafe, not up to current code and energy-conservation standards and require remediation. Most existing buildings at the site were also not designed for the uses contemplated in the Specific Plan – residential, office, research and development, and hospitality, for example (the two most readily usable office buildings at the site—Fredrickson and the Post Office Building—are not historic and are part of all alternatives). Thus, in addition to rehabilitation and retrofitting, these buildings will require entirely new floor plans and new construction – for example, bathrooms and kitchen with new residential units, and new plumbing, electrical lines, and heating systems. Infrastructure updates will be required necessitating to connections to updated sewer, water, power, telecommunications networks, and other utilities. Site infrastructure updates would be similar, but in the case of the Project spread across a larger population.

Thus, while retention of existing buildings may reduce overall construction at the site, the difference may not be large, and a thorough analysis is not available on every historic building, making it difficult to ascertain the extent of construction required for the Historic Preservation Alternative, and regardless, will require significant new construction materials and significant construction activity. The Project also retains many existing buildings at the site, including the Main Building, Sonoma House, and contributing resources identified in Figure 4.3-1 of the Specific Plan to the greatest extent feasible. Additionally, the largest GHG emissions in the county result from transportation operations, which would be similar on a comparative basis whether buildings are reused or not. Furthermore, as pointed out earlier, neither the Proposed Plan nor the Historic Preservation Alternative have significant GHG impacts.

Recommendation to the Select the Historic Preservation Alternative Rather than the Project

Several comments state that because the Historic Preservation Alternative is the environmental superior one, the County should adopt that rather than the Project. This comment is noted. The Draft EIR is an informational document that provides environmental analysis to decision-makers as they consider adoption of the Specific Plan. The decision on whether to adopt the Project or not or an alternative is up to the decision-makers (in this case, the County Board of Supervisors).

CEQA Guidelines 15021 states, "CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian."

The Historic Preservation Alternative has a very large financial feasibility gap (about $140 million)—more than $400,000 per market rate housing unit (more than four times that of the Project)—that renders its viability questionable. Many existing buildings are deteriorating (for example, the iconic Main Building is no longer structurally safe to enter because of extensive water damage), and delays in implementation could result in loss of resources and additional restoration costs. The State and Sonoma County entered an agreement in 2019 where the State of California allocated $40 million for three years of maintenance of the shuttered campus. The State has not allocated any additional funds for the maintenance.

Furthermore, historic preservation per se is not a priority objective established by the State for the site. California Government Code Section 14670.10.5 states that in light of the statewide affordable housing crisis, the SDC Specific Plan should prioritize housing, especially affordable housing and housing for individuals with developmental disabilities. The legislation also acknowledges the importance of the significant open space areas of the SDC site and requires permanent protection of the SDC site's open space and natural resources, along with protection of the Eldridge Cemetery located on the property. Other required components of the planning process include involvement of the community in order to reduce uncertainty, increase land values, expedite marketing, and maximize interest of potential purchasers, and ensuring economic feasibility.

The Proposed Project advances the State's objectives for housing and for SDC significantly, with environmental impacts that are largely comparable to those of the Historic Preservation Alternative. The Historic Preservation Alternative provides less than half of the overall units compared to the Proposed Plan, and significantly fewer income-restricted affordable housing units, failing to meet the State objective to prioritize housing, especially affordable housing, It would also not "… reduce uncertainty, increase land values, expedite marketing, and maximize interest of potential purchasers, and ensuring economic feasibility", that are established statutory objectives for the site.

As stated in CEQA Guidelines, Section 15093(a), if the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable." Further, CEQA requires that EIRs identify the Environmentally Superior Alternative and discuss the facts that support that selection (See PRC Section 21081.5; CEQA Guidelines Sections 15091, 15126.6(e)(2)). The Lead Agency is not, however, obligated to select the Environmentally Superior Alternative for implementation if it would not accomplish the basic project objectives and/or is infeasible (see State CEQA Guidelines Section 15126.6(a), (c) & (f)).

The Proposed Plan maximizes both the project objectives outlined in State Law and the Vision and Guiding Principles that were approved and adopted by the Board of Supervisors and the Planning Advisory Team, including preservation of the open space; protection and expansion of the wildlife corridor; minimization of the development impacts on traffic, wildlife, natural resources; and creation of a vibrant walkable community. In the Proposed Plan, these priorities are balanced with the Government

Code Section 14670.10.5 requirement that "The planning process shall facilitate the disposition of the property by…addressing the economic feasibility of future development."

Master Response 9: Mitigation Monitoring/Performance Standards

Standard Conditions of Approval would be applied to all development projects. Since these are not CEQA mitigations, no separate MMRP will be prepared. No separate set of standards aside from those already included in the Specific Plan and the Conditions will be imposed.

Any future development pursuant to the Specific Plan must be consistent with the various Specific Plan policies and conditions of approval, many of which are intended to ensure that significant environmental impacts will not occur. As part of implementation of the Specific Plan, specific development proposals will be reviewed for compliance with the various policies and conditions, and a consistency review process will be developed for both ministerial and discretionary types of approvals. See amended Policy 4-13 in the Specific Plan. As described in Policy 4-13, Sonoma County staff will review all proposed development to ensure consistency with the Specific Plan and all of its policies, conditions, and requirements prior to approval. This would include consistency checks for all Specific Plan policies such as number of preserved historic contributing resources, consistency with the overall development program, and provisions of wildlife corridor buffers and creekside setbacks. To assist in this effort, the County will prepare a checklist to be used for all proposed projects at the SDC site to ensure consistency with Plan policies and Supplemental Standard Conditions of Approval, as detailed in Appendix A. The Supplemental Standard Conditions of Approval will be updated by County staff over time to reflect changing conditions, new information, and compliance with changing local and State laws and guidelines.

Further, any future implementing actions that require additional environmental review may be subject to specific mitigations to address the particular impacts of the implementing action, whereas conducting such an analysis part of the programmatic environmental review for the overall Specific Plan would require speculation as to the nature of future development proposals and would lead to an analysis that would be lacking in informational value.

Comments Received

A total of 204 comment letters were received during or before the comment period. These contained 1,453 unique comments. Comment letters are organized into three categories and presented in alphabetical order within each category: Public Agency comments (section A), Organization comments (section B) and Individual comments (section C).

Each letter or summary is identified by a designator (e.g. "Letter A1"). Specific comments within each letter or summary are identified by a designator in the page margin that reflects the sequence of the specific comment within the correspondence (e.g. "A1-1" for the first comment in Letter A1).

Comment letters received are listed in Table 2-2.

Table 2-2: Comments Received on the Draft EIR

Letter	Date	Commenter	Agency/Organization
Agencies (A)			
A1	9/22/2022	Mayor Jack Ding	City of Sonoma
A2	9/27/2022	Steve Akre	Sonoma Valley Fire District
Organizations (B)			

B1	9/21/20222	Thomas C Ells	North Sonoma Valley Municipal Advisory Council
B2	1/6/22		North Sonoma Valley Municipal Advisory Council
B3	9/21/22	Arthur Dawson	North Sonoma Valley Municipal Advisory Council
B4			The Glen Ellen Historical Society
B5	9/25/2022	Hugo Dwyer	A Voice Of Reason
B6	9/26/2022	Christopher Locke	Jack London Park Partners on behalf of Valley of The Moon Alliance
B7	9/26/2022	Kathy Pons	Valley of The Moon Alliance
B8	4/3/2022	Richard Dale	Sonoma Ecology Center (SEC)
B9	9/26/2022	Peter Broderick	Center for Biological Diversity
B10	9/26/2022	Richard Dale	Sonoma Ecology Center
B11	9/26/2022	Eamon O'Byrne	Sonoma Land Trust
Individuals (C)			

C1	8/19/22	Amanda Zangara	
C2	8/19/22	Betsy Donnelly	
C3	9/14/2022	Brad McCarty	
C4	9/14/2022	Brad McCarty	
C5	9/14/2022	Brian Bollman	
C6	9/14/2022	Carol Carr	
C7	9/14/2022	Carole Harbard	
C8	9/14/2022	Charles G. Tsegeletos	
C9	9/14/2022	Chris Gralapp	
C10	9/14/2022	Christina Carasch	
C11	9/14/2022	David Eichar	
C12	9/14/2022	Denise Sobel	
C13	9/14/2022	Douglas C. Rice	
C14	9/16/2022	David Eichar	
C15	9/16/2022	Deborah Eppstein	
C16	9/16/2022	Denise Lacampagne	
C17	9/19/2022	Elisa Stancil Levine	
C18	9/19/2022	Elisa Stancil Levine	
C19	9/19/2022	Elizabeth Crabtree	
C20	9/19/2022	Fred Hodgson	
C21	9/19/2022	Geri Brown	
C22	9/19/2022	Greg Guerrazzi	
C23	9/19/2022	Linda Hale	
C24	9/19/2022	Heather Gallagher	
C25	9/19/2022	Holly Hertogs	
C26	9/19/2022	Jan Bowen	
C27	9/19/2022	Jan Humphreys	
C28	9/19/2022	Janet Bosshard	
C29	9/20/2022	Janet Greene	
C30	9/20/2022	Janet Laurain	
C31	9/20/2022	Jeanette & Brett Newman	

C32	9/20/2022	Jessica Strachan	
C33	9/20/2022	Jill Koenigsdorf	
C34	9/20/2022	Joan Geary	
C35	9/20/2022	Joan Geary	
C36	9/20/2022	Joe Lieber	
C37	9/20/2022	Joe Lieber	
C38	9/20/2022	Jon Greenslade	
C39	9/20/2022	Juliet Langley	
C40	9/20/2022	Justin Beck	
C41	9/20/2022	Karen Robidoux	
C42	9/20/2022	Kate Cooper	
C43	9/20/2022	Kathy Pons	
C44	9/19/2022	Chris Gralapp	
C45	9/19/2022	Chris Gralapp	
C46	9/19/2022	Craig S. Harrison	
C47	9/19/2022	David Eichar	
C48	9/19/2022	Jerry Bernhaut	
C49	9/19/2022	Josette Brose-Eichar	
C50	9/15/2022	Lauren Reed	
C51	8/22/2022	Lawrence A. Wilcox	
C52	9/19/2022	Lena Chyle	
C53	8/24/2022	Linda Curry	
C54	8/20/2022	Linda Hale	
C55	9/14/2022	Linda Hale	
C56	9/14/2022	Linda Hale	
C57	9/14/2022	Linda Hale	
C58	8/21/2022	Linda Hale	
C59	9/14/2022	Maite Iturri	
C60	8/24/2022	Marcia Johnson	
C61	8/24/2022	margandbo@gmail.com	
C62	8/22/2022	Marie Andel	
C63	9/13/2022	Mark Speer	

C64	9/19/2022	Mary Currie	
C65	9/14/2022	Mary Poppic-Reeves & Brian Reeves	
C66	9/19/2022	Mary Poppic-Reeves	
C67	8/23/2022	Michael Gill	
C68	9/10/2022	Michael Lockert	
C69	9/5/2022	Michael Lockert	
C70	8/24/2022	Moira Jacobs	
C71	8/24/2022	Monica A Menco	
C72	8/22/2022	Nancy Murray	
C73		Orlando O'Shea	
C74	9/19/2022	Pamela Merchant	
C75	8/20/2022	Patricia Spicer	
C76	8/29/2022	Paul Rockett	
C77	9/4/2022	R. Thornton	
C78	9/12/2022	Robert Holloway	
C79	9/15/2022	Roger Peters	
C80	8/20/2022	Sandra Mauerhan	
C81	8/20/2022	Sharon Bard	
C82	9/14/2022	Sharon Church	
C83	8/23/2022	Sharon Church	
C84	9/14/2022	Sharon Church	
C85	9/14/2022	Sherry Smith	
C86	9/15/2022	TOM BENTHIN	
C87	8/22/2022	Steve Sherer	
C88	9/19/2022	sue rankin	
C89	8/20/2022	Sydney Randazzo	
C90	9/8/2022	Teri Shore	
C91	8/24/2022	Teri Shore	
C92	9/14/2022	Terry and Carolyn Harrison	

C93	8/24/2022	The Filipello Family The Thomsen Family F. Horne, A. Chavez, J. Hansen	
C94	8/27/2022	Thomas Chase Ells	
C95	8/26/2022	Thomas Chase Ells	
C96	9/18/2022	Thomas Chase Ells	
C97	9/18/2022	Thomas Chase Ells	
C98	8/29/2022	Thomas Chase Ells	
C99	8/24/2022	Tim Portwood	
C100	9/13/2022	Vicki Hill	
C101	8/29/2022	Victor Gonzalez	
C102	8/29/2022	Victor Gonzalez	
C103	9/15/2022	Vivien MacDonald	
C104	9/12/2022	Will Shonbrun	
C105	8/23/2022	William B Hirsch	
C106	9/14/2022	Andrew Harper	
C107	9/13/2022	Arthur Dawson	
C108	9/25/2022	Alex Krem	
C109	9/26/2022	Alexandra D. Syphard	
C110	9/26/2022	Alice Horowitz	
C111	9/15/2022	Arthur Dawson	
C112	9/23/2022	Arthur Dawson	
C113	9/21/2022	Arthur Dawson	
C114	9/23/2022	Arthur Dawson	
C115	9/25/2022	Barbara Roy	
C116	9/22/2022	Betsy Donnelly	
C117	9/26/2022	Bonnie Brown	
C118	9/26/2022	Bonnie Brown	
C119	9/26/2022	Bonnie Brown	
C120	9/26/2022	Bonnie Brown	
C121	9/26/2022	David Brigode	

C122	9/26/2022	Bonnie Brown	
C123	9/26/2022	David Brigode	
C124	9/23/2022	David Eichar	
C125	9/18/2022	Deb McElroy Pool	
C126	9/26/2022	Deborah C. Nitasaka	
C127	9/25/2022	Dianne Brinson	
C128	9/26/2022	Douglas A McKinley	
C129		William Bucklin	
C130	9/26/2022	Elisa Stancil Levine	
C131	9/22/2022	Elizabeth Crabtree	
C132	9/25/2022	Elizabeth Pastore	
C133	8/22/2022	Greg Carr	
C134	9/23/2022	Greg Guerrazzi	
C135	9/26/2022	Greg Kamman	
C136	9/25/2022	Hugo Dwyer	
C137	9/26/2022	J.E. Airey	
C138	9/23/2022	Jack Allan	
C139	9/26/2022	jason enzenzensperger	
C140		Jerry Bernhaut	
C141	9/24/2022	Jim Price	
C142	9/22/2022	Johanna M. Patri	
C143	9/26/2022	Julie Cade	
C144	9/23/2022	Kaitlyn Garfield	
C145	9/26/2022	KATHLEEN FERRIS	
C146		Ladd J. Miyasaki	
C147	9/22/2022	Marina Abbott	
C148	9/21/2022	Mary Martinez	
C149	9/14/2022	Mary Poppic-Reeves	
C150	9/15/2022	Mary Poppic-Reeves	
C151	9/22/2022	Maud Hallin	
C152	9/22/2022	Maud Hallin	
C153	9/21/2022	Meg Beeler	

C154	9/21/2022	Meg Beeler	
C155		Michael Gill	
C156	9/21/2022	Meg Beeler	
C157	9/21/2022	Tracy Salcedo	
C158	9/26/2022	Neal K. Liddicoat	
C159		Norman Gilroy	
C160	9/26/2022	Ritch Foster	
C161	9/26/2022	Robert Baeyen	
C162	9/22/2022	Rowan Schneider	
C163	9/24/2022	Sonia E. Taylor	
C164	9/23/2022	Steve Birdlebough	
C165	9/26/2022	Tadashi Nitasaka	
C166	9/21/2022	Teri Shore	
C167	9/18/2022	Thomas Chase Ells	
C168	9/18/2022	Thomas Chase Ells	
C169	9/23/2022	Thomas Chase Ells	
C170	9/26/2022	Thomas Chase Ells	
C171	9/23/2022	Thomas Chase Ells	
C172	9/18/2022	Thomas Chase Ells	
C173	9/26/2022	Tiare Welch	
C174	9/21/2022	Tracy Salcedo	
C175	8/31/2022	Vivien Hoyt	
C176	9/24/2022	Will Ivancovich	
C177	9/23/2022	William B Hirsch	
C178	9/26/2022	Alexandra D. Syphard	
C179	9/26/2022	Caroline Hipkiss	
C180	8/22/2022	Charles Mikulik	
C181		Collin Thoma	
C182	9/26/2022	Deborah C. Nitasaka	
C183	9/26/2022	Deborah C. Nitasaka	
C184	9/26/2022	Elizabeth Brand	
C185	9/26/2022	Joanna Felder	

C186	9/26/2022	Joseph & Deborah Votek	
C187	9/26/2022	Linn Briner	
C188	9/26/2022	Tamara Boultbee	
C189	9/26/2022	Tamara Boultbee	
C190	9/26/2022	Teresa Murphy	
C191	9/26/2022	Vicki Hill	
C192	9/15/2022	Planning Commission Hearing	

Note: A blank cell indicates there is i) No Date Provided or ii) Not Applicable.

City of Sonoma
No. 1 The Plaza
Sonoma California 95476-6690
Phone (707) 938-3681 Fax (707) 938-8775
E-Mail: cityhall@sonomacity.org

September 22, 2022

Brian Oh
Comprehensive Planning Manager
Permit Sonoma
County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403

RE: Comments on the Specific Plan and Draft Environmental Impact report (DEIR) for the Sonoma Developmental Center (SDC)

A1-1

Thank you for the opportunity to comment on the Specific Plan and related Draft Environmental Impact Report for the Sonoma Developmental Center, both dated August 2022.

On behalf of the City of Sonoma, we provide the following comments as you finalize the Specific Plan document and Final Environmental Impact report (FEIR):

1. The City of Sonoma continues to support a robust affordable housing plan for the project and a supportive non-housing development program. The non-residential component of the project should include institutional, research and development, office, and other creative uses focused on sustainability and climate solutions-focused enterprises, non-profit organizations, and businesses. Small-commercial uses—such as restaurants, cafés, and small retail uses—to support neighborhood needs and walkable lifestyles are also supported by the City.

A1-2

2. The City of Sonoma supports visitor and community-serving uses such as meeting and event facilities (conference center, etc.,) **but does not support** a hotel use or Hospitality Overlay Zone as this type of use does not provide living wage jobs and increases the Valley's dependance on low wage workers who have little potential for finding housing which in turn exacerbates traffic impacts. The City of Sonoma supports economic generators in the project that provide a substantially better base for employment and that can generate follow-on businesses locally and throughout the state (i.e., provide quality jobs and serve the people of Sonoma Valley and California).

A1-3

3. The City of Sonoma supports public, and community uses, such as a museum honoring the legacy of the site and Sonoma's Native People, community center or gathering and recreational spaces, emergency command center, fire station, educational uses, and social support services. As such, the City supports the environmentally superior alternative analyzed in the DEIR - the "Historic Preservation Alternative". This should be the project approved in the Specific Plan by the Board of Supervisors as it achieves a "higher level of historic preservation with a focus on adaptively reusing existing buildings to the maximum extent while achieving the goals for co-locating housing and employment and limiting development to within the current footprint of the SDC facility (Core Campus)". Further, the Historic Preservation Alternative incorporates existing sustainable features of the Proposed Plan and does not include a new connection to Highway 12. Adoption of the Historic

Preservation Alternative "could result in a slightly lower VMT per capita than the Proposed Plan, thereby modestly reducing the significant VMT impact. Without the new roadway and associated lane miles, there would be no potential for induced travel and VMT associated with increases in roadway capacity. As a result, the significant impact associated with induced VMT would be eliminated. The Historic Preservation Alternative would lessen VMT impacts by eliminating the potential for induced travel and may also modestly reduce the projected residential VMT per capita".

4. Based on the requirements of CEQA, the analysis of transportation impacts in the DEIR is limited to the analysis of Vehicle Miles Travelled (VMT) in and around the project site (which is in and of itself a "Significant and Unavoidable impact" based on the Proposed Project). Level of Service (LOS) is no longer the test to analyze traffic impacts. The City of Sonoma still does not know and understand the traffic impacts upon our community regardless of the development plan chosen by the Board of Supervisors. This is because there is no "street segment" or "intersection" analysis for the City to review in the DEIR (for the reasons previously explained) as there was in the "Alternatives Report", dated November, 2021. And even with such analysis provided in the Alternatives Report, the nearest segment analysis to the City limits along Highway 12 was from Boyes Boulevard to Verano Avenue, which currently operates at LOS E and will worsen to LOS F with any project developed at the SDC. The Alternatives Report states the following on page 64:

   "The segment of SR 12 between Boyes Boulevard and Verano Avenue, however, currently operates poorly in the LOS E range and would be expected to fall to the LOS F range with all three alternatives. This roadway segment passes through the Springs communities, serving as their main street, and has high levels of pedestrian and bicycle activity as well as vehicular movements to and from side streets. Neither Caltrans nor the County of Sonoma intend to widen the corridor to increase auto capacity and are instead focusing efforts on shifting more auto travel to non-auto modes including walking, biking, and transit." We request the Specific Plan call for other measures to reduce traffic to and from SDC- like shuttle and like developing Arnold Drive with bike lanes, walking paths etc.

A1-4

The County Board of Supervisors must understand that under any development scenario chosen for the SDC, the City of Sonoma will be impacted. But to what extent we do not know. The City respectfully requests that the Board of Supervisors approve the environmentally superior alternative and eliminate the hotel overlay zone component as presently constituted.

A1-5

Regards,

Jack J Ding

Mayor Jack Ding
City of Sonoma

cc: Via email only - Brian.Oh@sonoma-county.org

City of Sonoma City Council:	Vice-Mayor Kelso Barnett Madolyn Agrimonti Robert Felder Sandra Lowe
Board of Supervisors:	Supervisor Susan Gorin (1) Supervisor David Rabbitt (2) Supervisor Chris Coursey (3) Supervisor James Gore (4) Supervisor Lynda Hopkins (5)

Interim City Manager, City of Sonoma: Susan Casey
Sonoma County Administrative Officer: Sheryl Bratton

Sonoma Valley Fire District

Proudly Serving the Communities of

Sonoma, Valley of the Moon, Glen Ellen, and Mayacamas

Date: September 27, 2022

To: Brian Oh, Permit Sonoma

From: Steve Akre, Fire Chief

Subject: Comments on the Sonoma Developmental Center Specific Plan and Specific Plan Draft Environmental Impact Report (EIR)

A2-1

Thank you for the opportunity to comment on the Sonoma Developmental Center (SDC) Specific Plan and Draft Environmental Impact Report (EIR). The SDC site is located in the heart of the Sonoma Valley region of southern Sonoma County, about six miles north of the City of Sonoma and about 15 miles south of Santa Rosa, between the unincorporated communities of Glen Ellen and Eldridge. The Specific Plan was developed to guide development of the SDC Core Campus and preserve open space and natural resources on the SDC property. The Proposed Plan establishes ten districts within the Core Campus subarea—Historic Core, Core North Residential, Maker Place, Core South Residential, Fire House Commons, Creek West, Eldridge North, Agrihood, and Utilities— each of which is envisioned to have a distinct character and intermix of uses and products. The Proposed Plan is anticipated to result in a total buildout of approximately 2,400 residents, 1,000 housing units, and 940 jobs,1 which would all be an increase from the current conditions of the SDC facility, closed in 2018 and largely vacant with some remaining uses.

A2-2

Sonoma Valley Fire District

The Sonoma Valley Fire District (SVFD) provides all-hazards fire, rescue, and paramedic level emergency medical services to the communities of Agua Caliente, Boyes Hot Springs, City of Sonoma, Diamond-A, El Verano, Fetters Hot Springs, Glen Ellen, Mayacamas, Temelec, Seven Flags, and Kenwood (under a contract for services).

The SVFD is governed by a seven-member Board of Directors, elected at-large by their constituents, and each serving a four-year term. The Fire Chief oversees the District's general operations under the Board of Directors' policy direction. The SVFD serves an area of approximately 114 square miles with a resident population of roughly 52,000. The District includes extensive wildland-urban interface (WUI) areas, large single-family homes, multi-family residential complexes, several hotels, ten schools, a hospital, and a historic downtown Plaza. SVFD also provides ambulance service to an additional 100 square miles, and an additional approximately 5,000 residents, as well as a significant number of visitors in the greater Sonoma Valley.

SVFD is a combination agency that maintains five career-staffed fire stations, three volunteer stations, an administrative office, and a maintenance facility. SVFD has 60 full-time personnel and over 50 volunteer personnel. SVFD's daily staffing includes four paramedic engines, two advanced life support ambulances, and a Battalion Chief. In addition, this staffing is enhanced through the cadre of dedicated volunteer firefighters and an assortment of specialized equipment, including a ladder truck, seven wildland engines, two rescue trucks, three water tenders, and three additional engines.

It is important to note that the SVFD also provides staffing for one shift for the Eldridge Fire Department at the existing SDC Fire Station as part of a contract for services agreement with the State of California Department of General Services. This staffing agreement and services have been in place since 2019.

The SVFD serves its Community from the below Fire Stations:

- Station 1 at 630 2nd St West, Sonoma
- Station 2 at 877 Center St, El Verano [Serves the lower portion of Highway 12, and the Verano and Donald St areas of the Plan Area]
- Station 3 at 1 West Aqua Caliente Rd, Agua Caliente [Located at the north border of the Plan Area and serves most of the Highway 12 corridor]
- Station 4 on Prospect Rd, Diamond A Ranch (Volunteer only)
- Station 5 at 13445 Arnold Dr., Glen Ellen
- Station 6 at 9045 Sonoma Highway, Kenwood
- Station 8 at 3252 Trinity Rd, Glen Ellen, CA 95442 (Volunteer only)
- Station 9 4601 Cavedale Rd, Glen Ellen, CA 95442 (Volunteer only)

SVFD is an independent Special District, organized and operating as defined under the Fire Protection District Law of 1987, California Health and Safety Code section 13800 et seq.

SDC Specific Plan Coordination and Communication

SVFD has been actively engaged in the Sonoma Developmental Center's future for over 5 years. This began in 2017 and continued with SVFD Fire Chief Steve Akre being an active participant in the SDC Coalition meetings beginning in 2018 that were held by Supervisor Gorin and included many SDC stakeholders. These efforts continued with both the Fire Chief and Elected Board members attending the first Eldridge Vision Workshop in June of 2019. SVFD has emphasized through the workshop and ongoing communications, the need for the SVFD to adequately serve the proposed project and the funding necessary to provide these services.

The SVFD (Chief Akre) has met multiple times with Brian Oh and Director Wick and conducted on-site meetings to review and discuss fire and EMS services and facilities. Chief Akre has additionally attended the subsequent Visioning Workshop and has been an active member of the Planning Advisory Team (PAT). Through these meetings, and work, the SVFD has kept in regular communication with County Staff regarding the progress on the release of both the Specific Plan and the Draft EIR.

Most recently, at the request of the Planning Department, the SVFD participated with the Department of Emergency Management (DEM) to develop two wildfire evacuation scenarios. The models utilized the enhanced alert and warning systems and new evacuation zones. The models also relied on the increased evacuation experience of County residents, the DEM, and the SVFD. We believe that these scenarios provide valuable and realistic assessments of how evacuations would be operationalized in 2022 and beyond. The scenarios were provided to the Planning Department and then to the consultants for traffic flow analysis and impacts.

SVFD Fire Marshal, Trevor Smith has reviewed both the specific plan and the Draft EIR. Fire Marshal Smith has attended all public meetings associated with the plan and the Draft EIR. Our Fire Prevention Office including both Fire Marshal Smith and Prevention Captain, Gary Johnson have been involved with the development of Glen Ellen Fire Safe Councils and are active participants in other community groups including the Glen Ellen Forum.

Comments on the Specific Plan Draft

A2-3

Sonoma Valley Fire District's Comments on Wildfire and other Hazards:

The SVFD agrees with the Goal (2-F) and Policies (2-54.a, b, c, and d), with the following changes.

2-54.a: The Sonoma Valley Fire District (SVFD) requests that language in the Specific Plan be amended to require the developer shall be required to prepare or fund the preparation of an Emergency Preparedness and Evacuation plan the complies with Sonoma County Evacuation Plans and the Sonoma Valley Fire District's procedures and identifies emergency access/egress routes and procedures.

2-54.b: The SVFD is not aware of any local, state or US Federal Standards in place for an on-site shelter-in-place facility. While this may be a worthwhile goal, there is nothing currently in place to guide this or evaluate its efficacy. In general, evacuating people

from a hazardous situation is the first priority and best option to ensure life safety. Sheltering-in-place is typically a strategy choice when there is a hazard, such as smoke, but one that is not a life-threatening hazard, such as a rapidly growing wildfire.

Sonoma Valley Fire District's Comments on Mobility and Access:

The SVFD agrees with the above Goal (3-B) and Policy (3-5), as updated below.

The SVFD is committed to ensuring the safety and timely evacuation of the community, and access for emergency vehicles, while balancing the protection of the wildlife corridor. We believe that this Goal and Policy needs more study and definition to accomplish the above objectives.

Sonoma Valley Fire District's Comments on Public Facilities:

The SVFD agrees with the above Introduction, Goal (6-A) and Policies (6-1), with the following changes.

Introduction: The SDC campus has historically been served by Eldridge Fire Department, a State agency that has coordinated with the Sonoma Valley Fire District for staffing and mutual aid. With the transition of the Planning Area away from State operations, the existing Fire District (Sonoma Valley Fire District) would require the construction of a new fire station at SDC (and the funding for the new station) to serve the residents of the Planning Area and the surrounding community. A new emergency operations center for Sonoma County could likewise be located at SDC, to serve the wider region in case of emergency.

Policy 6-1: Expand the Sonoma Valley Fire District to fully provide fire and EMS services to the SDC and identify a location for the construction of a new fire station (to SVFD standards and specifications) within the Core Campus. This includes providing the funding for this new facility, equipment, and ongoing services. Ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes.

The Sonoma Valley Fire District has the following comments on Implementation and Financing:

- The specific funding sources need to be identified for ongoing fire protection and EMS services, including the construction of the fire station, and purchasing of equipment, must be included in implementation and financing.

- The SVFD agrees that the new Fire Station needs to be built within the first five years after adoption and prior to any occupation of new development.
- The SVFD must be included in the coordination with local infrastructure agencies for future uses of water infrastructure located within preserved public parkland and open space. This is in order to ensure adequate water for fire suppression.
- The Design and construction oversight of the new fire station shall be the SVFD's in coordination with County Planning staff. The costs and funding sources for the design and construction need to be clearly identified.
- The plan elements listed in **Table 7-1** are assumed to be the responsibility of Sonoma County, and should be stated more clearly. This responsibility and the best estimated costs should be included in the Plan.
- The Specific Plan states that "it is assumed that vertical construction costs of community facilities and utility buildings will be the responsibility of public agencies". This needs to be explicitly and consistently stated which agency is financially responsible and how and when the funding is allocated.
- The SVFD requests that an MOU or other formal agreement be utilized for financing responsibilities.

The Sonoma Valley Fire District's Comments on the SDC Specific Plan Draft EIR

A2-4

Below are the SVFD comments on the Draft EIR, organized by section below:

Project Description:

The SVFD requests that the construction of a new Fire Station be specifically included in the Project Description.

Hazardous Materials:

A2-5

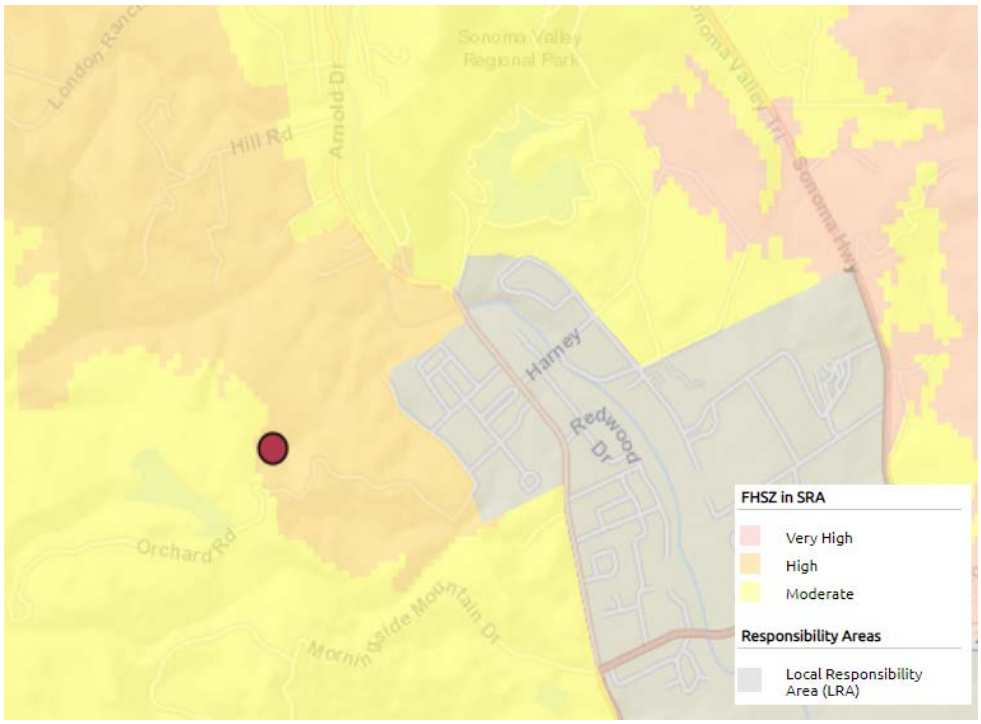
In the Review of Documents and Records, under the final heading of Emergency Management and Response, the Sonoma Valley Fire District requests that this section be corrected to accurately reflect that it is the ***Sonoma Valley Fire District*** and not the "Sonoma County Fire District" that provides services to the greater Sonoma Valley, including the SDC Project Area and surrounding areas.

A2-6

Impact 3.8-7: Implementation of the Proposed Plan would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires (Less than Significant)

SVFD's Comments:

Fire and Resources Assessment Program under the FRAP, the Planning Area is located in the Sonoma Creek watershed and includes areas of high to very high Fire Hazard Severity Zones west of Highway 12, areas of high fire hazard severity in the hills, and areas of moderate fire hazards severity zones in the vicinity of Suttonfield Lake and Fern Lake (Figure 3.16-2). The Core Campus is not included in any of these FHSZs. The figure also shows the extent of the 2017 Nuns Fire as well as Wildland Urban Interface (WUI) zones within the Core Campus and the northern and southern portions of the Planning Area. Based on the impacts and threats demonstrated by the 2017 Nuns fire; the evacuation of nearly 50% of the County for the 2019 Kincade fire; and the imminent threat from the 2020 Glass fire, SVFD suggests wildland fire remains a significant risk and therefore this impact should be potentially significant and mitigation measures should be included to reduce impacts to the degree feasible. Without adequate mitigation, this impact would be significant and unavoidable and would require findings and overriding considerations.



While new development and construction will conform to current building and development standards, there will be no additional protection made to the structures to make them safer in a wildfire environment. If the development was within the SRA and

located in any of the FHSZ's, additional protection and construction standards would apply making these structures less prone to ignition in the face of wildfire and would lessen the risk of these structures igniting and causing further spread of a wildfire event. California is in the process of updating these FHSZ boundaries and it is anticipated that the updates will be made public in early Fall of 2022.

The SVFD recommends the incorporation of a mitigation measure requiring that all new construction in the Specific Plan area meet elevated fire protection and construction standards. The SVFD recommends that all new construction including the retrofitting of existing structures utilize construction methods intended to mitigate wildfire exposure shall comply with the wildfire protection building construction requirements contained in the California Building Standards Code, including but not limited to the following: California Building Code, Chapter 7A, California Residential Code, Section R337, California Referenced Standards Code, Chapter 12-7A. In addition to the modifications to the construction standards the SVFD recommends requiring Fire Protection Plans in compliance with the Sonoma County Fire Code Section 13-59.5 for all development located within the SDC Specific Plan area

The SVFD will consider establishing locally designated FHSZs or WUI zones depending upon the outcome of the State's update of FHSZ boundaries and determinations.

Land Use:

A2-7

Impact 3.10-2 – Development under the Proposed Plan would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating and environmental effect.

SVFD"s Comments:

This impact is incorrectly identified as being less than significant. The proposed project would conflict with Sonoma County General Plan GOAL LU-4 which states

"*Maintain adequate public services in both rural and Urban Service Areas to accommodate projected growth. Authorize additional development only when it is clear that a funding plan or mechanism is in place to provide needed services in a timely manner."*

SVFD concurs with and supports this goal; however, there is no currently clear funding plan or mechanism in order to SVFD to ensure that sustainable, adequate fire and emergency medical services can be provided for the future growth. The District's one

time impact fee (based on estimates of the SDC development) will not be adequate to fund the necessary one-time facility and equipment needs. However, it will help to support ongoing infrastructure needs, but the impact fees will not provide the steady revenue stream needed to ensure adequate staffing levels for ongoing fire and emergency medical services operations. Accordingly, an additional sustainable funding plan or mechanism must be established to provide the full range of necessary fire and emergency medical services in a timely manner.

SVFD recommends inclusion of the following mitigation measure:

Mitigation Measure 3.9-2: The County shall enter into service agreement with SVFD that provides the sustainable funding plan to augment the existing impact fees to provide for required facility and equipment needs, as well as to fund staffing levels for ongoing fire and emergency medical services operations. See comments under Policy PS-3m below.

Public Services and Recreation: A2-8

The SVFD notes several conflicts with the following objectives and policies.

Policy PF-2a, Policy PF-2g, Policy PF-2x, and Policy PF-2b:

This policy should be changed to include "Districts" in addition to Cities.

As discussed above, the SDC Specific Plan does not provide a coordinated plan or funding mechanism regarding the provision of ongoing fire and emergency medical services for the additional growth and demand. The project does not comply with this policy and a mitigation measure should be included to include in lieu fees for future development to ensure adequate services are provided as subsequent development is implemented under the Specific Plan. In 2021, the County of Sonoma approved an impact fee for SVFD, but the infrastructure inventory and consequent impacts were estimates only and will need to be updated to reflect the evolving and expanding project scope and impacts. Additionally, these impact fees fund infrastructure only and do not provide funding for staffing and operational costs essential for sustainable increased fire and emergency medical services required because of the SDC Specific Plan. Therefore, the Proposed Project conflicts with the above policies and this impact is potentially significant and requires mitigation. Implementation of recommended Mitigation Measure 3.9-2 would reduce this impact to less than significant.

Policy PF-2m:

Policy PF-2m needs to be amended to specify the Sonoma Valley Fire District as the lead fire agency and include who is responsible for both the preparation and cost of the Fire Services Master Plan.

Policy PF-2n:

The Sonoma Valley Fire District strongly supports this policy with the following change: that "comparable uses" be changed to "comparable service areas within the SVFD".

Policy PS-3m:

SVFD recommends the addition of two mitigation measures to ensure that this policy is met. As a means to develop a sustainable funding plan to augment the existing impact fees to support staffing levels for ongoing fire and emergency medical services operations, SVFD recommends that the EIR be amended to require the County of Sonoma to revise and expand its existing service agreement with SVFD to ensure adequate services.

Additionally, another recommended mitigation measure is to require that the SVFD impact fee study rates be reevaluated and updated in light of more certainty in the scope and breadth of the SDC Specific Plan development impacts and infrastructure needs. This updating process may also identify additional exactions and mitigations based on a particular project (or portions of projects); which then can impose additional specific mitigations beyond the generic impact fees.

A2-9

3.13.2.1 Physical Setting:

The Sonoma Valley Fire District requests the following updated description be used in place of the current DEIR's description.

The SDC property is served by the Eldridge Fire Department, which operates out of the station located directly on the main campus. The Eldridge Fire Department is a State agency that coordinates with the County as an all-risk department, responding to all emergencies within the SDC property. Due to uncertainty whether the department would continue operation after closure of the developmental center, the fire department lost many of its staff members and is currently understaffed. However, the Eldridge Fire Department was extended to continue full operation and currently covers two of three shifts, supplemented by staff from the neighboring fire district Sonoma

Valley Fire District (SVFD) for the remaining shift, following a 2/4 schedule (two days on, four days off).

The Eldridge Fire Department maintains a two-minute getaway service standard from the time they receive a service call, which are responded to through a mobile data transmitter (MDT) system. Equipment operated by the department includes a Type 1 fire engine and a Type 3 brush rig. An ambulance is also available through partnership with SVFD, but it is not used for service calls. The Eldridge FD does not have an ISO (Insurance Services Office) rating but runs under SVFD's Class 2 rating standard.

The Eldridge Fire Department continues to operate independently, and it is anticipated that future services will still be provided by the Sonoma Valley Fire District, as the entire SDC Planning Area is within the boundaries of the SVFD. The Sonoma County Local Agency Formation Commission (LAFCO) approved this boundary change first in 1996 and then affirmed by LAFCO when the Sonoma Valley Fire District was formed in 2020.

The Sonoma County Fire Prevention Division is responsible for programs, procedures, and projects for preventing outbreak of fires and to regulate storage, handling, and processing of hazardous materials in the county. Sonoma County has 25 fire departments that cover the 44 public fire districts in the county, with additional support from Cooperative Fire Protection Agreements with the State Department of Forestry and Fire Prevention (CAL FIRE).

The Sonoma Valley Fire District (SVFD) provides all-hazards fire, rescue, and paramedic level emergency medical services to the communities of Agua Caliente, Boyes Hot Springs, City of Sonoma, Diamond-A, El Verano, Fetters Hot Springs, Glen Ellen, Mayacamas, Temelec, Seven Flags, and Kenwood (under a contract for services).

The SVFD is governed by a seven-member Board of Directors, elected at-large by their constituents, and each serving a four-year term. The Fire Chief oversees the District's general operations under the Board of Directors' policy direction. The SVFD serves an area of approximately 114 square miles with a resident population of roughly 52,000. The District includes extensive wildland-urban interface (WUI) areas, large single-family homes, multi-family residential complexes, several hotels, ten schools, a hospital, and a historic downtown Plaza. SVFD also provides ambulance service to an additional 100 square miles, and an additional approximately 5,000 residents, as well as a significant number of visitors in the greater Sonoma Valley.

SVFD is a combination agency that maintains five career-staffed fire stations, three volunteer stations, an administrative office, and a maintenance facility. SVFD has 60 full-time personnel and over 50 volunteer personnel. SVFD's daily staffing includes four

paramedic engines, two advanced life support ambulances, and a Battalion Chief. In addition, this staffing is enhanced through the cadre of dedicated volunteer firefighters and an assortment of specialized equipment, including a ladder truck, seven wildland engines, two rescue trucks, three water tenders, and three additional engines.

The SVFD maintains standards of response coverage benchmarks of six minutes until the first unit arrives on the scene for urban areas, seven minutes for suburban areas, and 12 minutes for rural areas, with a goal of meeting these standards for 90 percent of all calls for service. Based on the 2017 Annual Report, which represents the most recent data available, there were approximately 5,300 calls for service, most of which were for emergency medical services (68 percent). The District has achieved a one minute and 56 second average improvement in response times.

Another nearby fire station is the seasonally staffed CAL FIRE Glen Ellen Station located within the Sonoma Valley Regional Park. With five SVFD stations in addition to the Eldridge FD within four miles of the SDC site, fire service is well-established in the area. Table 3.13-1 lists fire department stations anticipated to serve the Planning Area.

Table 3.13-1 Fire Department Stations Serving the Planning Area

A2-10

This table should be amended to replace "SVFRA" with "SVFD" and to add Fire Station 6 9045 Sonoma Highway, Kenwood. 1 Type 1 Fire Engine.

13.3.3 Relevant Policies and Implementing Actions:

A2-11

The Sonoma Valley Fire District's comments on the below Goal and Policy:

Goal 6-A Community Facilities: Provide high-quality community facilities and spaces to serve new residents of the SDC site and the greater Sonoma Valley.

Policy 6-1 Expand an existing Sonoma County fire district to serve SDC, and identify a location for the fire district to construct a new fire station within the Core Campus. Ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes.

Sonoma Valley Fire District's Comments on Public Facilities:

A2-12

The SVFD agrees with the above Introduction, Goal (6-A) and Policies (6-1), with the following changes.

Introduction: The SDC campus has historically been served by Eldridge Fire Department, a State agency that has coordinated with the Sonoma Valley Fire District for staffing and mutual aid. With the transition of the Planning Area away from State operations, the existing Fire District (Sonoma Valley Fire District) would require the construction of a new fire station at SDC (and the funding for such) to serve the residents of the Planning Area and the surrounding community. A new emergency operations center for Sonoma County could likewise be located at SDC, to serve the wider region in case of emergency.

Policy 6-1: Expand the Sonoma Valley Fire District to fully provide fire and EMS services to the SDC and identify a location for the construction of a new fire station (to SVFD standards and specifications) within the Core Campus. This includes providing the funding for this new facility, equipment, and ongoing services. Ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes.

3.13.3.4 Impacts:

A2-13

Impact 3.13-1:

This impact is not less than significant and the impact category should be amended to be Less than Significant with Mitigation. SVFD concurs with and supports this goal; however, there is currently no clear funding plan or mechanism in order to SVFD to ensure that sustainable, adequate fire and EMS can be provided for the future growth. The SVFD does not have capacity either in funding or operations to provide the necessary and appropriate fire and EMS services to the SDC Planning area. Current new construction costs for Fire Stations are $1,000 per square foot. A mitigation measure is required to provide a funding mechanism for the new fire station design and construction.

Fire Protection: The SVFD requests the following updated description be used in place of the existing description.

A2-14

The Eldridge Fire Department continues full operations that service the Planning Area, supplemented by staff from the neighboring fire district, SVFD. The increased local projected buildout population, employment, and housing units generated by the Proposed Plan would likely result in a subsequent increase in fire and emergency

medical service calls to the Planning Area compared to existing conditions. Standards of response coverage benchmarks, as defined in the SVFD Standards of Response Coverage report, include six minutes until the first unit arrives on the scene for urban areas, seven minutes for suburban areas, and 12 minutes for rural areas, with a goal of meeting these standards for 90 percent of all calls for service. In order to maintain standards of response coverage benchmarks as a result of buildout under the Proposed Plan, services will be provided by the Sonoma Valley Fire District (SVFD) from the new fire station to be built in the SDC Planning Area as well as from the SVFD's 5 other staffed fire stations.

Further, the Proposed Plan will expand the existing SVFD to fully provide fire and EMS services to the SDC Planning Area and identify a location for the construction of a new fire station (to SVFD standards and specifications) within the Core Campus in order to meet the needs of the population under buildout (proposed Policy 6-1). This includes the Plan providing the funding for this new facility, equipment, and ongoing services. The new location of the fire station will be within the Core Campus to ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes. The Proposed Plan will also explore the feasibility of providing an additional east-west connection from the Core Campus to SR 12 to further improve emergency access (proposed Policy 3-5).

Construction of a new fire station could result in subsequent environmental impacts; the specific impacts of which are not known at this time. However, any new developments of fire protection facilities to serve the Planning Area would be located and constructed on existing urban and built-up land within the Core Campus (proposed Policy 6-1). Environmental impacts related to construction emissions, vehicle miles traveled (VMT), and biological resources associated with construction of the proposed new fire station or SR 12 connector are accounted for in technical modeling provided in other chapters of this EIR. Further, proposed policies 5.2-30 and 5.2-31 also ensure that new developments use reclaimed and salvaged materials and incorporate green building measures to mitigate environmental impacts. Because there is not sufficient information as to location or timing for a new fire station, analysis of potential impacts would be speculative at this time. Further, construction of a new fire station would be subject to separate project-level CEQA review at the time the design is proposed in order to identify any potential project-specific impacts and identify any mitigation as may be appropriate. As such, compliance with existing regulations as well as proposed policies would reduce impacts to a less-than significant level related to the provisions of fire protection facilities.

Transportation:

A2-15

3.14.4.3 Relevant Policies and Implementation Actions

Goal 3-B: Regional connections: Develop and support greater connectivity between SDC and the surrounding areas, including through a direct connection to Highway 12.

Policy 3-5: Reuse existing street network to the greatest extent feasible. Improve multi-modal access from the SDC to SR 12 by exploring the feasibility of providing an additional east-west emergency access connection from the site that includes high quality pedestrian and bicycle facilities.

A2-16

Impact 3.14-4: Implementation of the Proposed Plan would not result in inadequate emergency access (Less than Significant)

As mentioned in the Specific Plan comments under Transportation, the SVFD is committed to ensuring the safety and timely evacuation of the community, and access for emergency vehicles, while balancing the protection of the wildlife corridor. We believe that this Goal and Policy needs more study and definition to accomplish the above objectives.

A2-17

Utilities and Service Systems:

3.15.4.3 Relevant Policies and Implementing Actions

Public Facilities, Services and Infrastructure

Goal 6-A and Policy 6-1: Please see the SVFD's comments on these in the previous sections 6.1 of the Specific Plan and 3.13.3 of the DEIR.

Goal 6-26: Ensure the SDC site's water rights are retained for uses within the core campus and for habitat preservation, ecological services, groundwater recharge in the open space area, and to increase the reliability of the regional water supply

Goal 6-27: Maintain water supply and filtration at the site and ensure adequate flexibility and supply to serve regional needs in case of an emergency.

SVFD relies on the Valley of the Moon Water District for water supplies for fire suppression. SVFD supports the comments and/or recommendations from the VOMWD regarding Goals 6-26 and 6-27 in order to ensure adequate fire suppression water volume and distribution, including fire hydrants.

A2-18

Wildfire:

16.1.3.3 Relevant Policies and Implementing Actions

Sonoma Valley Fire District's Comments on Wildfire:

The SVFD agrees with the Goal (2-F) and Policies 2-54.(a, b, c, and d) 6-1, and 6-27, with the following changes.

2-54.a: The Sonoma Valley Fire District (SVFD) requests that the developer shall be required to prepare or fund the preparation of an Emergency Preparedness and Evacuation plan the complies with Sonoma County Evacuation Plans and the Sonoma Valley Fire District's procedures and identifies emergency access/egress routes and procedures.

A2-19

2-54.b: The SVFD is not aware of any local, state or US Federal Standards in place for an on-site shelter-in-place facility. While this may be a worthwhile goal, there is nothing currently in place to guide this or evaluate its efficacy. In general, evacuating people from a hazardous situation is the first priority and best option to ensure life safety. Sheltering-in-place is typically a strategy choice when there is a hazard, such as smoke, but one that is not a life-threatening hazard, such as a rapidly growing wildfire.

A2-20

Policy 6-1: Expand the Sonoma Valley Fire District to fully provide fire and EMS services to the SDC and identify a location for the construction of a new fire station (to SVFD standards and specifications) within the Core Campus. This includes providing the funding for this new facility, equipment, and ongoing services. Ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes.

A2-21

6-27: SVFD relies on the Valley of the Moon Water District for water supplies for fire suppression. SVFD supports the comments and/or recommendations from the VOMWD regarding Goals 6-26 and 6-27 in order to ensure adequate fire suppression water volume and distribution, including fire hydrants.

A2-22

Impact 3.16-1: Implementation of the Project has the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Less than Significant).

SVFD's Comments:

New development is subject to planning, building, public works, and fire review to evaluate the construction and design to ensure compliance. The most recent codes and regulations will be used as a measure to ensure that the new developments are safely designed and constructed and concerns of access, water supply, fire suppression and detection systems, and safe construction will be ensured. This new development and its overall safety would be affected by the ability of the street network to provide adequate ingress and egress during emergency evacuation and the associated mitigation response forces.

Mitigation measures should be included to address this impact, including additional wildfire cameras and a communication system to facilitate evacuations.

Additionally, as described in Section 3.13: Public Services and Recreation, it is anticipated that fire protection and EMS services will be provided by the SVFD, in order to maintain standards of response coverage benchmarks under the Proposed Plan. The Proposed Plan will also expand the Sonoma Valley Fire District to fully provide fire and EMS services to the SDC and identify a location for the construction of a new fire station (to SVFD standards and specifications) within the Core Campus in order to meet the needs of the population under buildout (proposed Policy 6-1). This includes providing the funding for this new facility, equipment, and ongoing services. The new location of the fire station will be within the Core Campus to ensure easy and proximate emergency access to Arnold Drive. Therefore, the implementation and operation of the Proposed Plan would not substantially impair of emergency response procedures. Furthermore, the Proposed Plan will result in new infrastructure and piping that will ensure that adequate water capacity and pressures are maintained to help with firefighting.

Most recently, at the request of the Planning Department, the SVFD participated with the Department of Emergency Management (DEM) to develop two wildfire evacuation scenarios. The models utilized the enhanced alert and warning systems and new evacuation zones. The models also relied on the increased evacuation experience of County residents, the DEM, and the SVFD. We believe that these scenarios provide valuable and realistic assessments of how evacuations would be operationalized in 2022 and beyond. The scenarios were provided to the Planning Department and then to the consultants for traffic flow analysis and impacts.

Cumulative Setting and Impact Analysis

A2-23

The SVFD's number one concern is for the safety of our Community's residents, visitors, and fire suppression personnel. The Fire Marshal's office has been active in the review of the SDC Specific Plan including a review of the Draft Environmental Impact Report. We have listened to and integrated into these comments the policy direction of the elected SVFD Board of Directors, public comments made to SVFD, and public comment meetings.

Development within the SVFD service area is welcomed especially when we can enhance opportunities for residents and businesses while ensuring safety for all. SVFD, in coordination and collaboration with other Sonoma County entities to include but not limited to; Planning Department, Building Department, Fire Prevention Division of Sonoma County, Department of Emergency Management, Law Enforcement, Public Works etc. will review construction projects to ensure compliance with regulations designed to ensure safety. These regulations, including the California Fire Code, are designed to safeguard public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structure, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations.

In spite of the reviews and compliance with legal standards to ensure safety, the fact remains that the SDC Specific Plan will increase the total amount of residents, employees, and visitors to our community. This overall increase in population, structures, and vehicles will create impacts to our street networks, the ability to ingress and egress in emergencies, and increase the total number of calls for fire and emergency medical services to which SVFD must respond.

There are cumulative impacts to the fire service, such as wildland fires that are potentially significant and require additional study and recommended mitigation measures to ensure the safety of the community as a whole.

Alternatives:

A2-24

The SVFD's recommended mitigation measures apply to all of the growth alternatives.

From: Thomas Ells
To: Hannah Whitman
Subject: NSV MAC Meeting
Date: Wednesday, September 21, 2022 4:54:46 PM
Attachments: SCD EIR and Specific Plan Process Comments 3 Valley of the Moon.pdf

---

EXTERNAL

Dear Hannah & NVS MAC Members,
Please distribute the attached by email to participants/members of the MAC.
Thank you
Thomas Ells

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

TCE
ENGINEERING

Thomas C Ells, RCE 40656
MS Tax, MS Fin, MS Acc
ED, Galen's Gardens/SHS

Investment Securities $ Stocks* $ Agency* & Municipal Bonds**
Real Estate Consulting $ Property Management

154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Formerly NASD Series 7 & 63 Registered Rep, & Series 66 Financial Advisor.
Securities Not Available

Mr Brian Oh, Comprehensive Planning Manager, SDC
Permit Sonoma, County of Sonoma
2550 Ventura Ave.
Santa Rosa, CA 95403

Regarding: Sonoma Developmental Center (SDC) Specific Plan (SP) & Program DraftEIR (EIR) Comments 2

Sept 18, 2022

County's evidentiary record is anecdotal @best. Sonoma Valley represents a national treasure, as described as, "The Valley of the Moon". Sonoma is the Native Indigenous American name for the valley. When White settlers asked what Sonoma meant, Natives pointed to the trace of the Moon setting and rising behind the eastern ridgetops during certain times of the year, the White's interpretation was that "Sonoma" meant 'the valley that the Moon touches' ("The Valley of the Moon"). My Anthropology studies and linguistic avocation has taught me to hear the phonetic sounds (the basic phonemes), particularly for significant language words, words that have cultural, spiritual, or international usage, such as words which are adopted into a language from another. The basis of this study is Multi-critical analysis as opposed to diacritical analysis. Typically there will be very little understanding of the actual meaning of an adopted word. Then, if it retains a high referential standing, it indicates it's an adopted word, not merely a forgotten word. Typical adopted words with high Referential standing and forgotten meanings are: Alleluia, precious, and Amen.

B1-1

In this case we have Sonoma: what are the phonemes for "Sonoma", they are "Tsu" (not Tso) & "Noma"; so in this case our supposition is correct, because these are two very important international words. "Tsu" or "Tzu" represents the name given by the Chinese to one of their greatest Philosophers, "LaoTzu" the founder of Taoism (from UCI Anthropology studies "Chinese, Taoism & Confucianism", 1983), "LaoTzu" was originally named "LoTzu", meaning "Man-Master" (Philosopher) and when he was older it was changed to "LaoTzu", meaning "Old-Man-Master" (or Great Philosopher): Therefore "Tzu" means "Master". "Noma" is the Aramaic word for 'name' establishing the identity and essence of a thing and thereby giving man control over the substance, and in the Greek "Nomo" means "law or control", again, in Western parlance the essence is unknowable but the manifestation is controllable by the 'name': so control and name are the same thing, therefore "Noma" means "name" (from participation in Antiochian and Greek culture, which develops from a multi-critical analysis as opposed to diacritical).

B1-2

"Sonoma" therefore means "The Master's Name", and in a Spiritual sense, it means the highest name above all names. "The Master's Holy Name", in an Eastern Spiritual sense describing God's, the Creator's, or Great Spirit's control over the location by the Moon's contact with the Earth, not Man's control over God by invocation of the Name. This we hear many times from Joseph Campbell, man's search for control vs man's search for God.

B1-3

TCE ***ENGINEERING*** *154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com*

Also, in another form of Transcendence, both “Tsu” and “Noma” mean “control”, so they are like conjoined twins, in a simple manifestation of the “Rosetta Stone”. Looked at separately, we call this a “Translation”, but conjoining them is a form of transcendence in the physical plane of existence. The name “Sonoma” appears to be used as a descriptive tool, by connecting physical transcendence (translation of place) with the location of a Spiritual Transcendence (in reference to the verticality of the Moon’s touching the Earth), it again mirrors the “Rosetta Stone” representing two kinds of Transcendence, with the Earthly “T” crossing the Spiritual vertical demarcation.

B1-3

More than the mere analysis of the word and its application to the space, is the significance of "Sonoma" in the cross-cultural linguistic representation of deification using ancient language references from across the sea, and linked only by many thousands of years. There is no other place name which connects so perfectly the unity of man, the Name itself transcends both the ages and the seas, thus we have the essence of a World Heritage Cultural Site. Like many other UNESCO World Heritage Sites, which are in disrepair and in danger of destruction, Sonoma's "Valley of the Moon" is suffering an existential threat from the Proposed Project Alternative. Located at near the exact geographic center of Sonoma Valley, 10 miles from it's head along Hwy 12, and 12 miles from it's outlet at Skagg's Island. And transected by a vital Wildlife Corridor connecting 2 Mountain Parks: Sugarloaf/Hood and Jack London Parks; no discussion or analysis has been given to the significance of this World Heritage Cultural Site, or the impacts or any mitigation from the significantly new, taller, and dense construction within the Program Draft EIR-SP Project analysis (cursory discussion was given to light pollution, but none to the physicality of the presence of tall, dense, populous village construction in the midst of an Historic Treasure, McDonalds centered in Teotihuacan).

B1-4

The significance of this Spiritual location was not lost on those who created the Sonoma Developmental Center for a healing center for their developmentally disabled children. We should hope that at this more enlightened time, and consistent with CEQA, the Historical Preservation Act, and the 50th Anniversary of the World Heritage Convention (Sept 17, 2022), we should be prepared to preserve both the content and the context, as much as is physically possible, for this National Treasure, "The Valley of the Moon". Under the UNESCO World Heritage Convention, which the United States was signatory (though withdrawn from 2018), we should "strengthen Credibility of the World Heritage List, ensure Conservation of World Heritage properties, promote Capacity-building measures, increase public awareness, involvement and support for World Heritage, and enhance the role of Communities in implementation of the World Heritage Convention". What has been done here appears to be the opposite, a complete neglect of not only Native American cultural values, but World Heritage Convention values.

B1-5

Analysis of EIR Historical Asset discussion:

The Program Draft EIR is silent on the above discussion, while reporting Environmental Impact Report - County Summary "5.3 Significant and Unavoidable Impacts: According to CEQA Guidelines 15126.2(b), an EIR must discuss any significant environmental impacts that cannot be avoided under full implementation of the proposed program...However the Proposed Plan aims to be self-mitigating. Thus, all proposed policies aim to address environmental impacts (to the, sic) to the greatest extent feasible and no mitigation measures are required. The analysis in Chapter 3 determined that the Proposed Plan would result in significant impacts to the cultural/historic resources and transportation (home-based work trip vehicle miles traveled per capita) that, even with implementation of mitigation measures, would remain significant and unavoidable". This language neglects real analysis of the Null Hypothesis Project, and only considers the Proposed Plan impacts which it states (along with all other alternatives) have similar impacts [without discernment as to avoidable, mitigatable, or unmitigatable], which is entirely untrue in the Null Hypothesis case.

B1-6

Continuing; "5.3.1 Cultural, Historic, and Tribal Resources: new construction under the Proposed Plan has the potential to disconnect the remaining contributing resources in the Core Campus from those in the Community Separator and Regional Parks lands to the east and west, disrupting the SSHHD's overall integrity to the point that it would no longer be eligible for listing in the National Register of Historic Places, CRHR, or as a California Historic Landmark. This impact, in addition to demolition of the aforementioned resources would result in a substantial adverse change to the significance of the historic district such that the significance of the historic district would be materially impaired pursuant to Section 15064.5. Implementation of goals 2-I and 2-J and policies 4-20 through 4-32 as well as Standard Conditions of Approval (LU1 through LU6) would partially compensate for the impact associated with the demolition of historically contributing resources and physical alteration of the historic district to the maximum extent practicable; however, because these measures would not be enough to avoid or reduce the impact completely, the Proposed Plan's impact would remain significant and unavoidable". No mention is made of the Tribal Resources, because no artifacts remain or they could be recovered in a project excavation, but this does not address the transcendent value of the space and place name as a World Heritage Cultural Site, which can be subsumed in the potential Project construct, where we have heard discussed 2-3Msf of Commercial Construction.

B1-7

Again, the Program Draft EIR's considerations of the impacts, mitigations, and alternatives appear limited to the Proposed Plan Project Alternative, and do not address the Alternatives, nor the Null Hypothesis Project, continuing a foregone conclusion (see 2-3Msf of Commercial Construction discussed above, is that unmitigatable?).

B1-8

Please see the following analysis of project conceptual iteration for planning and design.

TCE ENGINEERING 154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Please see pg4 p3 San Mateo Gardens, re "substantial evidence in the record, is a predominantly factual question...for the agency...drawing on its particular expertise"; here we are bringing your attention to the word “expertise”.

B1-8

Friends of the College of San Mateo Gardens v. San Mateo County Community College District

https://law.justia.com/cases/california/court-of-appeal/2017/a135892.html

We want to accept the presumption of legal operation, but we must also accept and correct the illegal condition when evidence is presented to the contrary. In a County system, Engineering is not conducted without Accounting. But if the Accounting fails such as for Northwestern Pacific Railroad, the sad evidence must be accepted, and correction immediately made or we suffer the loss of funding or function. No one was there to accept the Trucker's weighmaster's tickets when the washout deliveries were made in the upper NWP line, none could be found, none ever delivered, no NWP.

B1-9

The reason we approach the initial determination of a project this way, using California Supreme Court’s remand for San Mateo Gardens, is, here we equate the Court EIR analysis process to the Engineering process, in that there are a sequence of iterative steps involved. This process is best exemplified from the CA Supreme Court's remand expressed in San Mateo Gardens, where a series of back-and-forth evaluations and propositions are made in analyzing a project (one such method is CPM,Critical Path Method), which is the same process we use in conceptual design or planning.

A comparison is made by question; does the "initial concept" with its features fit the need and the existing space, then we may have to adjust the concept's features to the needs, or to the space? Conceptual planning designs forward & backward many times.

B1-10

This comparison is not to decry the effort expended or the information obtained through Planning education or product, but a marathon runner prepares for a marathon, not Law or Engineering. Preparation for a marathon may be great preparation for someone wanting to become a Lawyer, Doctor, or Engineer, but by itself does not make one a Lawyer, Doctor, or Engineer. Nor is an Urban Planner a qualified Civil Engineer, and therefore is unable to make professional judgments in respect to the Planning of "fixed works" identified in BPC 6731.

[See Licensing BPC 6730-6730.2(a); 6731; 6734; 6735(a). See also Administrative Mandamus case, Morris v Harper (2001) 94 Cal.App.4th 52 . “After all, ‘“‘[i]t is the refusal or neglect to perform an act which is enjoined by the law as a present duty that serves as the very foundation for the [mandamus] proceeding.’ ” (Morris v. Harper, supra, at p. 60.)"]

B1-11

San Mateo Gardens; "Instead of resting on whether a project is new “in an abstract sense,” the “decision to proceed under CEQA’s subsequent review provisions must . . . necessarily rest on a determination—whether implicit or explicit—that the original environmental document retains some informational value.” (Id. at p. 951.) Such an inquiry “is a predominantly factual question . . . for the agency to answer in the first instance, drawing on its particular expertise.” (Id. at p. 953.)"

From where does this “expertise” derive, Planners require no Science education?

The EIR standard is, if/when there are significant environmental impacts, then a review of impacts and mitigations must obtain (other than stating overriding or unmitigatable conditions), and a "judicial review must reflect the exacting standard that an agency must apply". San Mateo (ibid) pg 8.

What this is referring to is, that the evidence must be prepared to a very high standard, from the beginning, in order for it to be considered "substantial evidence in the record". Where is the “exacting Standard” & “expertise”?

B1-12

According to the National Society of Professional Engineers code of ethics, Professional Engineers may disagree without a single outcome obtained, but must remain decorous.

["The Supreme Court in San Mateo Gardens provided guidance for how to apply the subsequent review provisions. It explained that whether “major revisions” will be

required as a result of project changes “necessarily depends on the nature of the original environmental document,” i.e., whether it was an EIR or a negative declaration. (San Mateo Gardens, supra, 1 Cal.5th at p. 958.) It further explained that the appropriate standard of review also depends on the nature of the original environmental document. Although an agency’s determination of whether major revisions are required is reviewed for substantial evidence, “judicial review must reflect the exacting standard that an agency must apply when changes are made to a project that has been approved via a negative declaration,” as opposed to the deferential standard that applies when the project was originally approved by an EIR. (Id. at p. 953; see Committee for Re-Evaluation of TLine Loop v. San Francisco Municipal Transportation Agency (2016) 6 Cal.App.5th 1237, 1247, 1251-1252 [applying San Mateo Gardens in case where project originally approved by EIR]; Latinos Unidos de Napa v. City of Napa (2013) 221 Cal.App.4th 192,"]

B1-13

In planning, we have said, the process is intensely exhaustive and iterative, and what is described as the Court EIR review process is also exhaustive and iterative.

The Court ceding competency to the local agency is similar to the process of presenting a case to a Court of Competent Jurisdiction. A Court of Competent Jurisdiction is composed firstly of a trained lawyer, either by a Law School or by preparation and passing the Baby Bar. Then of course, the prospectant Judge must pass the National Bar Exam locally administered, next the Judge must practice law for a minimum of 10 years. At some point the Judge is appointed or runs for election, and finally, the Judge is selected to hear a case by the Chief Judge. The Court itself must also be of Competent Jurisdiction, meaning it is the proper venue, as established by our system of Jurisprudence. These are significant tests.

B1-14

If someone went to College and studied English or Political Science, they could learn a lot of laws, but they would not be presumed to know how to practice Law,

And they did not go to Law School or pass the Baby Bar, and they have not prepared to be a Lawyer, let alone a Judge.

TCE ENGINEERING 154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Engineering is one of the most complex problems in supply & demand, as evidenced by the number of divorces in custom home remodeling and construction, and why Public Works requires Licensed Civil Engineers.

Our critique is not meant to characterize the work of any Engineers having completed reports for the SDC EIR-SP, since we do not know what instructions they were given.

B1-15

But we contend that recommended demolition for over 1.2Msf without analysis of 400,000sf, and recommended demolition of ~75,000sf of Hospital Treatment Building rated at "not requiring any updates", represents an incomplete analysis at best, and certainly a neglect of the impacts on the resources being analyzed.

As we spoke of backward-and-forward analysis in design, this is required in Planning as well, unless a truncated process is employed. It is far easier to make the facts fit the design, than to make the design fit the facts. If your timeline is short, it is far easier for you to establish the Project, and make the analysis fit the Project by not addressing impacts except in a standard way, such as, "(h)owever the Proposed Plan aims to be self-mitigating". “from Program Draft EIR 5.3 Significant and Unavoidable Impacts”

B1-16

Subsequent to the very specific State Law being passed to sell SDC, incorporating significant intent for community participation, many meetings were held with studied interest and good comments. Comments were sent to Permit Sonoma and the Planners involved in SDC's NOP of Program Draft EIR & SP, but these comments were not incorporated in the evaluation nor in the Proposed Alternative Project SP, nor were they forwarded to the Planning Commission, nor were they provided to other participants or commenters to the EIR & SP.

This is not standard practice, and violates CEQA Code 15300(a)&(b)(1)-(3); “(a) Before granting any approval of a project subject to CEQA, every lead agency or responsible agency shall consider a final EIR or negative declaration or another document authorized by these guidelines…(b) Choosing the precise time for CEQA compliance involves a balancing of competing factors, EIR’s and negative declarations should be prepared as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment.”

B1-17

(b)(1) "With public projects, at the earliest feasible time, project sponsors shall incorporate environmental considerations into project conceptualization".

The timeframe window for "cumulative impacts" evaluation was limited to after Proposed Alternative Project completion, leaving out the demolition and construction of the entire project, let alone the life cycle embedded costs, GHG’s and energy to be demolished as a consequence from the new construction.

B1-18

This time frame results in unsubstantiated conclusions for the Proposed Project Alternative in ES.3 Alternatives to the Proposed Plan, “As discussed in Impacts 3.6-2, the Proposed Plan would thus support and reflect the increasingly stringent State and local goals and regulations that seek to increase energy efficiency, reduce energy consumption, and prioritize renewable energy – reinforcing that the Proposed

Plan would not result in cumulatively considerable impact with respect to wasteful, inefficient, or unnecessary consumption of energy resources." They left out 161,000 tons of waste.

15300 (b)(3), "With private projects, the Lead Agency shall encourage the project proponent to incorporate environmental considerations into project conceptualization, design, and planning at the earliest feasible time."

B1-18

This truncated analysis appears to be the type that establishes priorities, goals, and objectives before the certification of the EIR is complete, therefore "limiting alternatives or mitigation measures".

This truncated analysis would violate CEQA Code 15300 (b)(2), "public agencies shall not undertake actions concerning the proposed public project that would have a significant adverse effect or limit the choice of alternatives or mitigation measures, before completion of CEQA compliance";"and for example, agencies shall not:(b)(2)(B)", "Otherwise take any action which gives impetus to a planned or foreseeable project in a manner that forecloses alternatives or mitigation measures that would ordinarily be part of CEQA review of that public project".

B1-19

Given that Permit Sonoma will only provide the public's comments to the Planning Commission upon final EIR Certification, and a series of comments have been made to the SDC Comprehensive Planning Manager which has not incorporated the public's comments into the Proposed Project Alternative, "at the earliest feasible time", they appear to have violated Sec's 15300(a)&(b)(1)-(3), inclusive.

What we contend here is, that the proper "back-and-forth" process has not occurred, as within the planning process proper, within the design process proper, within the EIR process, as would be the same within the Court's evaluation of the EIR process itself, from San Mateo Gardens remand from the California State Supreme Court, which constitutes proper Authority to all jurisdictions within California.

B1-20

We also contend that "particular expertise" and "the exacting standard that an agency must apply" is not available to the review that the "judicial review must reflect", without a Licensed Civil Engineering in Responsible Charge of "Fixed Works" Planning, BPC 6731.

Your Humble Servant Thomas Chase Ells

Thomas Chase Ells, ED, Galen's Gardens/Samaritan Housing Society
Anthropologist, RCE 40655, MS Tax Law, MS Fin, MS Acc.
UCI Administrative Law Certificate in Hazardous Materials & Emergency Management

From:	Teri Shore
To:	Hannah Whitman; Arthur Dawson
Cc:	Angela Nardo-Morgan; Kate Eagles; Susan Gorin
Subject:	NSVMAC - SDC Letter - Open Space Text Addition - Item 8 - 9.21.22 Public comment
Date:	Monday, September 19, 2022 1:30:55 PM
Attachments:	OpenSpacePages from Permitted UsesPages from SDC Public Review Draft Specific PlanLR.pdf NVMACAddShore.docx

EXTERNAL

Dear Chair Dawson, NSVMAC, Sup. Gorin and Hannah,

Please consider adding this section on open space to the NSVMAC letter regarding SDC at your September 21, 2022 meeting, Agenda Item 8.

B1-21

It is important to go on record requesting more details in the DEIR and Specific Plan about the open space, as without it we will face more uncertainty as the SDC project progresses over the years and the players change.

Please see below and attached suggested text.

Thanks for your consideration.

Teri Shore
515 Hopkins St.
Sonoma, CA 95476

SUGGESTED TEXT ADDITION TO NSVMAC LETTER ON SDC

Submitted by Teri Shore

PRESERVED OPEN SPACE/PARKLANDS

While we recognize that it is the intent of the County of Sonoma and the State of California to protect the open space lands around the historic campus at SDC, the DEIR and Specific Plan are inconsistent and inadequate regarding the description, protection and disposition of 755 acres of open space outside the core campus.

B1-22

Neither the DEIR or Specific Plan gives the exact boundaries (other than in one general overlay map in the Land Use Section of the Specific Plan) or give details on how or when open space lands will be protected, transferred, or managed; or analyze or mitigate the impacts to those lands from the development of the historic campus.

These inadequacies need to be resolved in the DEIR and Specific Plan by adding clear descriptions of the open space lands with exact boundaries; likely mechanisms for transferring the lands and to what possible entities or types of entities; a timeline; and how the lands will be managed and under what authority. Environmental impacts and mitigations for impacts to the open space lands from development of the campus and ongoing operations must be provided.

B1-23

A major concern is that multiple new agricultural uses including tasting rooms and agricultural processing that have never occurred at SDC are proposed to be permitted in the “Preserved Open Space” in the Land Use Section of the Specific Plan. These as well as new conditional land uses in the open space including geothermal development, sports facilities, and parking

facilities are never mentioned or analyzed in the DEIR. See Table 4.3 of the Specific Plan, attached. The DEIR needs to be revised to eliminate these sues and/or to analyze and mitigate environmental impacts on the open space and natural resource. B1-23

Vague Goals and Policies contained the Specific Plan and DEIR do not suffice, such as "*future developers at the site must work with the County to ensure proper management and stewardship*" and "*Work with Sonoma County to dedicate the preserved open space as regional parkland*." Not resolving these issues is likely to create confusion and conflict later for all involved, as elected officials, agency staff and developers change over time. B1-24

Lastly, the DEIR and Specific Plan cannot rely on state statute to protect the open space lands as that language is vague, only as "feasible" and in the "best interests of the state."[1]

---

[1] *The disposition of the property or property interests shall provide for* ***the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible*** *and shall be upon terms and conditions the director deems to* ***be in the best interests of the state.***

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

SUGGESTED TEXT ADDITION TO NSVMAC LETTER ON SDC

Submitted by Teri Shore

PRESERVED OPEN SPACE/PARKLANDS

While we recognize that it is the intent of the County of Sonoma and the State of California to protect the open space lands around the historic campus at SDC, the DEIR and Specific Plan are inconsistent and inadequate regarding the description, protection and disposition of 755 acres of open space outside the core campus.

B1-25

Neither the DEIR or Specific Plan gives the exact boundaries (other than in one general overlay map in the Land Use Section of the Specific Plan) or give details on how or when open space lands will be protected, transferred, or managed; or analyze or mitigate the impacts to those lands from the development of the historic campus.

These inadequacies need to be resolved in the DEIR and Specific Plan by adding clear descriptions of the open space lands with exact boundaries; likely mechanisms for transferring the lands and to what possible entities or types of entities; a timeline; and how the lands will be managed and under what authority. Environmental impacts and mitigations for impacts to the open space lands from development of the campus and ongoing operations must be provided.

B1-26

A major concern is that multiple new agricultural uses including tasting rooms and agricultural processing that have never occurred at SDC are proposed to be permitted in the "Preserved Open Space" in the Land Use Section of the Specific Plan. These as well as new conditional land uses in the open space including geothermal development, sports facilities, and parking facilities are never mentioned or analyzed in the DEIR. See Table 4.3 of the Specific Plan, attached. The DEIR needs to be revised to eliminate these sues and/or to analyze and mitigate environmental impacts on the open space and natural resource.

Vague Goals and Policies contained the Specific Plan and DEIR do not suffice, such as "*future developers at the site must work with the County to ensure proper management and stewardship*" and "*Work with Sonoma County to dedicate the preserved open space as regional parkland*." Not resolving these issues is likely to create confusion and conflict later for all involved, as elected officials, agency staff and developers change over time.

B1-27

Lastly, the DEIR and Specific Plan cannot rely on state statute to protect the open space lands as that language is vague, only as "feasible" and in the "best interests of the state."[1]

[1] *The disposition of the property or property interests shall provide for* ***the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible*** *and shall be upon terms and conditions the director deems to* ***be in the best interests of the state.***

Table 4-3: Permitted Uses

Land Use	*Low/Medium Density Residential*	*Medium/Flex Density Residential*	*Flex Zone*	*Institutional*	*Utilities*	*Hotel Overlay*	*Parks and Recreation*	*Buffer Open Space*	*Preserved Open Space*
Agriculture and Resource-Based Land Use									
Agricultural Crop Production and Cultivation	P	P	P	-	-	P	-	P	P
Agricultural Processing	C	C	P	-	-	C	-	P	P
Animal Keeping: Beekeeping	P	P	P	-	-	C	-	P	P
Animal Keeping: Confined Farm Animals	C	-	P	-	-	-	-	-	P
Animal Keeping: Farm Animals	P	P	P	-	-	-	-	P	P
Animal Keeping: Pet Fancier	P	P	P	-	-	-	-	-	-
Farm Retail Sales	C	C	P	-	-	-	-	-	P
Farm Stands	C	C	P	-	-	-	-	-	P
Indoor Crop Cultivation	C	C	P	-	-	-	-	-	P
Mushroom Farming	C	C	P	-	-	-	-	-	P
Nursery, Wholesale	-	-	P	-	-	-	-	-	P
Timberland Conversions, Minor	-	-	P	-	-	-	-	-	P
Nursery, Wholesale	-	-	P	-	-	-	-	-	P
Tasting Rooms	-	-	P	-	-	P	-	-	P
Industrial, Manufacturing, Processing and Storage									
Animal Product Processing	-	-	C	-	-	-	-	-	-
Fertilizer Plants	-	-	C	-	-	-	-	-	-
Laboratories	-	-	C	-	-	-	-	-	-
Laundry Plants	-	-	C	-	-	-	-	-	-
Manufacturing/Processing, Light	-	-	C	-	-	-	-	-	-
Manufacturing/Processing, Medium	-	-	C	-	-	-	-	-	-

P Permitted
- Not Permitted
C Conditional Use Permit

Table 4-3: Permitted Uses

Land Use	*Low/Medium Density Residential*	*Medium/Flex Density Residential*	*Flex Zone*	*Institutional*	*Utilities*	*Hotel Overlay*	*Parks and Recreation*	*Buffer Open Space*	*Preserved Open Space*
Recreation, Education and Public Assembly Land Use Category									
Camp, Organized	-	-	-	-	-	-	C	-	C
Campgrounds	-	-	-	-	-	-	C	-	C
Civic Institution	P	P	P	P	-	P	P	-	-
Community Meeting Facilities	P	P	P	P	-	P	P	-	-
Country Club	-	-	P	-	-	-	-	-	-
Educational Institutions: Colleges and Universities	-	-	-	P	-	-	-	-	-
Educational Institutions: Elementary and Secondary Schools	P	P	P	P	-	P	P	-	-
Educational Institutions: Specialized Education andTraining	-	-	P	P	-	-	C	-	-
Periodic Special Events	-	-	P	P	-	P	P	-	-
Recreation and Sports Facilities: Health/Fitness Facility	-	-	P	P	-	P	C	-	-
Recreation and Sports Facilities: Recreation Facility, Indoor	-	-	P	P	-	P	C	-	-
Recreation and Sports Facilities: Recreation Facility, Outdoor	P	P	P	P	-	P	P	C	C
Recreation and Sports Facilities: Rural Sports and Recreation	P	P	P	P	-	P	P	C	C
Sports and Entertainment Assembly	-	-	P	P	-	P	-	-	-
Studios for Art Crafts, Dance, Music	-	-	P	P	-	P	-	-	-

P Permitted
- Not Permitted
C Conditional Use Permit

Table 4-3: Permitted Uses

Land Use	Low/Medium Density Residential	Medium/Flex Density Residential	Flex Zone	Institutional	Utilities	Hotel Overlay	Parks and Recreation	Buffer Open Space	Preserved Open Space
Services Land Use Category									
Banks and Financial Institutions	-	-	P	-	-	-	-	-	-
Business Support Services	-	-	P	-	-	-	-	-	-
Commercial Kennels	-	-	C	-	-	-	-	-	-
Day Care Center	-	-	C	-	-	-	-	-	-
Cemeteries	-	-	C	-	-	-	-	-	-
Commercial Cannabis Uses	-	-	C	-	-	-	-	-	-
Commerical Horse Facilities	-	-	C	-	-	-	-	-	-
Homeless Shelter, Emergency	-	-	C	-	-	-	-	-	-
Homeless Shelter, Small Scale	-	-	C	-	-	-	-	-	-
Horse Boarding	-	-	C	-	-	-	-	-	-
Lodging: Bed and Breakfast (B&B)	-	-	P	-	-	P	-	-	-
Lodging: Hosted Rental	-	-	P	-	-	P	-	-	-
Lodging: Hotel, Motel, and Resort	-	-	P	-	-	P	-	-	-
Maintenance and Repair Service, Non-Vehicular	-	-	C	-	-	-	-	-	-
Medical Services: Hospitals	-	-	C	P	-	-	-	-	-
Medical Services: Offices and Outpatient Care	-	-	C	P	-	-	-	-	-
Personal Services	-	-	P	-	-	-	-	-	-
Professional Office	-	-	P	P	-	-	-	-	-
Veterinary Clinic	-	-	P	P	-	-	-	-	-
Transportation, Energy, Public Facilities Land Use Category									
Dispatch Facility	-	-	P	P	P	-	-	-	-
LowTemperature Geothermal Resource Development	-	-	-	-	P	-	-	-	P
Parking Facilities	P	P	P	P	P	P	P	P	P
Public Safety Facilities	P	P	P	P	P	-	P	-	-
Public Utility Facilities	-	-	-	-	P	-	P	P	P
Renewable Energy Facilities	P	P	P	P	P	P	P	-	-
Telecommunications Facilities	-	-	-	-	P	-	-	-	-

P Permitted
- Not Permitted
C Conditional Use Permit

From:	Tracy Salcedo
To:	Hannah Whitman; Arielle Kubu-Jones; Karina Garcia
Cc:	Arthur Dawson; Maite Iturri
Subject:	SMP letter re: SDC DEIR and preferred plan
Date:	Wednesday, September 21, 2022 9:42:13 AM
Attachments:	SMP_DEIR letter_FINAL_9-21-22.pdf

EXTERNAL

Hi Hannah, Arielle, and Karina,

I have attached the letter from Sonoma Mountain Preservation addressing the draft environmental impact report and preferred specific plan for the Sonoma Developmental Center. While I apologize for the redundancy, since I've already copied you on the original email with its cc list, I would like to make sure the letter is received by all members of the North Sonoma Valley Municipal Advisory Council, the Springs Advisory Council, and the Sonoma Valley Citizens Advisory Commission.

B1-28

I appreciate your assistance with this request. Thank you for all you do.

Kindly, Tracy

Tracy Salcedo
Laughingwater Ink
(707) 246-0694
laughingwaterink@gmail.com / laughink@vom.com
laughingwaterink.com

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Sonoma Mountain Preservation

September 21, 2022

Brian Oh
Comprehensive Planning Manager
Permit Sonoma, County of Sonoma
2550 Ventura Avenue
Santa Rosa CA 95403
[via email]

RE: Draft Environmental Impact Report and Preferred Specific Plan for redevelopment of the Sonoma Developmental Center in Glen Ellen

Dear Mr. Oh,

We appreciate this opportunity to comment on the draft environmental impact report (DEIR) and preferred Specific Plan for redevelopment of the Sonoma Developmental Center (SDC).

While we acknowledge the conflicting directives laid out in the legislation authorizing the specific planning process for the property and recognize the difficulty of making meaningful connections with stakeholders in pandemic times, we must express our overall disappointment with the DEIR and Preferred Plan, which do not reflect community input as we've witnessed in public meetings and in letters over the years-long planning process. The scale of proposed redevelopment of the 180-acre core campus is fundamentally incompatible with the rural character of the surrounding community and the north Sonoma Valley, presents a clear danger to the safety of current and future residents of the Valley in the inevitable event of wildfire, and threatens the integrity of Sonoma Mountain's irreplaceable natural resources — habitats for keystone flora and fauna, the health of the Sonoma Valley Wildlife Corridor, water quality, air quality, recreational opportunities, and historic, tribal, and modern cultural values.

B1-29

The DEIR fails to adequately or clearly describe meaningful, enforceable mitigations for the environmental impacts of redevelopment at the scale proposed, as required by the California Environmental Quality Act (CEQA). It fails to clearly delineate cumulative

B1-30

impacts. It does not provide sufficient analysis to give decision-makers all the information they need to satisfactorily draw conclusions about the environmental consequences of the Preferred Plan. It is our hope that by addressing the questions that follow, applicable, effective, enforceable mitigations will be identified and instituted that materially decrease or eliminate those impacts.

B1-30

General concerns/questions

The DEIR indicates that, across the board, the environmental impacts of the Preferred Plan and the Historic Preservation Alternative (HPA), which is acknowledged as environmentally superior per CEQA, are "largely comparable." The DEIR also states that the HPA is less superior in terms of energy use, biological resources, and wildfire risk (ES.4.2). Given the significant differences in scale of the two alternatives — the HPA is half the size of the Preferred Plan — these conclusions defy logic.

B1-31

1) Please explain how construction of 1,000 homes occupied by 2,500 people has the same environmental impact across virtually every category studied in the DEIR as does providing 450 homes occupied by 1,125 people (a 55% reduction)? Which studies support this finding?

2) Please explain how providing workspace for 900 people has the same environmental impact across virtually every category studied in the DEIR as does providing workspace for 600 people (a 33.3% reduction). Which studies support this finding?

3) Please explain how the HPA—which translates to less demolition through adaptive reuse of historic structures, less construction, fewer vehicle miles traveled, and fewer people on the property—uses more energy, has a greater impact on biological resources, and increases wildfire risk than the Preferred Plan, as stated in the DEIR (ES 4.2). Which studies support this finding?

Impacts specific to Sonoma Mountain

The entire 945-acre SDC property, including the developed core campus, is located within one of the last rural regions on the Sonoma Valley floor, with the mostly undeveloped slopes of Sonoma Mountain forming the entire western boundary and serving as a viewshed/mountain backdrop; as an informal natural reserve/safe haven for native flora and fauna; and as an informal recreational resource for hikers, cyclists, and equestrians from throughout Sonoma County and beyond. Further, historic residential use of the SDC by individuals with developmental disabilities and their caregivers had minimal human-caused environmental impacts on the property's open spaces. Redevelopment at the scale in the Preferred Plan creates an urban footprint within this

B1-32

historically rural zone, significantly increasing human-caused environmental impacts on a number of areas identified under CEQA (i.e., Aesthetics [3.1]; Biological Resources [3.4], and Public Services and Recreation [3.13], to name a few). To mitigate impacts of any redevelopment on the historic, minimal-impact, rural quality of the property, and to ensure the viewscape is preserved, we request that:

B1-32

1) The DEIR include mitigation measures to compensate for the loss of the rural attributes of the property at its current baseline, or a baseline that dates back no further than 10 years. Please specify which measures in the current DEIR address these impacts, and which studies support them.

2) Please study, provide mitigation measures, and document how incorporating adaptive reuse of buildings into the HPA proposal, with its smaller human footprint, would impact environmental goals.

3) The SDC's open space currently sees frequent use by recreationalists from all over Sonoma County and beyond. That use increased markedly during the pandemic, despite restrictions on travel. The level of use has remained high as the pandemic has waned. The addition of 2,500 residents, 900 workers, visitors to the proposed hotel and conference center, and their friends and family, as outlined in the Preferred Plan, will add an exponential burden on the property's open space, much of which is on the skirts of Sonoma Mountain. Please analyze what that increase in recreational use means for aesthetics, biological resources, cultural, tribal, and historic resources, and water and air quality, and identify mitigations for those impacts.

B1-33

4) Please analyze the cumulative impacts and potential degradation of floral and faunal habitats, groundwater supply, and riparian zones across the site, including the 750+ acres identified as open space, caused by the increased housing density, noise, construction, traffic, and demolition proposed under the Preferred Plan. Please provide analysis of the impacts of redevelopment on migratory fish species, such as coho salmon. Please also analyze whether these impacts would be mitigated by a smaller redevelopment such as the HPA.

B1-34

5) The intent to preserve and protect the 750+ acres of open space surrounding the 180-acre core campus has been codified by the state in its enabling legislation and has been promised by the county in the Preferred Plan. However, neither the Preferred Plan and nor the DEIR delineate clear boundaries for the open space to be transferred, identify a mechanism of transfer, clearly identify the entities that a developer must work with to facilitate transfer, or explicitly require a developer to ensure that redevelopment of the core campus be done in such a way, and with sufficient buffers, as to protect the natural values of the open space. Please add specific, enforceable guidelines for the open space

B1-35

transfers, specifying acreages and minimum boundaries on both the east and west sides of Arnold Drive, and limiting allowed uses on these acreages to passive recreational uses such as hiking, mountain biking, horseback riding, photography, etc.

B1-35

6) Agricultural and commercial uses should not be permitted in open space intended to be parkland. Please clarify that uses such as those identified in Table 4.3 will not be permitted in open space identified for transfer to park agencies, and that mitigations for such uses on other open space parcels are identified and enforceable.

B1-36

Thank you for the time and effort you have put into developing the DEIR and preferred Specific Plan for the property. We look forward to receiving Permit Sonoma's responses to our concerns, and hope the final plan and EIR presented to the Planning Commission for comment and to the Board of Supervisors for approval reflect substantive changes that ensure the integrity of the natural values of Sonoma Mountain, and the communities that surround it, remain intact.

Respectfully,

Meg Beeler, Chairperson
Sonoma Mountain Preservation
Traditional territory of Southern Pomo, Wappo, Patwin, and Coast Miwok

On behalf of Sonoma Mountain Preservation's Board of Directors
Kim Batchelder, Bob Bowler, Arthur Dawson, Avery Hellman, Nancy Kirwan, Larry Modell, Tracy Salcedo, Teri Shore, Helen Bates, Mickey Cooke, Marilyn Goode, David Hansen, and Lucy Kortum

cc:
Senator Mike Thompson, Assembly member Cecilia Aguiar-Curry, Senator Mike McGuire, Senator Bill Dodd, Sonoma County Planning Commission, Sonoma County Board of Supervisors, Springs Municipal Advisory Council, North Sonoma Valley Municipal Advisory Council, Sonoma Valley Citizens Advisory Commission, Sonoma City Council, Permit Sonoma, Department of General Services (Gerald McLaughlin)

From: Jay Gamel
To: Hannah Whitman
Cc: Arthur Dawson
Subject: Re: North Sonoma Valley MAC Materials-9/21/22 Meeting
Date: Wednesday, September 14, 2022 7:36:44 PM
Attachments: NSV-MAC-DEIR-Comment-Letter-Draft4-09-12-22.pdf

EXTERNAL

An excellent start to this response. I have noted a few very small grammatical items; nothing substantive.

B1-37

jay gamel, kenwood

On Wed, Sep 14, 2022 at 6:06 PM Kathy Pons <282kpons@gmail.com> wrote:

> Draft comment letter on SDC from North SV MAC...
>
> ---------- Forwarded message ---------
> From: **Hannah Whitman** <Hannah.Whitman@sonoma-county.org>
> Date: Wed, Sep 14, 2022 at 11:40 AM
> Subject: North Sonoma Valley MAC Materials-9/21/22 Meeting
> To: Hannah Whitman <Hannah.Whitman@sonoma-county.org>
>
> Greetings,
>
> Attached please find:
>
> - Materials for Item #8 for 9.21.22 NSV MAC Meeting
>
> Best,
>
> Hannah Whitman
>
> Aide to Supervisor Susan Gorin
> Sonoma County Board of Supervisors
> 575 Administration Dr., Room 100A
> Santa Rosa CA, 95403
> Hannah.Whitman@sonoma-county.org
>
> Phone: (707) 565-2241
> Fax: (707) 565-3778

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Draft letter only – Draft to be edited and reviewed for potential approval at the NSV MAC meeting of 9/21/22.

September 13, 2022

Mr. Brian Oh
Permit Sonoma
Address / Email

Dear Mr. Oh,

On behalf of the North Sonoma Valley Municipal Advisory Council (NSV MAC), I respectfully submit the following comments pertaining to the Public Review Draft of the Sonoma Developmental Center (SDC) Specific Plan (Proposed Plan) and the SDC Specific Plan Draft Environmental Report (DEIR), as issued by Sonoma County in August 2022. While this letter is reflective of community input, it is not intended to be exhaustive or to take the place of individual comments from community members and other interested parties.

Given the tremendous amount of input from Sonoma Valley residents and business owners concerned about the project size and its impacts, as well as this MAC's own request and the Board of Supervisors' direction to scale back the Specific Plan, it is surprising that the proposed Specific Plan still contains over 1,000 homes and approximately 940 jobs. It appears that the DEIR fails to disclose the full extent of impacts that will result throughout Sonoma Valley from this large-scale development outside of an urban growth area, as is further detailed in this letter.

The Specific Plan represents one of the largest, if not THE largest, developments in the history of Sonoma Valley and is in conflict with County General Plan policies calling for city-centered growth. Furthermore, the proposed plan is inconsistent with its own guiding principles calling for a balance between redevelopment and historic preservation; the plan will destroy the very qualities that make the historic SDC site unique and its implementation will have far-reaching, significant adverse impacts on Sonoma Valley residents.

With this in mind, we provide the following comments, by general category:

PROJECT SCALE & HOUSING

Increasing the supply of affordable and workforce housing is broadly supported by the Sonoma Valley Community, but not at any cost to the environment and the health and safety of Sonoma Valley residents. Our understanding is that the DEIR should help the community better understand the scale of the environmental impacts of the Specific Plan, how they will be mitigated, what options were considered, and why these options were dismissed. We do not believe the DEIR has yet met these objectives.

For example, the DEIR identifies the smaller-scale Historic Preservation Alternative (Historic Alternative) as the environmentally superior alternative. It is not ruled out in the DEIR because it meets the required objectives, but it is dismissed from full consideration. Why?

DRAFT ONLY

If this alternative is environmentally superior and substantially reduces impacts of the proposed plan; if it more effectively meets some of the fundamental project objectives as outlined in the Specific Plan guiding principles, including Preservation of Historic Resources and Balancing Redevelopment with Land Use (DEIR pages 5 and 6); if it provides 450 new homes (still the largest project in Sonoma Valley); and meets the state's statutory objectives regarding the disposition of the SDC site, why is this alternative (or a version of it that addresses some of the issues identified) not being put forward as the proposed plan?

"Overall, the Historic Preservation Alternative is the environmentally superior alternative, although significant impacts of the Proposed Plan and the two alternatives are largely comparable, and the Historic Preservation Alternative would be less superior in some environmental features such as energy use, biological resources, and wildfire risks. Additionally, this alternative would not support key project objectives related to increased housing supply, varied housing opportunities, community vibrancy, and long-term fiscal stability to the same degree as the Proposed Plan." (DEIR page 14)

We do not find adequate data in the DEIR that supports the "less superior" distinctions above, or any reason why these couldn't be readily addressed. There is no requirement that maximum housing be developed, especially if it means significant impacts in several issue areas. In terms of biological resources, the analyses on page 563 of the DEIR indicates that the Historic Preservation Alternative would be "similar or slightly better" than the Specific Plan. In terms of energy use, the older historic buildings are presumed to be less energy efficient, but it's not clear how the net calculation was made since "energy use" is also cited in conjunction with construction and demolition GHGs, which would be significantly higher in the Specific Plan. The increased wildfire risk with this lower density plan is presumably solely because of the arbitrary exclusion of the Hwy 12 connector road in this alternative. **How would the proposed Specific Plan fare in comparison to the Historic Preservation alternative if it also excluded the Hwy 12 connector road, or if both included the Hwy 12 connection?**

Scale is the most obvious way to mitigate impact. While the types of impacts of the Historic and proposed Specific Plans may be the same, they are not equal in magnitude.

FEASIBILITY

If the Historic Preservation alternative was dismissed because of an assumption that feasibility will require higher development densities, **how is a feasibility analysis considered in the DEIR and shouldn't this be more transparently addressed in the Proposed Plan?**

Since it's unclear what "economic feasibility" means for the SDC campus at this time, **shouldn't there be an economic feasibility analysis as part of this evaluation process?** The market demand study that was prepared for the alternatives report does not fill this need (and is inconsistent with the Specific Plan in any case in that it reports little demand for non-residential uses).

MITIGATION MONITORING / PERFORMANCE STANDARDS

It's of concern to the community that most of the policies in the proposed Specific Plan are not enforceable, generally because of the use of "should" in the descriptive language rather than "shall" in many instances. Terms such as "if feasible" and "assumed" are also used repeatedly and the DEIR analysis acknowledges considerable uncertainly in the impacts and thus in the mitigation measures as well.

DRAFT ONLY

Will the policies and conditions of the approval of the Specific Plan be put into a mitigation monitoring plan or program to ensure mitigation compliance for the project?

Given the scale of the proposed Specific Plan and absence of any phasing requirements, it's critical that performance standards be developed and tied into the phasing of the project, especially since the DEIR calls for future studies and mitigations that are not yet identified. **Will performance standards be put into place, potentially to consider impacts that might include Traffic, Wildlife Function, Resources, Noise?**

HOUSING NUMBERS

The Specific Plan states that it will result in 1,000 units and the DEIR uses that assumption, but as noted in Specific Plan Table 4.2 there could be closer to 1,210 units, even without likely density bonuses. That means that most of the environmental impacts in the DEIR are underestimated for the number of units permitted.

CULTURAL RESOURCES / HISTORIC PRESERVATION

The Historic Alternative meets the fundamental project objectives listed on pages 5-6 of the DEIR, unlike the proposed Specific Plan that is inconsistent with the fundamental project objective calling for balancing development with historic resource conservation.

Regarding policies and impacts on cultural resources, the DEIR does not specifically address impacts on Contributing Resources. This should be its own section, not embedded in the discussion of impacts on the district as a whole. For example, if impacts on the integrity of the historic district are considered unavoidable and this would result in removing its eligibility for the National Historic Register, under CEQA that means there are no contributing resources because there is nothing to contribute to, and that all Conditions of Approval referring to contributing resources are effectively moot and not applicable. This seems to be the rationale used under Policy 4-25, but we'd like further detail as to how this is applied.

What are the criteria to determine which building are saved, reused, or demolished? Criteria and standards are mentioned, but we don't find any specific documentation, policy or analysis to properly guide this determination in the Specific Plan. Also, the loss of eligibility for the National Register listing would have additional significant impacts. *(Detail to be confirmed.)*

Regarding the Sonoma House and the main building, Specific Plan Policy 2-47 uses terms like "consider" and "if feasible." Where is the text describing how these determinations will be applied? Why is this not explained through explicit mitigation measures, of which there are currently none? Analysis of impacts on individually significant historic resources are deferred to a time when individual projects are proposed. However, since many future projects will not be subject to CEQA, doesn't this analysis have to be done as part of the Specific Plan EIR with mitigation measures identified, not deferred?

Neither the proposed Specific Plan nor the Draft EIR acknowledges the community effort to get the SDC listed in the National Register as an Historic District. Why is this not mentioned?

UTILITY INFRASTRUCTURE (Comments to come)

CLIMATE CHANGE Comments to come)

DRAFT ONLY

VEHICLE MILES TRAVELED (VMT)

The Specific Plan indicates that there will be no free parking on campus. Has the DEIR studied the VMT and traffic safety impacts of this policy with respect to visitor vehicle trips to find parking off-site; the impacts on the narrow streets in the adjacent neighborhoods, particularly the Glen Ellen streets south of the SDC (Martin, Lorna, Burbank, Sonoma Glen Circle, Marty and Madrone) where parking is free; or the public safety or emergency evacuation impacts of this policy? Has the potential limit on public access been evaluated?

There is no evidence at this juncture that anyone living on the SDC site will be employed at the site so this cannot be assumed. Has the DEIR considered this in one of its VMT scenarios?

Can the DEIR appropriately consider the completion of the Sonoma Valley Trail multi-use path, connecting the SDC site with Santa Rosa, as part of the SDC site VMT mitigation if this is a Caltrans controlled project?

Why is the downscaling or elimination of the hotel not considered part of VMT mitigation? The hotel is no identified as a priority in the state legislation pertaining to the SDC site and will contribute significantly to VMT.

In Table ES-2, the DEIR determines that VMT reduction measures cannot be guaranteed, and they may be insufficient to reduce VMT per capita below the applicable significance threshold or fully offset the effect of induced VMT. “There are no other feasible mitigation measures available.” Why is this an allowed conclusion when there are certainly mitigation measures available that might justifiably be considered, even if reductions might not reduce impacts to levels that are less than significant? Examples of mitigation include a reduced scale alternative or elimination (or reduction of size) of the hotel or other commercial development.

WILDLIFE CORRIDOR

There is no analysis of the impacts on the wildlife corridor through the campus and no acknowledgement of the fact that animals currently use the campus and will be impacted. Also, there is no assessment of the impacts of fencing on wildlife. (Only wooden fences are prohibited on the campus.) The fencing policies appear to apply only to the open space and human/wildlife interface areas, not the campus.

LAND USE IMPACTS

The proposed Specific Plan is both inconsistent with several project objectives, as noted above, and inconsistent with existing County General Plan policies encouraging growth in transit-oriented, urban areas. It is also inconsistent with General Plan policies calling for an overall reduction in VMT since it introduces urban uses in a non-urban area; this will necessarily increase vehicle trips to reach services in either Sonoma or Santa Rosa.

COMMERCIAL SPACE / JOB CREATION

There appears to be no policy saying that the hotel can’t be built first. Is there anything in the proposed Specific Plan requiring the developer to build housing first?

Why is such a large-scale hotel being proposed when it’s not a defined project objective, and when VMT is listed as a challenge?

DRAFT ONLY

POPULATION and GROWTH ASSUMPTIONS

The DEIR analysis of growth-inducing impacts is based on a comparison of the project size to county-wide population and employment numbers, which is an unrealistic and invalid comparison. As a distinct planning unit, Sonoma Valley should be the region of comparison. Given the relatively small population of Sonoma Valley, the proposed plan represents a substantial growth-inducing project. Alone, it will double (triple?) the community housing numbers and draw population and employees from other parts of the county as well as from outside the county. Given its location away from necessary goods and services, it will generate pressure for additional urban land uses on surrounding and nearby unincorporated lands. This urban sprawl growth scenario is in direct conflict with climate change policies to encourage compact, in-city growth.

IMPACTS ON NEIGHBORHOODS SOUTH OF SDC

The Glen Ellen neighborhoods adjacent to SDC will take the brunt of both the construction and operation impacts – not to mention the ongoing impacts of traffic and safety related to parking if there is no free parking on the SDC campus. The over 200 apartments and small lot single family homes directly south of the SDC property will be subject to the aggregate effects of noise, traffic, air emissions, and visual effects. These residents' daily routines will be disrupted during a very long-term construction period. This area is home to many low to moderate-income families who have arguably not had an adequate voice in this planning process.

Has the DEIR adequately studied the effect of the Specific Plan on this neighborhood, to include the narrow Glen Ellen streets from Martin Street south to Madrone Road and along Madrone Road?

CUMULATIVE EFFECTS

There are several foreseeable projects within 15 miles of the SDC site that will contribute to cumulative growth and related impacts, including but not limited to: the Graywood Ranch Hotel, Elnoka Village Senior Citizens housing project, Milestone Siesta Senior Citizens housing project, Donald Street housing development project, Verano hotel and housing project, Hanna Boys Center residential development program, and the proposed ~70% membership license increase at the Sonoma Golf Club.

In the Transportation Methodology section (page 432), the DEIR states," The model's 2040 cumulative year includes growth that is consistent with adopted general plans within the County and with regional projections contained in Plan Bay Area 2040." Were the above-mentioned projects, and any additional foreseeable projects, considered either in the general plans or by Plan Bay Area 2040? Is Permit Sonoma able to share what was included in the model?

FIRE / EMERGENCY PREPAREDNESS

The DEIR did not consider a fire scenario in which the fire comes in from the west, down from Sonoma Mountain. "Historically, a fire approaching from the west may be less likely, and therefore did not warrant further specific analysis" (DEIR page 515). We know that fires are now burning in ways that are outside of historical precedent due to climate change and related impacts, and that this area has not burned in recent history. With this in mind, we believe a west-approaching fire scenario west must be considered.

Did the DEIR consider an evacuation scenario where broadband and/or cell service is out, or is unreliable, affecting receipt of alerts? This occurred in both the 2017 and 2020 fires – land lines and cell service were knocked out or overloaded and people had limited information to guide evacuation.

DRAFT ONLY

In Section 16.1.3.4 (page 511), the DEIR states that to further mitigate potential impacts, Policy 2-54 requires that the project sponsor proactively plan for emergency wildfire safety by building or designating an on-site shelter-in-place facility, to be open to both SDC residents and the general public. In our community conversations to date, Sonoma County fire and emergency experts have not condoned or recommended this as appropriate for the SDC site, so we question this as an appropriate mitigation measure.

The DEIR indicates no significant increases in evacuation times with the Specific Plan. Tables show evacuation times in the order of 15-20 minutes, with and without the proposed project. The Evacuation Time analysis suggests that "added times" for travel during an evacuation range from 1 or 2 minutes to 37 minutes to get to Napa. These hypothetical scenarios defy residents' reality and the actual evacuation times experienced during recent fires: Nuns Canyon fire (2017) resulted in evacuation times out of Sonoma Valley of 1 hour or more; Glass Fire (2020) resulted in evacuation times from nearby Oakmont onto Hwy 12 of one to two hours; evacuations from Kenwood during recent fires took hours, not minutes; adding thousands of vehicles will exacerbate the problem.

Page 520 of the DEIR states that, "The additional SR 12 connector road will provide additional fire access and evacuation routes." However, during a wildfire, it's quite possible that residents and workers in the proposed project area will not be able to take this connector route east toward highway 12 due to the high probability of a wildfire advancing from the highway 12 direction (see Specific Plan, figure 2.3-1). Has this possibility been considered in the DEIR analysis of evacuation times? Also, can the analysis assume the Hwy 12 roadway connection when it will be subject to a separate CalTrans review and approval process and might not be approved?

The DEIR indicates that the SDC core campus is in the Local Responsibility Area (LRA) versus the State Responsibility Area (SRA) with respect to fire-related development governance. In Figure 3.16-2, it appears that the LRAs are outside of any fire hazard severity zone. However, given that parts of the LRA are immediately adjacent to medium, high and very high fire hazard severity potential zones (FHSZs), can this be accurate?

CLOSING COMMENTS (to come)

Sincerely,
North Sonoma Valley Municipal Advisory Council

cc: Susan Gorin
Tennis Wick
Rajeev Bhatia
(Other tbd at NSV MAC 9/21 meeting)

DRAFT ONLY

From: Josette Brose-Eichar
To: Hannah Whitman
Subject: Re: North Sonoma Valley MAC Materials-9/21/22 Meeting
Date: Wednesday, September 14, 2022 5:12:42 PM

EXTERNAL

Hi Hannah,

Thank you for sending this. I will not be able to attend the North Sonoma Valley MAC meeting on 9-21. But, if you could please pass on to the members of the MAC and Supervisor Gorin, how fabulous I think this letter is. The North Sonoma Valley MAC, has so much technical knowledge and expertise, for which I am so grateful. They have covered all the areas that must be addressed in this very vague and almost useless draft EIR. I fully support everything they have so far and the level of detail is outstanding. As I can not attend the meeting, I urge them to approve the final version and get it to PRMD. I will be attending the PRMD meeting tomorrow and then will work on my own letter, but it will never have the level of detail and understanding of all the issues that this draft letter has.

Thank you and sincerely,

Josette Brose-Eichar

On 9/14/2022 11:39 AM, Hannah Whitman wrote:

> Greetings,
>
> Attached please find:
> - Materials for Item #8 for 9.21.22 NSV MAC Meeting
>
> Best,
>
> Hannah Whitman
> Aide to Supervisor Susan Gorin
> Sonoma County Board of Supervisors
> 575 Administration Dr., Room 100A
> Santa Rosa CA, 95403
> Hannah.Whitman@sonoma-county.org
> Phone: (707) 565-2241
> Fax: (707) 565-3778

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

APPENDIX to North Sonoma Valley Municipal Advisory Council Letter of 01/06/22.

This appendix provides additional details in support of the concepts presented in the main body of the NSV MAC letter dated January 6, 2022. These details are a compilation of information provided in public comments on the SDC Specific Plan Alternatives Report (November 2021), a community survey, and NSV MAC input. These details should be addressed in the Specific Plan policies and design guidelines. B2-1

All "community survey" references below are to the non-affiliated survey conducted by Sonoma Valley resident Dr. Shannon Lee, Biology Department Faculty at Sonoma State University, in December 2021 (link).

OPEN SPACE:

General Information:

- Community input consistently emphasizes the singular opportunity the SDC campus represents in terms of protecting the open space and wildlife corridor in the context of a vibrant, sustainable community.
- Over 90% of the community survey respondents ranked "preservation of open space" as of the highest priority.

B2-2

The Community Supports:

- Prioritizing the transfer of park-adjacent properties to Sonoma Valley Regional, Jack London State Historic parks, or a potential land trust with continued public access to trails and open space.
- Protecting the wildlife corridors, their permeability and related natural resources from the wide range of impacts associated with over-development of the campus.
- The wildlife corridors are not separate from SDC campus—animals are not cognizant of boundaries—and their protection is integral to all aspects of the site plan.
- Pursuing the development of performance standards to support housing and other development, as outlined in the Sonoma Land Trust's memo to the NSV MAC, Springs MAC and Sonoma Valley Citizens Advisory Council in follow-up of the November 18, 2021 joint meeting.

B2-3

HOUSING DENSITY:

General Information:

- The SDC site is outside of an urban growth area and surrounded by community separator lands and the rural village of Glen Ellen.
- Based on current United States' census definitions, the Eldridge "census designated place," including the SDC campus and the Glen Ellen community just south of the SDC, could add approximately 450 housing units, i.e., through redevelopment of the SDC campus, and still be within a rural (vs. urban) designation, assuming average occupancy in Sonoma County of 2.61 people per dwelling unit.
- Maintaining a rural designation for the site's development is consistent with the Guiding Principles established for the site plan in that new development must complement the surrounding communities of Glen Ellen and Eldridge/Glen Ellen.

B2-4

The Community Supports:

- The creation of additional housing on the SDC site, particularly affordable housing, *however at a substantially lower density—450 or fewer housing units—than in any of the draft alternatives published to date. (The number of housing units in all three plan alternatives is 990 or greater.)*

B2-5

- 89% of community survey respondents support no more than 450 housing units; 65% of those supporting between 400-450 units, and 24%, less than 400 units.
- Related to this and to complementary community development as mentioned above, 87% of community survey respondents cited "preserving the rural character of Glen Ellen" as "very important."
- The community does not prioritize market rate housing.

B2-5

AFFORDABLE HOUSING:

The Community Supports:

- A higher percentage of mixed level affordable housing than the 25% of the published alternatives. Specifically:
- 76% of community survey respondents think that 25-50% (or more) of the SDC housing should be affordable; 49% of all respondents would push that percentage higher, with at least 50-75% of housing units affordable. Over half of that 49% would prefer that 75%+ of all housing be affordable.
- Housing to include housing for individuals with developmental disabilities (as indicated in state statute); community comments also support senior and veterans housing and related services.
- Housing should be fully accessible (to disabled), as outlined in letters from representatives of the disabled community.
- The survey showed little support for estate homes (81% of respondents opposed) or 3-story apartment buildings (68% opposed), however during the NSV MAC discussion of 12/15/21 it was acknowledged that 3-story housing may need to be considered to achieve higher levels of affordable housing.
- Adaptive re-use of existing buildings (see below) may alleviate need for 3-story structures.
- The community generally agrees that clustered housing and integrated affordability level housing should be considered.
- **The state of California has prioritized the creation of affordable housing, as has Sonoma County. The state must reconcile this priority with its fiscal responsibility with respect to the SDC property by defraying the significant site remediation costs.**
- Housing clusters and siting should be designed to support open space priorities as identified above.
- Housing should be located away from Arnold Drive to preserve the existing visual and historic character and density of the SDC campus.

B2-6

Potential funding sources:

- Federal Infrastructure Investment and Jobs Act

ADAPTIVE REUSE OF EXISTING BUILDINGS:

General Information:

- ALL responsible structural studies of the single-story buildings on the east side of the SDC campus indicate that re-use of the buildings is both financially feasible, and a likely positive use of existing resources.
- It is important to note that all of the studies related to the re-use option were conducted using old financial data. Local new construction costs have escalated sharply in the past few years, and particularly in the past 12 months.
- The discussions of adaptive re-use have focused on perceived low demand, and the potential unwillingness of people to live in buildings that have been re-designed. However, there are examples of creative, livable residential re-use deigns throughout urban environments both locally,

B2-7

and in other regions of the US, including lofts in old train stations, apartments in old manufacturing facilities, etc.

- Additionally, those discussions regarding design do not take into account the changes we have seen in the past couple of years alone. Tiny houses, re-purposed shipping containers, etc., are designs that are now considered livable and comfortable despite the out-of-date view of such designs.

B2-7

Community Benefits:

- The re-use option will reduce greenhouse gases associated with demolition and construction. It will reduce air quality problems since the impacts of dismantling of concrete, wood and toxics will be considerably reduced as compared to that of demolished whole buildings.
- The roadways will not be further burdened by the weight and number of overloaded trucks.
- Public safety will be improved due to reduced traffic flows.
- The unique and beautiful architectural nature of the existing buildings will be preserved.
- The re-use of the buildings will be less expensive, and less time consuming, resulting in a more rapid occupancy schedule.
- Local job creation will increase with the use of adaptive re-use of existing buildings due to the nature of the specialty construction skills required for the work.
- "Proof of concept," or the demonstration project aspect of the work, will serve as a model for additional other communities or similar projects.

B2-8

The Community Supports:

- The community survey found that 49% of all respondents find **adaptive reuse of buildings to serve at-risk populations** to be of highest or high priority combined.
- In addition, a total of 64% of all respondents find **adaptive reuse of buildings to serve special needs populations** to be of highest or high priority combined.
- In addition, the community has indicated support for alternative housing types, e.g., co-housing, that could be implemented to make reuse financially feasible.

B2-9

Potential funding sources:

- Grants
- Developer funds

UTILITY INFRASTRUCTURE:

Sewer Treatment / Water Recycling

General Information:

- The Sonoma Valley County Sanitation District Treatment Facility is located approximately 13 miles from the SDC Campus. The area surrounding the current treatment facility, located at the end of 8th Street East, routinely floods during the wet season.
- Untreated effluent is discharged into Nathanson Creek during flood events.
- Climate change, and associated sea level rise, will result in operations at the current location becoming increasingly difficult to maintain and sustain.
- Flood events will increase as groundwater levels rise.
- Discharges into Nathanson Creek will increase.
- Currently the Sanitation District pays a fine every time it has to dump overflow into the Nathanson Creek system. This happens multiple times a year. Adding additional homes to the sanitation system design will likely cause more frequent overflow problems.

B2-10

Community Benefits:

- A sewage treatment facility could be sited on the SDC site—a location in the Sonoma Valley which is resistant to the impacts of climate change and sea level rise.
- Localized water recycling makes re-use financially feasible since the Sonoma Valley County Sanitation District does not, and will not, have the funds to create a large-scale water recycling program from its current location at the end of 8th St. East.
- Localized water recycling and storage is part of a fire resiliency plan.
- Wetlands associated with water treatment could be associated with a wildlife preserve and fire break, adding to climate resiliency.
- Groundwater recharge in the upper Sonoma Valley would benefit the groundwater plan requirements.
- Infrastructure requirements associated with SDC development would require an upgraded sewer treatment and water recycling plan.

B2-11

P**otential funding sources:**

- Grants
- Reduced penalties for discharges into the Nathanson Creek system could be applied to the construction of a treatment facility.
- Recycled water sales.
- Local sewer district fees including SDC development, the existing town of Glen Ellen and potential expansion into areas that are currently served by underperforming septic systems.
- Developer funds.
- Federal Infrastructure Investment and Jobs Act

B2-12

<u>Energy Resiliency / Microgrid Construction</u>

General Information:

- An energy sustainability plan and microgrid design should accompany any SDC development.
- Community Choice Aggregation is available in 23 municipalities and counties in California, serving 11 million customers.
- The Climate Center, located in Santa Rosa, is among the main organizing and lobbying organizations responsible for the development and adoption of Community Choice Aggregation.
- PG&E has shown itself to be an increasingly unreliable source for the electric grid.

B2-13

Community Benefits:

- A move towards a localized, sustainable energy infrastructure can serve as an emergency preparedness resource.
- Reduced greenhouse gas emissions.
- Lower energy costs will attract potential commercial interests, and reduce operating costs for a sewage treatment plant, public school, etc.
- Local job creation will increase due the highly skilled workers required for construction, and the administration and monitoring of the system.

Potential funding sources:

- Grants
- Local rate payers
- Federal Infrastructure Investment and Jobs Act

FIRE SAFETY / CLIMATE RESILIENCY:

Fire Safety / Protections

General Information:

- Many of our appendix items address this indirectly, including water treatment and wetlands as fire protection; microgrid as protection against large scale electrical grid failure or neglect; adaptive reuse of the reinforced concrete buildings and the open space designation as fire protection. A community center could be used for any number of emergencies.
- Additionally, fire protection building code and WUI (Wildlands Urban Interface) requirements are codified.
- Evacuation plans and roadway emergency preparedness are big questions; it's our understanding that the EIR will address these issues.

B2-14

Climate Resiliency

General Information:

- The Sonoma Valley wildlife corridor on the SDC campus is critical to maintain the quality of our water, forests, and wildlife in a rapidly changing and warming environment.
- Keeping landscapes connected via habitat linkages or corridors is the most frequently recommended approach to maintain ecosystem resilience in the face of climate change as it provides an "escape route" for plants and animals to relocate when their habitats are no longer viable.
- Linking also allows resources, including water and nutrients, to pass between habitats that are increasingly confined by human development to maintain ecosystem health for humans and wild residents.
- In 2015, when the SDC was still operational, a paper prepared for Sonoma Land Trust by researchers from the University of California, Berkeley, not only documented how the SDC's wildlife corridor maintains connectivity, but also addressed what it will take to ensure its integrity.
- The SDC "has high potential for landscape permeability and therefore is expected to allow for free passage of wildlife if left undisturbed," the researchers wrote. They also cited a state mandate—"a cornerstone of California's State Wildlife Action Plan"—that places a priority on making sure development does not encroach on such corridors.
- The researchers noted that protecting the corridor "will require preventing further development, especially in the northern portion of the SDC; as well as reduction in traffic speeds, artificial lighting, invasive species and domestic animal control, limiting human access, and a move toward wildlife-friendly fencing throughout the corridor."
- Aligns with the state's 30x30 goals.

B2-15

Community Benefits:

- Clean and abundant water: connected creek corridors protect our streams and groundwater.
- Reduced wildfire risk: well-managed landscapes have less fuel to carry and spread flames.
- Climate change resilience: plants and animals can move through corridors to cooler places.
- Room to roam: connected landscapes maintain healthy flows of plants, animals, and resources.

HISTORIC PRESERVATION:

General Information:

- The community supports and recognizes the importance of preserving the historic, architectural, and aesthetic character of the SDC campus, including permanent protection, preservation and management of selected buildings and structures,

B2-16

- This would include the historic cemetery, and related landscapes that sit within the boundary of the historic district of Sonoma Developmental Center.
- Inclusion of a museum, archival research center, library, and visitor center (The Gateway to Sonoma Mountain) on the grounds linked with and complementary to the Historic Cemetery, Open Space and Wildlife Corridor.
- This management structure is compatible with the goals of the Sonoma Land Trust, co-housing advocates, disability rights supporters, the numerous stakeholders that contributed to past community forums, and the recent community survey conducted and presented to the NSV MAC.

B2-16

Community Benefits:

- In addition to bringing people together through public events, lectures and workshops, a museum will help provide a sense of community and place by celebrating our collective heritage.
- Museums educate, inspire, foster dialogue, curiosity, self- reflection and serve to help future generations comprehend their history and recognize the achievements of those who came before.
- Fosters partnerships and collaboration with the larger community and other non-profits
- Adaptive reuse of buildings to house research, museum and visitor centers will be effective in reducing our carbon footprint preparing for a future of fire safety, climate resiliency and sustainability of Sonoma Valley
- Historic preservation and reuse of historic buildings reduces resource and material consumption, puts less waste in landfills and consumes less energy than demolishing entire buildings and constructing new ones. Destruction of historic buildings unleashes vast amounts of embodied carbon into the atmosphere contributing to an already overtaxed and warming planet and adding to our carbon footprint.
- An historic district ensures that we are protecting and revitalizing the character of our town and ensuring that the most iconic and diverse collection of architectural buildings, sites and object are preserved for future generations
- Documentation supports that well preserved and revitalized historic districts are an economic boon to a community and affect property values in a very positive way.
- Historic districts are a vibrant, social and economic center for towns and are regarded as world class destinations.

B2-17

The Community Supports:

- Preservation and rehabilitation of historically significant buildings, structures, landscapes and historic cemetery. These buildings include Sonoma House, McDougall, Oak Lodge, Hatch, PEC and King.
- Preservation of the SDC Library and other sources of written knowledge.
- Preservation of historic artifacts and digital archives currently stored on campus.
- Preservation of the knowledge possessed by individuals associated with SDC, Eldridge and Glen Ellen.

B2-18

Potential Funding Sources:

- Glen Ellen Historical Society has already received grants and funding from private philanthropists to support a museum and visitor center.
- The Board of Directors of GEHS and general membership include experienced legal, development, grant writing, fundraising and cultural heritage professionals engaged in raising funding for the project.
- Establishment of “Friends of Glen Ellen Historic District” will be instrumental in organizing fundraisers and events providing financial assistance. Modeled after the Friends of Jack London, this

will have a self-generating funding source which includes an event/community center, museum, visitor center that includes historic tours and a world class archival and research hub
- Federal and State Grants
- State Historic Preservation Office Funding
- National Park Service Historic Preservation Funding
- National Trust for Historic Preservation Funding
- Privately Funded Grants
- Scholarships and Research Fellowships
- Governor Newsom's 2021 Executive Order for 30 x 30 State Funding

B2-18

COMMERCIAL SPACE / JOB CREATION:

The Community Supports:
- The community has expressed support for innovative or educational use of commercial space at a scale that is compatible with the semi-rural Valley. Vocational training center is a popular idea.
- Although it is the NSV MAC's understanding that it is premature to designate too specifically, community suggestions have included a non-profit hub and a trade skills vocational center.
- Community comments have also noted that we have no identified tenants for commercial space at this time, and that the level of demand for commercial space is uncertain, reflective of significant changes in work patterns.
- Community comments have also noted that it's not clear that we have a shortage of jobs in Sonoma Valley—versus a shortage of affordable housing—and that *the scale of the commercial space designation needs to be appropriate for this rural community.*
- Commercial space ranked second lowest for "not important / neutral" as a re-development priority in the community survey.
- However, when survey respondents were asked to prioritize commercial development, a Community Center was the most popular (77% of survey respondents supporting), following by an Innovation/Research /Climate Hub at 60%.
- Hotel / Resort was the least popular with 10% support from community survey respondents.

B2-19

Potential funding sources:
- Federal Infrastructure Investment and Jobs Act
- Legislative job training bill

COMMUNITY-ORIENTED COMMERCIAL:

The community is supportive of commercial space to be set aside for community-oriented usage to potentially include:

<u>Community Center</u>

B2-20

General Information:
- Glen Ellen currently does not have a community center.

Community benefits:
- Potential uses and needs: emergency shelter, temporary emergency health clinic, community meetings, live performances.
- Provides a great boost to the local economy, providing jobs, both in the building and running of the facility. It also provides opportunities for the town to raise money through events, performances and weddings.

- Provides an opportunity for youth to congregate in a safe space promoting strong relationships through sports and recreational activities.
- Can be associated with the local Dunbar School for general assemblies, meetings, and activities, resulting in reduced project costs.

B2-20

Potential funding sources:
- Grants
- Community fundraising
- Adaptive re-use of an existing building as a cost-saving measure

Relocate Dunbar School to SDC campus

General Information:
- Dunbar school currently serves grades K-5 and is located 3.5 miles from the SDC Campus. The current Dunbar campus is aged and located in a rural setting which requires either busing or car transportation for the commute.
- It is acknowledged that the Sonoma Valley Unified School District would need to run demographic and other feasibility studies as part of any determination to relocate.

B2-21

Community Benefits:
- Job creation for the SDC development through school administration, maintenance, and enhanced school campus use by the public.
- The relocation allows for greater use of foot traffic to school from the proposed SDC campus development and the south Glen Ellen area.
- Reduced bus and individual car trips through Glen Ellen.
- Reduced greenhouse gases.
- Reduced bus maintenance and fuel costs.
- Multiple studies have indicated that school campus proximity to neighborhoods and housing promotes increased school campus use and greater neighborhood/ community continuity.
- Modernized Dunbar School campus

Potential funding sources:
- Grants
- Local school construction bonds
- Sale of existing Dunbar school campus as surplus land
- Developer funds. Most developments of the scale proposed for the SDC campus would require new school construction.

SITE GOVERNANCE:

General Information:
- Many members of the public have requested consideration of establishing a trust to implement the Specific Plan rather than a private developer. A trust would open opportunities for financing and site management that would broaden the potential for successful redevelopment AND community compatibility.
- The model of the Land/ Government-owned Trust for SDC governance and development was introduced at the first public meeting in 2016. Local community response was supportive of the Trust model for SDC governance.

B2-22

- The SDC Planning Resource Committee was convened to consider the feasibility of forming a "State-Owned" trust, and to examine the required land disposition, land planning, development management, and infrastructure improvements issues.
- In 2018, the SDC Planning Resource Committee received a proposal from WRT Consulting for a financial assessment study of SDC site development potential, with an emphasis on: conservation of wildlife habitat and open space areas, protection and re-use of historic structures, adaptive re-use of existing buildings, and potential redevelopment off-setting revenue uses for the central SDC campus.
- It is important to note WRT Consulting performed the original Existing Conditions Assessment of the SDC site under a contract with the California State Department of General Services.
- An example of a successful community land trust model: OPAL Community Land Trust

B2-22

Community Benefits:

- The non-profit government trust model reduces the profit incentives associated with private developers. Development companies generally generate a 25-30% profit on a specific project.
- Local trust governance allows for far more development financing opportunities. Public funding (governmental in nature), private funding (traditional lending sources: banks, pension funds, insurance companies), private non-profit funding (land trusts, housing trusts, other types of trust related grants).
- Local trust governance may allow for affordable housing occupancy formulas which enable a larger percentage of local workers and residents to live in the newly constructed homes. A private developer cannot make the housing available ONLY to local residents and workers. Any applicant, no matter their location of residency or occupation, is eligible for occupancy.
- A community housing trust-based model would only be responsible for the work associated with SDC campus development.

B2-23

Potential funding sources:

- Private non-profit grants
- Private fund raising
- Governmental grants
- Traditional developer fund resources
- Income from commercial development

September 21, 2022

Mr. Brian Oh, Comprehensive Planning Manager
Permit Sonoma County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403

Dear Mr. Oh,

On behalf of the North Sonoma Valley Municipal Advisory Council (NSV MAC), we respectfully submit the following comments pertaining to the Public Review Draft of the Sonoma Developmental Center (SDC) Specific Plan (Proposed Plan) and the SDC Specific Plan Draft Environmental Report (DEIR), as issued by Sonoma County in August 2022. While this letter is reflective of community input, it is not intended to be exhaustive or to take the place of individual comments from community members and other interested parties. B3-1

Given the tremendous amount of input from Sonoma Valley residents and business owners concerned about the project size and its impacts, as well as this MAC's own request and the Board of Supervisors' direction to scale back the Specific Plan, it is surprising that the proposed Specific Plan still contains over 1,000 homes and approximately 940 jobs. It appears that the DEIR fails to disclose the full extent of impacts that will result throughout Sonoma Valley from this large-scale development outside of an urban growth area, as is further detailed in this letter.

The Specific Plan represents one of the largest, if not THE largest, developments in the history of Sonoma Valley and is in conflict with County General Plan policies calling for city-centered growth. Furthermore, the proposed plan is inconsistent with its own guiding principles calling for a balance between redevelopment and historic preservation; the plan will destroy the very qualities that make the historic SDC site unique and its implementation will have far-reaching, significant adverse impacts on Sonoma Valley residents. B3-2

With this in mind, we provide the following comments, by general category. Please explain the following inconsistencies in the DEIR:

PROJECT SCALE & HOUSING

Increasing the supply of affordable and workforce housing is broadly supported by the Sonoma Valley Community, but not at any cost to the environment and the health and safety of Sonoma Valley residents. Our understanding is that the DEIR should help the community better understand the scale of the environmental impacts of the Specific Plan, how they will be mitigated, what options were considered, and why these options were dismissed. We do not believe the DEIR has yet met these objectives. B3-3

For example, the DEIR identifies the smaller-scale Historic Preservation Alternative (Historic Alternative) as the environmentally superior alternative. It is not ruled out in the DEIR because it meets the required objectives, but it is dismissed from full consideration. Why?

If this alternative is environmentally superior and substantially reduces impacts of the proposed plan; if it more effectively meets some of the fundamental project objectives as outlined in the Specific Plan guiding principles, including Preservation of Historic Resources and Balancing Redevelopment with Land Use (DEIR pages 5 and 6); if it provides 450 new homes (still the largest project in Sonoma Valley); and meets the state's statutory objectives regarding the disposition of the SDC site, why is this alternative (or a version of it that addresses some of the issues identified) not being put forward as the proposed plan?

B3-4

"Overall, the Historic Preservation Alternative is the environmentally superior alternative, although significant impacts of the Proposed Plan and the two alternatives are largely comparable, and the Historic Preservation Alternative would be less superior in some environmental features such as energy use, biological resources, and wildfire risks. Additionally, this alternative would not support key project objectives related to increased housing supply, varied housing opportunities, community vibrancy, and long-term fiscal stability to the same degree as the Proposed Plan." (DEIR page 14)

We do not find adequate data in the DEIR that supports the "less superior" distinctions above, or any reason why these couldn't be readily addressed. There is no requirement that maximum housing be developed, especially if it means significant impacts in several issue areas. In terms of biological resources, the analyses on page 563 of the DEIR indicates that the Historic Preservation Alternative would be "similar or slightly better" than the Specific Plan. In terms of energy use, the older historic buildings are presumed to be less energy efficient, but it's not clear how the net calculation was made since "energy use" is also cited in conjunction with construction and demolition GHGs, which would be significantly higher in the Specific Plan. The increased wildfire risk with this lower density plan is presumably solely because of the arbitrary exclusion of the Hwy 12 connector road in this alternative. **How would the proposed Specific Plan fare in comparison to the Historic Preservation alternative if it also excluded the Hwy 12 connector road, or if both included the Hwy 12 connection?**

B3-5

Scale is the most obvious way to mitigate impact. While the types of impacts of the Historic and proposed Specific Plans may be the same, they are not equal in magnitude.

FEASIBILITY

If the Historic Preservation alternative was dismissed because of an assumption that feasibility will require higher development densities, **how is a feasibility analysis considered in the DEIR and shouldn't this be more transparently addressed in the Proposed Plan?**

B3-6

Since it's unclear what "economic feasibility" means for the SDC campus at this time, **shouldn't there be an economic feasibility analysis as part of this evaluation process?** The market demand study that was prepared for the alternatives report does not fill this need (and is inconsistent with the Specific Plan in any case in that it reports little demand for non-residential uses).

MITIGATION MONITORING / PERFORMANCE STANDARDS

It's of concern to the community that most of the policies in the proposed Specific Plan are not enforceable, generally because of the use of "should" in the descriptive language rather than "shall" in many instances. Terms such as "if feasible" and "assumed" are also used repeatedly and the DEIR analysis acknowledges considerable uncertainly in the impacts and thus in the mitigation measures as well.

B3-7

Will the policies and conditions of the approval of the Specific Plan be put into a mitigation monitoring plan or program to ensure mitigation compliance for the project?

B3-7

Given the scale of the proposed Specific Plan and absence of any phasing requirements, it's critical that performance standards be developed and tied into the phasing of the project, especially since the DEIR calls for future studies and mitigations that are not yet identified. **Will performance standards be put into place, potentially to consider impacts that might include Traffic, Wildlife Function, Resources, Noise?**

HOUSING NUMBERS

The Specific Plan states that it will result in 1,000 units and the DEIR uses that assumption, but as noted in Specific Plan Table 4.2 more units are suggested, even without likely density bonuses. That means that most of the environmental impacts in the DEIR are underestimated for the number of units permitted. If the analysis is limited to 1,000 units, why is the possibility of 1,100 or more of units included in the Specific Plan?

B3-8

CULTURAL RESOURCES / HISTORIC PRESERVATION

Isn't it true that the Historic Alternative meets the fundamental project objectives listed on pages 5-6 of the DEIR? Isn't it true that the proposed Specific Plan is inconsistent with the fundamental project objective calling for balancing development with historic resource conservation?

Regarding policies and impacts on cultural resources, isn't it true that the DEIR does not specifically address impacts on Contributing Resources. Please amend the EIR to include such impacts in its own section, not embedded in the discussion of impacts on the district as a whole or explain why not. Isn't it violative of CEQA for the EIR to assume that the project will be approved as proposed, without mitigations and alternatives to reduce impacts on historic resources having been determined feasible or infeasible? Wouldn't the loss of eligibility for the National Register of Historic Places remove protections for contributory resources? What environmental impacts would attend such losses of eligibility? What mitigations could avoid that loss? Please consider and analyze the benefits of the pending efforts to list SDC in the National Register.

B3-9

What are the performance-based standards to determine which buildings can feasibly be restored or adaptively reused? How is demolition of any building to be decided? What type of analysis and performance-based standards will be applied to permit demolition under the Specific Plan? Please amend the Specific Plan so that demolition of any qualified historic resource will require a Plan amendment based on codified criteria. If not, why not? Isn't protection of National Register eligibility required by CEQA if feasible?

B3-10

Regarding the Sonoma House and the main building, Specific Plan Policy 2-47 uses terms like "consider" and "if feasible." How will feasibility be determined? In light of significant impacts, why are mitigation measures not identified or analyzed? Doesn't CEQA disallow deferral of analysis and mitigation of the Specific Plan's foreseeable impacts on historic resources? Isn't it true that projects consistent with the Specific Plan, including those involving demolition of currently listed or eligible historic resources will not be subject to discretionary CEQA review? If not, under what circumstances would CEQA review be required?

UTILITY INFRASTRUCTURE

The Valley of the Moon Water District (VOMWD) consistently contacts customers requesting a 20% reduction in water use, further stating that penalties will be assessed if the reduction is not met. Yet, for the purposes of the DEIR and the water assessment section, the DEIR and VOMWD assert they have the resources to serve the SDC project. What assumptions underpin this assertion?

B3-11

There are contradictions that should be addressed in the DEIR. For example: VOMWD's own estimates for future water deliveries and shortages are based upon single dry years, not the multiple dry year shortfalls we are already experiencing. Additionally, the Sonoma Valley Groundwater Sustainability Agency has made increasing projections for the need for groundwater re-charge throughout the Sonoma Valley, but the VOMWD has not estimated its own required contribution to groundwater re-charge and has maintained an increased groundwater "draw down" in the SDC water assessment report. What are the groundwater re-charge assumptions for the SDC site and are they included in the DEIR?

Additional areas of the water assessment report that require clarification in the DEIR:

- The report assumes the planning area will be served by local, on-site surface water sources. However, for Fern and Suttonfield Lakes, the treatment plant and the pipes/infrastructure are not a part of the core campus development. For the purposes of the DEIR and water assessment, those resources do not exist.

- What, specifically are the surface water sources the DEIR is stating are available for use?
- What becomes of those "non-available" water sources (the lakes, treatment plant)?
- Who is responsible for the evaluation of the dams that contain all of that water?
- Are the lakes going to be drained, filled in, maintained?

B3-12

- The riparian rights contradict the findings of both the Sonoma Ecology Center and the Sonoma Valley Water Sustainability study that urges an elimination of riparian water rights in order to provide groundwater recharge to diminishing Sonoma Valley aquifers.

- Who maintains the riparian water rights? The VOMWD, the state, the developer?

- The SDC water treatment plan has not been licensed for operation in many years. The DEIR states it will be evaluated for re-use by the water system operator.

- Who will pay for the evaluation? If the plant requires re-construction, or is not salvageable, who pays for these updates?
- Where, on the Specific Plan, will it be located?

ENERGY MICROGRIDS:

The DEIR language is vague in the section that pertains to an electrical microgrid. By definition, a microgrid is a locally controlled and maintained electrical grid with defined electrical boundaries. It is able to operate in both a grid-connected and "island" mode. A stand-alone or isolated microgrid only operates off-the-grid and cannot be connected to a wider electric power system.

B3-13

- Which type of system is being proposed, grid-connected or stand alone?

- Will the system have localized generating capacity?
- Where is the dedicated space on the Specific Plan for any proposed generation?
- Who pays for it and maintains it?
- Where is the electrical use projection data for microgrid design?

B3-13

VEHICLE MILES TRAVELED (VMT)

The Specific Plan indicates that there will be no free parking on campus. Has the DEIR studied the VMT and traffic safety impacts of this policy with respect to visitor vehicle trips to find parking off-site; the impacts on the narrow streets in the adjacent neighborhoods, particularly the Glen Ellen streets south of the SDC (Martin, Lorna, Burbank, Sonoma Glen Circle, Marty and Madrone) where parking is free; or the public safety or emergency evacuation impacts of this policy? Has the potential limit on public access been evaluated?

B3-14

In addition, was there analysis done on the safety implications of increased VMT on the routes used by cyclists and commuters to travel from Glen Ellen to other county locations (Santa Rosa and Rohnert Park), specifically Warm Springs and Bennett Valley Roads. These narrow, winding roads are commonly traveled at relatively high speeds; their road shoulders are significantly deteriorated (no shoulder at all for significant portions). The safety implications on these roads due to the increased VMT in the Proposed Plan must be considered in the DEIR.

There is no evidence at this juncture that anyone living on the SDC site will be employed at the site so this cannot be assumed. Has the DEIR considered this in one of its VMT scenarios? On a related note, while it's noted that institutional uses associated with the former SDC have been removed from the SCTM19 model's existing land use database (DEIR page 426), historical VMT numbers are still cited in the Historical Use section (DEIR 427-428) and implied to be relevant. VMT under the Proposed Plan will not be directly comparable to the historic SDC site in terms of either resident (non-driving) or single-employer shift work VMT per capita; any assumptions made pertaining to historical VMT need to be made clearer in the DEIR analysis and narrative. Finally, the DEIR cites a VMT increase of ~631, with the existing VMT at 59,654, and the Proposed Plan VMT at 60,285 in 2040 (DEIR, page 183). How can this be accurate based on the anticipated population and the VMT summaries cited throughout the DEIR?

B3-15

The DEIR's Project trip generation estimate was developed using the SCTM19 travel demand forecasting model maintained by the Sonoma County Transportation Authority (SCTA). The specific trip generation factors are not included in the DEIR. Thus, it is impossible to evaluate the reasonableness of either those factors or the resulting trip generation numbers.

Can the DEIR appropriately consider the completion of the Sonoma Valley Trail multi-use path, connecting the SDC site with Santa Rosa, as part of the SDC site VMT mitigation if this is a Caltrans controlled project?

Why is the downscaling or elimination of the hotel not considered part of VMT mitigation? The hotel is no identified as a priority in the state legislation pertaining to the SDC site and will contribute significantly to VMT.

B3-16

In Table ES-2, the DEIR determines that VMT reduction measures cannot be guaranteed, and they may be insufficient to reduce VMT per capita below the applicable significance threshold or fully offset the effect of induced VMT. "There are no other feasible mitigation measures available." Why is this an allowed conclusion when there are certainly mitigation measures available that might justifiably be

considered, even if reductions might not reduce impacts to levels that are less than significant? Examples of mitigation include a reduced scale alternative or elimination (or reduction of size) of the hotel or other commercial development. B3-16

WILDLIFE CORRIDOR

There is no analysis of the impacts on the wildlife corridor through the campus and no acknowledgement of the fact that animals currently use the campus and will be impacted. Also, there is no assessment of the impacts of fencing on wildlife. (Only wooden fences are prohibited on the campus.) The fencing policies appear to apply only to the open space and human/wildlife interface areas, not the campus. B3-17

LAND USE IMPACTS

The proposed Specific Plan is both inconsistent with several project objectives, as noted above, and inconsistent with existing County General Plan policies encouraging growth in transit-oriented, urban areas. It is also inconsistent with General Plan policies calling for an overall reduction in VMT since it introduces urban uses in a non-urban area; this will necessarily increase vehicle trips to reach services in either Sonoma or Santa Rosa. B3-18

COMMERCIAL SPACE / JOB CREATION

There appears to be no policy saying that the hotel can't be built first. Is there anything in the proposed Specific Plan requiring the developer to build housing first? B3-19

Why is such a large-scale hotel being proposed when it's not a defined project objective, and when VMT is listed as a challenge?

POPULATION and GROWTH ASSUMPTIONS

The DEIR analysis of growth-inducing impacts is based on a comparison of the project size to county-wide population and employment numbers, which is an unrealistic and invalid comparison. As a distinct planning unit, Sonoma Valley should be the region of comparison. Given the relatively small population of Sonoma Valley, the proposed plan represents a substantial growth-inducing project. Alone, it will double (triple?) the community housing numbers and draw population and employees from other parts of the county as well as from outside the county. Given its location away from necessary goods and services, it will generate pressure for additional urban land uses on surrounding and nearby unincorporated lands. This urban sprawl growth scenario is in direct conflict with climate change policies to encourage compact, in-city growth. B3-20

IMPACTS ON NEIGHBORHOODS SOUTH OF SDC

The Glen Ellen neighborhoods adjacent to SDC will take the brunt of both the construction and operation impacts – not to mention the ongoing impacts of traffic and safety related to parking if there is no free parking on the SDC campus. The over 200 apartments and small lot single family homes directly south of the SDC property will be subject to the aggregate effects of noise, traffic, air emissions, and visual effects. These residents' daily routines will be disrupted during a very long-term construction period. This area is home to many low to moderate-income families who have arguably not had an adequate voice in this planning process. B3-21

Has the DEIR adequately studied the effect of the Specific Plan on this neighborhood, to include the narrow Glen Ellen streets from Martin Street south to Madrone Road and along Madrone Road?

CUMULATIVE EFFECTS

There are several foreseeable projects within 15 miles of the SDC site that will contribute to cumulative growth and related impacts, including but not limited to: the Graywood Ranch Hotel, Elnoka Village Senior Citizens housing project, Milestone Siesta Senior Citizens housing project, Donald Street housing development project, Verano hotel and housing project, Hanna Boys Center residential development program, and the proposed ~70% membership license increase at the Sonoma Golf Club.

B3-22

In the Transportation Methodology section (page 432), the DEIR states," The model's 2040 cumulative year includes growth that is consistent with adopted general plans within the County and with regional projections contained in Plan Bay Area 2040." Were the above-mentioned projects, and any additional foreseeable projects, considered either in the general plans or by Plan Bay Area 2040? Is Permit Sonoma able to share what was included in the model?

FIRE / EMERGENCY PREPAREDNESS

The DEIR did not consider a fire scenario in which the fire comes in from the west, down from Sonoma Mountain. "Historically, a fire approaching from the west may be less likely, and therefore did not warrant further specific analysis" (DEIR page 515). We know that fires are now burning in ways that are outside of historical precedent due to climate change and related impacts, and that this area has not burned in recent history. With this in mind, we believe a west-approaching fire scenario west must be considered.

Did the DEIR consider an evacuation scenario where broadband and/or cell service is out, or is unreliable, affecting receipt of alerts? This occurred in both the 2017 and 2020 fires – land lines and cell service were knocked out or overloaded and people had limited information to guide evacuation.

B3-23

In Section 16.1.3.4 (page 511), the DEIR states that to further mitigate potential impacts, Policy 2-54 requires that the project sponsor proactively plan for emergency wildfire safety by building or designating an on-site shelter-in-place facility, to be open to both SDC residents and the general public. In our community conversations to date, Sonoma County fire and emergency experts have not condoned or recommended this as appropriate for the SDC site, so we question this as an appropriate mitigation measure.

The DEIR indicates no significant increases in evacuation times with the Specific Plan. Tables show evacuation times in the order of 15-20 minutes, with and without the proposed project. The Evacuation Time analysis suggests that "added times" for travel during an evacuation range from 1 or 2 minutes to 37 minutes to get to Napa. These hypothetical scenarios defy residents' reality and the actual evacuation times experienced during recent fires: Nuns Canyon fire (2017) resulted in evacuation times out of Sonoma Valley of 1 hour or more; Glass Fire (2020) resulted in evacuation times from nearby Oakmont onto Hwy 12 of one to two hours; evacuations from Kenwood during recent fires took hours, not minutes; adding thousands of vehicles will exacerbate the problem.

B3-24

Page 520 of the DEIR states that, "The additional SR 12 connector road will provide additional fire access and evacuation routes." However, during a wildfire, it's quite possible that residents and workers in the proposed project area will not be able to take this connector route east toward highway 12 due to the high probability of a wildfire advancing from the highway 12 direction (see Specific Plan, figure 2.3-1). Has this possibility been considered in the DEIR analysis of evacuation times? Also, can the analysis

assume the Hwy 12 roadway connection when it will be subject to a separate CalTrans review and approval process and might not be approved? B3-24

The DEIR indicates that the SDC core campus is in the Local Responsibility Area (LRA) versus the State Responsibility Area (SRA) with respect to fire-related development governance. In Figure 3.16-2, it appears that the LRAs are outside of any fire hazard severity zone. However, given that parts of the LRA are immediately adjacent to medium, high and very high fire hazard severity potential zones (FHSZs), can this be accurate?

The assessment of wildfire hazards in the DEIR appears to have a number of errors and omissions, the most serious of which lead to unwarranted conclusions that underestimate this hazard ("Impact 3.8-7 Implementation of the Proposed Plan would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. (Less than Significant)" p. 268). B3-25

Page 503: "Primary responsibility for preventing and suppressing wildland fires in Sonoma County is divided between local firefighting agencies and the State of California, Department of Forestry and Fire Protection. The SDC Planning Area is currently located in an area identified as a State Responsibility Area (SRA)."

1. The Planning Area "includes the approximately 180-acre SDC Core Campus…" (DEIR, pg. 51) According to the State Fire Marshall's map: https://osfm.fire.ca.gov/media/6822/fhszs_map49.pdf, the Core Campus is within a Local Responsibility Area (LRA. See map on page 4), not the State's. Is this correct?

Page 503: "Under the Fire and Resources Assessment Program (FRAP) "the Planning Area…includes areas of high to very high Fire Hazard Severity Zones west of Highway 12, areas of high fire hazard severity in the hills, and areas of moderate fire hazards severity zones in the vicinity of Suttonfield Lake and Fern Lake (Figure 3.16-2). The Core Campus is not included in any of these FHSZs. " B3-26

The State Fire Marshall's final map is not intended to show moderate and high FHSZs within the Local Responsibility Area. The State's draft map (page 4), however does show moderate and high FHSZs covering a substantial portion of the Core Campus. While not finalized, this appears to be the best available fire risk data for the Planning Area.

Goal PS-3 from the Sonoma County General Plan 2020 (DEIR, page 497), reads: "Prevent unnecessary exposure of people and property to risks of damage or injury from wildland and structural fires," with Objective PS-3.1 stating, "Continue to use complete data on wildland and urban fire hazards."

2. How was the data gap between the SRA and the LRA within the Planning Area addressed during the DEIR's analysis of wildfire threat? What evidence was the statement about the Core Campus (DEIR, pg 503. See above) based on? Was this conclusion reached because there is data showing low fire risk there or because lack of data was equated with low risk? B3-27
3. The Fire Constraints map (13.16-2) shows the Core Campus being almost entirely outside of any Fire Severity Hazard Zones. How would the Fire Severity Hazard data for the Core Campus, shown in the State's draft map, change the analysis of fire hazards there? Does this change the calculus for significance under 16.1.3.1 Criterion 2: "Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire."?

4. In addition, the Sonoma County Community Wildfire Protection Plan Update 2022 (referenced in the DEIR, 16.1.1.3. Regional and Local Regulations, p. 496) states that: "Wildland fires that start in the woods and spread into adjacent areas with relatively dense housing often result in the greatest losses of property and life. Efforts to save lives and property will take precedence over losses of wildland resources, so firefighters' response must focus on protecting populated areas rather than fighting a fire in the most efficient way."
   Even if we assume there are no FHSZs within the Core Campus, this suggests that building dense housing at SDC adjacent to wildlands could result in high "losses of property and life." Responding to such a fire might prevent firefighters from efficiently working to prevent further fire spread. How was this scenario taken into account during the DEIR analysis?

B3-27

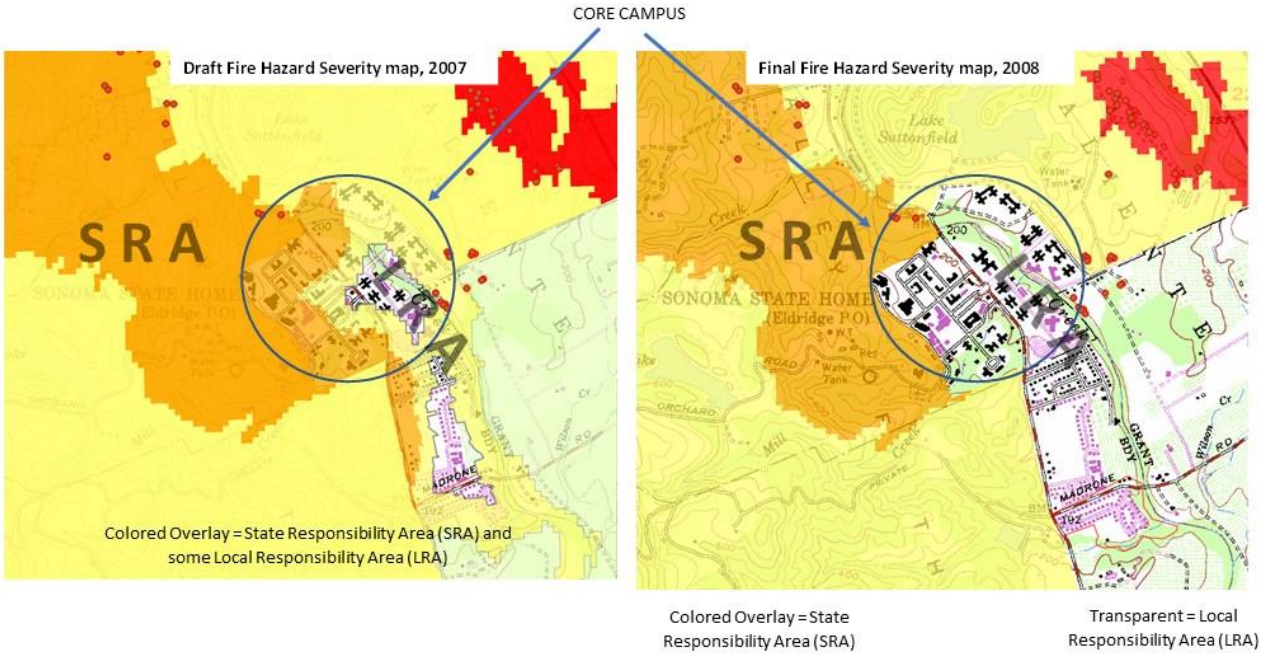
3.16.1.3.4. Wildfire Evacuation

1. Wildfire ignitions are known to increase with the size of a population. How was this relationship evaluated in the calculation of fire risk in the Planning Area?

B3-28

Hazard zones below are from the State Fire Marshall's office: https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/

HAZARD ZONES: Yellow = moderate Orange = high Red = very high Dots = structures burned in 2017 (Sonoma County GIS)



CLOSING COMMENTS

As evidenced through the comments above, we do not believe this DEIR yet adequately and completely evaluates the environmental and safety impacts of the Proposed Plan. Furthermore, we remain committed to the Sonoma Valley community's consistent input calling for both affordable housing and a lower density plan alternative. A plan closer to the Historic Preservation Alternative – determined as "environmentally preferred" in the DEIR analysis – successfully meets the project objectives and the established Guiding Principles for this project and should be given strong consideration. B3-29

We remain committed to a plan that we can all support and appreciate this opportunity to provide comment. The NSV MAC letter process did not allow to adequately address all topic areas. Please respond to the public comments in the attached addendum that we received in advance of the NSV MAC meeting on 9/21/22, relating to the Specific Plan and the DEIR, which we are incorporating by reference, and give them full consideration.

Sincerely,

Arthur Dawson

Arthur Dawson, Chair
North Sonoma Valley MAC

cc: Susan Gorin
Tennis Wick
Rajeev Bhatia
Sonoma County Planning Commission

To: Permit Sonoma

Attn Brian Oh

From: The Glen Ellen Historical Society

Subject: Comments/Response re: Eldridge Draft EIR/Specific Plan

The Specific Plan process, which was touted to be a community driven plan, has most definitely fallen short of its vision. The creation and implementation of the Planning Advisory Team (PAT), which was intended to be 'the voice of the community', appears to have had no voice at all. A general consensus of the local community, with over 2000 valley residents signing a petition in agreement, has resoundingly rejected this Proposed Plan. Regardless of the continual outcry and input provided from the public, the County sits steadfast on its position with this grandiose and elaborate plan. It's apparent that this plan is geared toward addressing the State's housing problem by constructing as many houses as possible on this historic campus in an effort to achieve their unreasonable goal and quota. The County and State are determined to build a new urban style town in the middle of this historic and rural community of Glen Ellen. With a thousand homes, a hotel and large commercial enterprises, the County is relentlessly pushing their agenda regardless of the wants and wishes of this community. In the guiding principles of the Specific Plan Glen Ellen is characterized as an "adjacent town", when in reality the SDC property sits directly in the middle of this historic village of Glen Ellen. If this proposed plan reaches fruition as written, it will destroy the character of this quaint and picturesque village forever.

B4-1

The Glen Ellen Historical Society has been a strong community advocate for the preservation and prudent management of the Eldridge Property formerly known as Sonoma Developmental Center. And while we continue pursuing the National Registry of Historic Places (NRHP) status for entire 940+ acres, we cautiously endorse the Historic Preservation Alternative as the **only** realistic and viable option available within this Specific Plan as written.

B4-2

It is with great urgency that this organization stresses that the urbanization of Eldridge is not portrayed accurately. The Draft EIR does not stress or give any credence to the preservation of cultural integrity, history, conservation and housing in an appropriate scale. The inadequacy of the 'self-mitigated" Specific plan appears to have fallen short of CEQA. CEQA Guidelines mandate consideration and analysis for all alternatives and gives desired designation to the most environmentally superior alternative. (Section 15126.6)

Your analysis that; "Historic Preservation Alternative would be less superior in some environmental features such as energy use, biological resources, and wildfire risks." Is categorically untrue. There are many architects, including those within the National Trust for Historical Preservation, that express exactly the opposite view. Where is the data to support this claim?

B4-3

Examples of this lack of analysis with reference to environmental impacts is evidenced by the sugar-coated language used throughout this document such as, '*if feasible*" or "*reasonably foreseeable".* Legally enforceable Mitigation and Monitoring should be included in every aspect of this DEIR that overtly states in most instances, "no mitigation needed.

With regard to the massive demolition suggested in this Proposed Plan, We find it unconscionable that this DEIR makes such outlandish claims. Below are just a few examples of the dozens listed as "requiring no mitigation".

B4-3

3.8 Hazards and Hazardous Materials 3.8-1

- Implementation of the Proposed Plan would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. No mitigation needed (where is your data?)

B4-4

- Implementation of the Proposed Plan would not create a significant hazard to the public or the environment through *reasonably foreseeable* upset and accident conditions involving the release of hazardous materials into the environment. No mitigation needed (demolition of old buildings releases huge amounts if embedded carbon into the atmosphere as well as releasing hazardous materials into the soil)

- Implementation of the Proposed Plan would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No mitigation needed (Blatantly incorrect. There are dozens homes on Marty Dr and beyond that are fewer than a hundred yards away)

- Implementation of the Proposed Plan would not result in development located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment. No mitigation needed. (There are multiple dumpsites on-grounds that are questionable. Where is your data?)

5.3 Significant and Unavoidable Impacts

B4-5

(We find these statements (below) to be totally unacceptable and we challenge the validity of your assessment)

5.3.1 Cultural, Historic and Tribal Resources

"Development under the Proposed Plan would potentially entail the demolition of at least 13 percent of historically contributing resources that were originally documented as part of the Sonoma State Home Historic District (SSHHD), which has been determined eligible for listing in the California Register of Historical Resources (CRHR) and qualifies as a historical resource under CEQA. Further, new construction under the Proposed Plan has the potential to disconnect the remaining contributing resources in the Core Campus from those in the Community Separator and Regional Parks lands to the east and west, disrupting the SSHHD's overall integrity to the point that it would no longer be eligible for listing in the National Register of Historic Places, CRHR, or as a California Historic Landmark. This impact, in addition to demolition of the aforementioned resources would result in a substantial adverse change to the significance of the historic district such that the significance of the historic district would be materially impaired"

(It was expressed several times by Mr. Bhatia [Dyett &Bhatia] during the many virtual community outreaches that most of the older building on the west side campus are, in his words, "beyond repair". Again, those assertions have no merit or data to justify such claims. Recently local architects, well versed in historic restoration, assessed many of

the oldest building on the west campus and they agreed that very few of these historic buildings are beyond refurbishing. It is also a proven fact that it is less expensive and environmentally preferred to refurbish and reuse existing structures than to demolish and rebuild)

B4-5

Retaining the historic character of these 100+ year old buildings, together with their unique architectural styling is equally important, as referenced in the ***Environmental Analysis > 3.1 Aesthetics,*** and again reiterated in the Specific Plan's "Guiding Principals"**:**

B4-6

"… to balance Development with Historic Resource Conservation. Preserve and adaptively reuse the Main Building and the Sonoma House complex, conserve key elements of the site's historic landscape, and strive to maintain the integrity of the historic district to the west of Arnold Driven by adaptive reuse of contributing buildings where feasible. Support a cohesive community feel and character, while allowing a diversity of architectural styles"

We (GEHS) feel that the Historic Preservation Alternative meets the fundamental project objectives listed on pages 5-6 of the DEIR. However, we also find that the Specific Plan is inconsistent with these fundamental project objectives, which calls for balancing development with historic resource conservation?

B4-7

What are the performance-based standards to determine which buildings can feasibly be restored or adaptively reused? How is demolition of any building to be decided? What type of analysis and performance-based standards will be applied to permit demolition under the Specific Plan?

The removal of historic buildings is not something we (GEHS) take lightly. These old buildings are a major contributor and a part of the very fabric of our local community and beyond. We find that the lack of data regarding the structural integrity of these historic buildings is quite troubling, as well as the ease by which the County speaks of their removal. We found it necessary to refer back to the assessments of Wallace, Robert &Todd and JRP to find data on structural and seismic conditions as well as building materials condition. The assessment done by Diana Painter and Associates (2015) was also quite valuable in helping us understanding where these historic buildings stood structurally. With Page and Turnbull being one of your consultants, why is there no data available on current building conditions? It is obvious to us (GEHS) that these historic buildings are merely considered obstacles in the path of the County's Proposed Plan and that the general consensus of the community at large with their concerns regarding the scope and density of the Proposed Plan have simply been ignored or considered unfounded.

The Guiding Principles offer excellent insight and direction:

"Ensure that new development complements the ~~adjacent~~ communities of Glen Ellen and Eldridge and fits the character and values of the site and surrounding areas…"

<u>Legacy of Care</u>

From the beginning of the Specific Plan process the term, "Legacy of Care" has been used and continually tossed around without focus or purpose. Perhaps it is to show a willingness to recognize and acknowledge the 130 years of dedicated service and care to those with developmental disabilities. Though it is heart warming to hear that SDC is being acknowledged and remembered by those who wish

B4-8

to replace it, this sentiment rings hollow with the absence of truly addressing the historical significance of California's first care facility for children with developmental disabilities. Dozens of times we've heard this term "Legacy of Care" used, yet never once has the County and their consultants expressed any interest or desire in creating a Historic Preservation Area - an area that would be dedicated specifically to the Legacy of this once great Developmental Center. The Proposed Plan makes suggestions of remembrances but has nothing of any substance to offer. Where is your plan to address this often-used term, "Legacy of Care'"? It appears to be just a term used to console and placate those who truly care about the history of the old Sonoma State Home: The people who lived and worked there; the families whose loved-ones resided there; the local communities that flourished along side… It's these people, places and stories that truly constitute a vision of Legacy of Care. To the County and their consultants Legacy of Care appears to mean nothing, as evidenced by their lack of interest in preserving California History.

B4-8

The Specific Plan make references to preserving the old administration building (PEC building 1908) and the Superintendent's residence (Sonoma House 1897) as evidence enough to prove that Legacy of Care exists in their plan. Ironically tho, these two historic building are already protected on the NRHP and as a County Historic Landmark, respectively. The County also has suggested in their Proposed Plan that these two historic buildings should be slated as part of the hospitality / hotel idea.
Is this really how the County wants to portray Legacy of Care? Does the County and State have *any* plans to respectfully acknowledge the existence of this historic care home? If so, what are they?

B4-9

The Glen Ellen Historical Society has submitted multiple plans to address the indifference and unresponsiveness toward Historic Preservation. It is deeply concerning that these plans have never received a response or recognition of any kind. The willingness of the County to turn a blind eye on an area of such historical significances is worrisome.
Our (GEHS) plans are concise and well thought out. Our vision is simple. Establish a small Historic Preservation Area that includes a museum and library, a visitor's center and a small community conference and archive center. The proposed Historic Area would be strategically positioned at the location that is currently suggested as "The Firehouse Commons" in the County's Proposed Plan. Hospitality is the County's focus for this area. Historic Preservation is ours…
The County and Dyett & Bhatia have seen our plans:
"The Gateway to Sonoma Mountain and the Historic Cemetery"
This is what "Legacy of Care" **<u>really</u>** looks like.

B4-10

In closing, the GEHS respectfully requests the following;

- A CEQA level identification of potential impacts of known or potential historic sites and landscapes.

- Consider the historic sites as an entire cultural landscape and not identify individual buildings individually to be demolished.

- Require a future developers to prepare a historic preservation plan, based on desired development and suitability of buildings for adaptive reuse, with the overarching objective of preserving a set of buildings that reflect the diversity of building types and the continuum of life at the former SDC. For instance, retain and reuse buildings that represent various architectural styles

B4-11

that are character-defining to the Historic District, including French Eclectic, Spanish Eclectic, and Tudor Revival, as well as character-defining materials such as tile roofs, stucco and brick cladding, and wood windows.

B4-11

- Include a reference or rationale of why Sonoma County has not responded to a two-year-old application for Historical Landmark status for Eldridge.

- Explain how the demolition of buildings reduces the eligibility of the property for the National Register of Historic Places. The property application has been submitted by SHPO and the GEHS has been asked for additional and expanded information on the property, specifically the east side of Arnold Drive. According to the Draft not all buildings, structures, and landscape elements within the historic district boundary are considered contributing resources because some of them are outside the 1889 1949 period of significance and others do not have sufficient historical integrity. Due to the expansion of the historic district boundary as requested by SHPO, the number of contributing resources grew from 46, as identified in JRP's May 2017 report, to 94 buildings and structures. Where is any reference to Wallace, Roberts and Todd or Page and Turnbull or JRP and their findings regarding historical preservation of building and landscapes?

B4-12

- Why is there no mention of historic preservation in the initial bullet points? The statement of Balance with Historic Resource Conservation is acceptable however it is qualified with 'where feasible.' What is the definition of the phrase 'where feasible?'

- CALFIRE identified the oldest fire suppression buildings in the State dating to 1931-2. The Eldridge Fire Department was built in 1932 yet it is not considered significant and one to be potentially removed. Then the plan calls the area Fire House Commons. Why will the area be named for a building to be remove as 'insignificant?

B4-13

- The Historic Core appears to consist of two buildings: The Sonoma House and the Professional Education Building. The buildings adjacent to them (Oak Lodge, Hatch and McDougall) are important representatives of early 20th century institutional care. This section is nearly contiguous with the cemetery and Jack London HISTORICAL State Park. Has there been any rationale to create a historic area within the property historic district and how the Department of Parks and Recreation could be expanded to include this historic area.

Thank you for your consideration. The Glen Ellen Historical Society looks forward to seeing your responses in the final EIR

Respectfully,

Glen Ellen Historical Society

PO Box 35, Glen Ellen, CA. 95442

(707) 996-8790

VOR
A Voice Of Reason
Speaking out for people with Intellectual & Developmental Disabilities

VOR
Main Office
836 S. Arlington Heights Rd. #351
Elk Grove Village, IL 60007
Toll Free: (877) 399-4867
https//:www.vor.net

Executive Director
Hugo Dwyer
72 Carmine St.
New York, NY 10014
(646) 387-2267
hdwyer@vor.net

President
Joanne St. Amand
20 Sutton Place
Cranford, NJ 07016
(908) 272-0399
jrst.amand@verizon.net

September 25, 2022

Mr. Brian Oh,
Sonoma County, California
brian.oh@sonoma-county.org

Dear Mr. Oh,

By way of introduction, VOR – A Voice Of Reason - is a national non-profit founded in 1983. For nearly forty years, we have been advocating for high quality care and human rights for all individuals with intellectual and developmental disabilities (I/DD).

I write you today on behalf of those individuals with the most severe and profound I/DD and autism in California, in regard to the county's plans for the property that was once home and community for many of our loved ones with I/DD at the Sonoma Development Center. It is my understanding that the property is being divided and parceled out to property developers and investors. B5-1

We would like to ask that you please keep a substantial portion of the property available to providers of services for those individuals most deeply impacted by I/DD and autism, in keeping with the original intent of those who first developed this property.

Sonoma County is known around the world for its beauty, its amazing vineyards, and for its people. Forest fires may change the landscape. Drought may ruin a season of grapes. But the people of Sonoma County have a chance to retain their heart, their soul, and their dignity, by determining to continue to provide for California's most vulnerable citizens. B5-2

Business schools used to teach about the value of "Goodwill". You cannot set a price on it, but it is an asset that can bring greater value to all of the other assets a business, or a county, holds. We urge the Sonoma County commissioners to bring that unique and rare value to their community, and to maintain the goodwill that they have considered one of the many blessings that have long graced Sonoma County and its families.

Thank you for your time and consideration,

Hugo Dwyer – Executive Director
Joanne St. Amand - President

FARELLA BRAUN + MARTEL LLP

CHRISTOPHER LOCKE
clocke@fbm.com
D 415.954.4486

September 26, 2022

Brian Oh
Comprehensive Planning Manager
Permit Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403
brian.oh@sonoma-county.org

Re: Sonoma Developmental Center – Comments on Draft EIR

Dear Mr. Oh:

On behalf of Valley of the Moon Natural History Association *dba* Jack London Park Partners ("Jack London Park Partners"), this will provide comments relating to the County of Sonoma's ("County's") draft Environmental Impact Report ("DEIR") for the draft Sonoma Developmental Center Specific Plan ("Specific Plan" or "Project") under the California Environmental Quality Act (Pub. Resources Code §21000 et seq., or "CEQA") and CEQA's implementing Guidelines (Cal. Code Regs., tit. 14, §15000 et seq., or "Guidelines"), concerning the transfer and disposition of the Sonoma Developmental Center ("SDC") property under Government ("Gov't") Code §14670.10.5. B6-1

The governing statute recognizes that the SDC property is "composed of a developed campus covering approximately 180 acres and approximately 700 acres of open space adjacent to the Sonoma Valley Regional Park and the Jack London State Historic Park," that the property includes "exceptional open-space, natural resources, and wildlife habitat," and expressly provides that "[i]t is the intent of the Legislature that the lands outside the core developed campus and its related infrastructure be preserved as public parkland and open space." Gov't Code §14670.10.5(a)(1), (7) & (9).

The statute further provides that the "disposition of the property or property interests shall provide for the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible and shall be upon terms and conditions the director deems to be in the best interests of the state," and expressly recognizes "the need for conservation of water resources to preserve or enhance habitat, fish and wildlife resources" in evaluating proposed uses of the property. Gov't Code §14670.10.5(c)(3) & (5). B6-2

With this in mind, and as set forth below, Jack London Park Partners requests that the DEIR be revised and recirculated to (1) provide for the direct transfer of the SDC open space west of Arnold Drive to the California Department of Parks and Recreation ("State Parks") to be "preserved as public parkland" and ensure "permanent protection of the open space and natural resources as a public resource," as required by Gov't Code §14670.10.5(a)(3) and (9); (2) analyze environmental impacts on the open space and adjacent areas of Jack London State Historic Park (the "Park") that would be posed by unrestricted access by Project residents and hotel guests; (3) analyze the potential impacts of the proposed Project on water resources critical for biological resources, including the flora, fauna and habitat in the upgradient SDC open space and adjacent areas of the Park; and (4) provide for a southern entrance ("Southern Park Entrance") to the Park in the SDC open space area immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive, mitigating both environmental impacts from unrestricted access and traffic impacts, allowing adaptive reuse of the two historic buildings in that area, and providing for wildlife corridor protections and enhancements there. B6-3

A. Jack London Park Partners

Jack London Park Partners emerged during a budgetary crisis in 2012 that would have shuttered many state parks. It was the first non-profit organization to take up management of a state park on behalf of the people of California. Since then, it has been successfully managing, restoring and maintaining the natural and historical features of the Park under contract with State Parks, the owner of the Park. Jack London Park Partners also contributes funds to advance cultural and recreational programs, and create educational exhibits, interactive displays, signage and other features at the Park. B6-4

Jack London Park Partners is the outgrowth of Valley of the Moon Natural History Association, a citizens' group established nearly a half-century ago to support the interpretive needs of three parks in Sonoma County, including the Park. The Association has played a vital role in recruiting and organizing the hundreds of volunteers who support all functions of the Park. Among the organization's most noteworthy accomplishments are the award-winning restoration of the cottage that was the residence of Jack and Charmian London after acquiring the "Beauty Ranch," and the completely re-imagined House of Happy Walls Museum which interactively brings the story of Jack and Charmian London to life.

Most recently, Jack London Park Partners began the restoration of 40 acres of historic orchard, established on SDC property more than a century ago, which became part of the Park in 2002. While many of the trees had died, some were still alive and bearing fruit, and the surviving trees have provided scions to grow new, historically authentic fruit trees to restore the orchard. With a combination of agricultural expertise and tender loving care, the orchard is on its way toward healthy stabilization with revitalized trees producing several varieties of apples B6-5

and pears, prune plums, apricots, cherries, and quince.[1] Jack London Park Partners has formed a partnership with Farm to Pantry to provide fruit from the orchard to Sonoma organizations that help people facing food insecurity.

B6-5

With this history and continuing commitment in mind, Jack London Park Partners has a keen interest in ensuring that "[t]he disposition of the property or property interests shall provide for the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible," as set forth in the statute governing the future of the SDC property, Gov't Code §14670.10.5(c)(3), analysis of which is required by CEQA. Similarly, as a steward of the Park, Jack London Park Partners has an interest in protection of water resources critical for the extant flora, fauna and habitat in the SDC open space and adjacent areas of the Park, as is similarly required by Gov't Code §14670.10.5(c)(5) and analysis of which is required by CEQA. And, Jack London Park Partners has an interest in preventing harm to wildlife, habitat and other biological resources that would be posed by unrestricted access to the western open space and the adjacent Park by large numbers of Project residents and visitors. Such harm could be addressed in part by the proposed Southern Park Entrance, which could also mitigate traffic and vehicle miles traveled ("VMT") impacts and provide opportunities to adaptively reuse historic buildings and enhance the wildlife corridor in the area immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive.

B6-6

None of these potentially significant effects on the environment and proposed mitigation measures are addressed in the County's DEIR. Accordingly, these comments address direct transfer of the open space to State Parks to ensure that it will be a public resource as parkland, and other key issues relating to water resources, habitat preservation, public access, and protection and enhancement of the wildlife corridor.

B. Relevant CEQA Standards

The failure of the County's DEIR to adequately analyze the environmental impacts requires that it be revised and recirculated. An EIR is inadequate as a matter of law where, for example:

B6-7

- The project description "did not adequately apprise all interested parties of the true scope of the project for intelligent weighing of the environmental consequences of the project;"
- "[I]t cannot be found that the FEIR adequately investigated and discussed the environmental impacts of the development project;" or
- "[T]he discussion of alternatives omitted relevant, crucial information."

[1] *See* Salcedo, *Old orchard gets a makeover, Goals of clearing project include cultural resource preservation and wildfire hazard mitigation,* Kenwood Press (March 15, 2022), available at https://www.kenwoodpress.com/2022/03/15/the-old-orchard-gets-a-makeover/.

San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus (1994) 27 Cal.App.4th 713, 729, 734, 739 (internal quotation marks omitted).

B6-7

An agency's determinations must be set aside where there is a prejudicial abuse of discretion. An "[a]buse of discretion is established if the agency has not proceeded in a manner required by law or if the determination or decision is not supported by substantial evidence." Pub. Resources Code §21168.5; *see* Pub. Resources Code §21168; *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal. 4th 412, 426-27 & 427 fn. 4 ("*Vineyard Area Citizens"*); *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 392 fn. 5 ("*Laurel Heights I"*).

"[T]here are instances where the agency's discussion of significant project impacts may implicate a factual question that makes substantial evidence review appropriate." *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 514 ("*Friant Ranch*"). Under CEQA, "substantial evidence includes fact, a reasonable assumption predicated upon fact, or expert opinion supported by fact," but "not argument, speculation, unsubstantiated opinion or narrative, evidence that is clearly inaccurate or erroneous, or evidence of social or economic impacts that do not contribute to, or are not caused by, physical impacts on the environment." Pub. Resources Code §21080(e)(1) & (2).

B6-8

Here, the County's DEIR wholly fails to analyze the potential impacts described herein and has therefore not proceeded in the manner required by law. The California Supreme Court has recognized that "adequacy of discussion claims are not typically amenable to substantial evidence review." *Friant Ranch, supra,* 6 Cal.5th at 515. Additionally, an agency's abuse of discretion is prejudicial where its environmental disclosure documents omit information required by CEQA and necessary for an informed discussion. *See POET, LLC v. State Air Resources Bd.* (2017) 12 Cal.App.5th 52, 84. "The failure to comply with the law subverts the purposes of CEQA if it omits material necessary to informed decisionmaking and informed public participation;" the "[c]ase law is clear that, in such cases, the error is prejudicial." *Friant Ranch, supra,* 6 Cal.5th at 515 (internal quotation marks omitted).

For the foregoing reasons and those set forth below, the DEIR must be revised to include (1) an adequate Specific Plan that clearly states that the open space west of Arnold Drive will be directly transferred to State Parks to further the mandate of the governing statute, Gov't Code §14670.10.5; (2) an analysis of potential environmental impacts posed by unrestricted access by Project residents to the western open space and the adjacent Park; (3) an analysis of the potential impact of the proposed Project on water resources critical for the biological resources, including extant flora, fauna and habitat, in the SDC open space and adjacent areas of the Park; and (4) an adequate consideration of alternatives that include and analyze a new Southern Park Entrance to address unrestricted access, mitigate VMT and other traffic impacts, adaptively reuse the two historic buildings, and enhance of the wildlife corridor in that area. Such revisions will provide significant new information and will thus require recirculation of the DEIR.

B6-9

C. The Project Description Fails to Reflect Direct Transfer of Open Space and the DEIR Fails to Analyze Impacts to Biological Resources from Unrestricted Access

"An accurate, stable and finite project description is the Sine qua non of an informative and legally sufficient EIR." *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 192-193. "A curtailed or distorted project description may stultify the objectives of the reporting process," because it is "[o]nly through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal (i.e., the 'no project' alternative) and weigh other alternatives in the balance." *Id.* Numerous cases have reiterated this principle because, for example, "a project description that gives conflicting signals to decision makers and the public about the nature and scope of the project is fundamentally inadequate and misleading." *Stopthemillenniumhollywood.com v. City of Los Angeles* (2019) 39 Cal.App.5th 1, 17 (internal quotation marks omitted). B6-10

As explained below, the Project Description (*see* DEIR, Chapter 2) and the Specific Plan omit discussion of whether the western and eastern SDC open space will be transferred to State Parks and to the Sonoma County Regional Parks Department ("Regional Parks"), preserved as public parkland, and protected from impacts posed by the Project. The Project Description should be revised to address this critical omission and, specifically, to clearly state that the open space west of Arnold Drive will be transferred to State Parks. B6-11

Public officials, government agencies, and numerous public commentators have repeatedly called for a direct transfer of the open space to State Parks and Regional Parks, yet the Specific Plan and the DEIR fail to address this issue, and the DEIR fails to analyze the potential impacts of unrestricted access by Project residents and hotel guests on the biological resources that exist in the SDC open space and the adjacent Park.

Indeed, not only does the DEIR fail to analyze such impacts, it sets forth a "vision" that is directly contrary to the statutory requirement that the open space be preserved as "public parkland" and as a "public resource:" The DEIR proposes that the core 180-acre developed area will feature "recreational open space integrated with the surrounding park systems" and that "[r]esidents [will] enjoy pedestrian access to essential services and parks, and seamless connections to surrounding open spaces." DEIR, p. 64. Similarly, the Specific Plan's Guiding Principles include "[s]upport[ing] the responsible use of open space as a recreation resource for the community." Specific Plan, Guiding Principle 3, p. 1-9.[2] B6-12

[2] The Staff Memorandum for the Planning Commission hearing held on September 15, 2022, repeats these "vision" statements. Permit Sonoma, *Staff Memo for the Sonoma County Planning Commission*, County of Sonoma (Sept. 15, 2022), p. 2, available at https://share.sonoma-county.org/link/NShqMNHFV4U/Item%201%20-%20Sonoma%20Developmental%20Center%20Specific%20Plan/Planning%20Commission%20DEIR%20Staff%20Memo.pdf.

The County's preferred alternative includes up to 1,000 residential units, 2,400 residents, a hotel and other facilities. Even at the height of operations, the SDC did not provide unrestricted recreational activities in the open space or the surrounding park systems for this volume of residents and staff. Moreover, in the decades since SDC operations wound down,[3] fragile ecosystems, wildlife, flora and habitat have developed in the open space and in adjacent areas of the Park. The environmental impact of unrestricted "recreational" access and use of these areas by the "community" of thousands of Project residents and hotel guests is of grave concern, poses the potential for significant impacts, and must be analyzed under CEQA. The language of the DEIR and Specific Plan also suggests preferential and unrestricted access tantamount to *private* use of these areas by Project residents and hotel guests, contrary to the governing statutory requirements. *See* Gov't Code §14670.10.5(a).[4]

B6-13

It was precisely because of such concerns that the statute requires that the open space be preserved as "public parkland" and as a "public resource." And it is precisely because of such concerns that public officials, coalitions of government agencies and the public have insisted for years that there be a direct transfer of the open space to State Parks and Regional Parks.

B6-14

For example, the express goal of the SDC Coalition Land Committee's Land and Water Protection Proposal (February 2019)[5] was to ensure a "low cost/no-cost transfer of ownership of

[3] The SDC resident population reached its height more than five (5) decades ago, in 1968. DEIR, p. 480; SDC, Closure Plan, CA HHSA DDS (2015), available at https://www.dds.ca.gov/wp-content/uploads/2019/03/SDC_ClosurePlan100115_20190318.pdf.

[4] We note that in response to public comments advocating direct transfer at the County's March 22, 2022 virtual workshop, the County's consultant stated that "certain complexities" relating to "water rights" would make it "difficult" to transfer the open space to anyone other than the developer of the core campus. Such statements are contrary to the governing statute's requirement that the SDC open space be preserved as public parkland and protected as a public resource. Gov't Code §§14670.10.5(a)(9) & (c)(3). Moreover, the position of the County's consultant is contrary to the water rights ownership and use provisions in the governing statute, which provides that "[t]he state owns riparian water rights and pre-1914 and post-1914 appropriative water rights . . . [t]hese rights may be held by the state for existing and future domestic uses on the property." Gov't Code §14670.10.5(f). The suggestion that water rights issues prevent direct transfer of the open space also ignores the availability of easements and licenses to ensure continued SDC core campus access to water supply sources and infrastructure. Similarly, earlier suggestions that including the SDC open space in a sale to core campus developers will increase the potential purchase price or provide tax benefits are not only contrary to the statutory requirement that the land be preserved as public parkland and protected as a public resource, they are also belied by legal authorities disallowing such deductions where, as here, the developer would not be foregoing development rights to the open space.

[5] *Land and Water Protection Proposal*, SDC Coalition Land Committee (Feb. 2019), p. 5, available at https://transformsdc.files.wordpress.com/2019/06/sdc-land-protection-proposal-final-feb.-2019.pdf. The Coalition (2017-2019) was comprised of California State Parks, California Department of Fish and Wildlife, Sonoma County Agricultural Preservation and Open Space District, Sonoma County Regional Parks, Sonoma County Water Agency, Sonoma Land Trust, Sonoma Ecology Center, Sonoma Mountain Preservation, Sonoma Mountain Ranch Preservation Foundation, and Jack London Park Partners.

the areas outside the existing developed campus of SDC to the California Department of Parks and Recreation (State Parks) or the Sonoma County Regional Parks Department (Regional Parks) to ensure permanent protection." At the January 8, 2022 Community Workshop on the Future of SDC, Sonoma Land Trust similarly observed that a "crucial outcome" is the transfer of the 750-acres of open space to State or County parks, and is vital to protection of the wildlife corridor and other natural resources and the preservation of this land as a public resource.

B6-14

Public officials have also repeatedly declared their support for a direct transfer of the open space to State Parks and Regional Parks. At the County Board of Supervisor's meeting on January 25, 2022, where the Board of Supervisors considered the County Staff's SDC Vision Plan Frameworks, Potential Development Types and Outcomes, Supervisor Susan Gorin expressed support for direct transfer of the SDC open space, stating that it is time to "to move it into annexation of the parks, both Jack London State Park and the Regional Park." Other Supervisors supported her comments. More recently, on June 14, 2022, State Senators Bill Dodd and Mike McGuire, along with Supervisor Gorin, issued a joint statement affirming that the SDC open space will be a *public* resource, consistent with direct transfer to State Parks and Regional Parks: "The land outside the core campus is already legally protected in state law as parkland and open space, and we will ensure it will always remain public land. Public agencies are working together to ensure the best long-term management of this incredible public resource."[6]

B6-15

The State Legislature has declared that "[t]he state parks and other nature, recreation, and historic areas deserve to be preserved and managed for the benefit and inspiration of all state residents and visitors to the state parks," and that "[i]ndividual units of the state park system derive increased importance and recognition through their inclusion in a unified state park system that is preserved and managed for the benefit and inspiration of all Californians and visitors to the state." Pub. Resources Code §5001(a)(2) & (3). Pursuant to this declaration, State Parks is committed to "promote and regulate the use of the state park system in a manner that conserves the scenery, natural and historic resources, and wildlife in the individual units of the system for the enjoyment of future generations," and "provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation."[7] The governing statute here, Gov't Code §14670.10.5, is clearly intended to apply these mandates to the SDC open space.

B6-16

[6] Dodd, *Sen. Dodd Issues Joint Statement on Sonoma Developmental Center*, California Senator Bill Dodd, Senate District 3 (June 14, 2022), available at https://sd03.senate.ca.gov/news/20220614-sen-dodd-issues-joint-statement-sonoma-developmental-center.

[7] Pub. Resources Code §5001(a)(2) & (3); *About Us: Our Mission*, California Department of Parks and Recreation, available at https://www.parks.ca.gov/?page_id=91.

The failure of the Specific Plan and DEIR to provide for direct transfer is contrary to these assurances by public officials and the requirements of the governing statute. The failure of the DEIR to analyze the environmental effects of unrestricted access to the open space and adjacent areas of the Park is a violation of CEQA.

We also note that the governing statute gives the current owner of SDC, the State Division of General Services ("DGS"), the right to transfer all or part of the SDC. The governing statute acknowledges the potential for transfer of a portion of the SDC property after "the county has granted necessary approvals to rezone the property, approved a specific plan or plans for the property, and approved any necessary development agreements needed for disposition of all or any portion of the property, or the director has determined that the transfer, sale, or final disposition is in the best interests of the state." Gov't Code §14670.10.5(e)(2).[8]

B6-17

Consistent with this authorization, on May 17, 2022, DGS published a Request for Proposal ("RFP") seeking proposals from qualified parties "to purchase the Subject Property (described below) for potential redevelopment," and identified the Subject Property as "an approximately ±180 acre developed core campus ('Subject Property') surrounded by over ±700 acres of open space." RFP, p. 4. As Senator Dodd, Senator McGuire and Supervisor Gorin observed in their joint statement, "[w]e want to be crystal clear – the open space is absolutely not included in the Department of General Service's request for proposals."[9] Accordingly, the open space and adjacent areas of the Park should not be subject to preferential and unrestricted access tantamount to *private* use of these areas by Project residents and hotel guests.

B6-18

The Specific Plan and the DEIR should acknowledge that the RFP does not include the open space, and that it will be directly transferred to State Parks and Regional Parks to ensure preservation as "public parkland" and a "public resource." Gov't Code §14670.10.5(a). Moreover, the DEIR must analyze and mitigate the environmental effects on biological resources in the SDC open space and adjacent areas of the Park that would be posed by unrestricted access of thousands of core campus Project residents and hotel guests.

B6-19

[8] Government Code §14670.10.5(e)(1) further states that "[t]his section shall not apply to the transfer of the property to a state agency in accordance with [Gov't Code] Section 11011," which provides that "[e]xcept as otherwise provided by any other law, whenever any land is reported as excess pursuant to this section, the Department of General Services shall determine whether or not the use of the land is needed by any other state agency. If the Department of General Services determines that any land is needed by any other state agency it may transfer the jurisdiction of this land to the other state agency upon the terms and conditions as it may deem to be for the best interests of the state."

[9] Dodd, *Sen. Dodd Issues Joint Statement on Sonoma Developmental Center*, California Senator Bill Dodd, Senate District 3 (June 14, 2022), available at https://sd03.senate.ca.gov/news/20220614-sen-dodd-issues-joint-statement-sonoma-developmental-center.

FARELLA BRAUN + MARTEL LLP

D. The DEIR Fails to Analyze Impacts from Project Use of Water Resources on Biological Resources in the Open Space and Adjacent Parkland

"The ultimate inquiry, as case law and the CEQA guidelines make clear, is whether the EIR includes enough detail 'to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.'" *Friant Ranch, supra*, 6 Cal.5th at 516 (citations omitted); *see* Guidelines §15151. As a result, "[t]o facilitate CEQA's informational role, the EIR must contain facts and analysis, not just the agency's bare conclusions or opinions." *Laurel Heights I, supra*, 47 Cal.3d at 404. B6-20

An EIR must consider the potential environmental impacts from supplying water to a project, not simply whether there are sufficient water resources for a project. "The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided." Pub. Resources Code §21002.1(a). This includes impacts from water usage, because "[t]he ultimate question under CEQA . . . is not whether an EIR establishes a likely source of water, but whether it adequately addresses the reasonably foreseeable *impacts* of supplying water to the project." *Vineyard Area Citizens for Responsible Growth, supra*, 40 Cal.4th at 434 (emphasis in original). B6-21

An EIR is inadequate where, "even if the Water District does have the ability to meet the water requirements of the project, the EIR is silent about the effect of that delivery on water service elsewhere in the Water District's jurisdiction." *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 831 ("*Santiago County Water Dist."*). An agency presenting evidence "to show that there are sufficient water resources available for the project. . . . is beside the point," because "[i]t is the adequacy of the EIR with which [courts] are concerned, not the propriety of the board of supervisors' decision to approve the project." *Id.* Accordingly, "[d]ecision makers must, under the law, be presented with sufficient facts to 'evaluate the pros and cons of supplying the amount of water that the [project] will need.'" *Vineyard Area Citizens, supra*, 40 Cal.4th at 431 (quoting *Santiago County Water Dist., supra*, 118 Cal.App.3d at 829). Where an agency fails to include such an analysis, it has "failed to proceed in the manner prescribed by CEQA." *Id.* at 435 (internal quotation marks omitted). B6-22

Here, the DEIR wholly fails to consider the impacts that Project water use will have on biological resources in the SDC open space and adjacent areas of the Park. As noted above, the County's preferred alternative includes up to 1,000 residential units, 2,400 residents, a hotel and other facilities.[10] It has been decades since the SDC operated at anything approaching this population and, even at the height of operations, SDC did not involve the level of water use B6-23

[10] The DEIR states that "[t]he Proposed Plan is anticipated to result in a total buildout of approximately 2,400 residents, 1,000 housing units, and 940 jobs, which would all be an increase from the current conditions of the SDC facility, closed in 2018 and largely vacant with some remaining uses." DEIR, p. 7. The DEIR also acknowledges that "the Jack London State Historic Park and Sonoma Valley Regional Park border the Planning Area." DEIR, p. 405.

posed by the Project or the drought conditions and groundwater use restrictions currently affecting and forecast for Sonoma County. B6-23

Moreover, ecosystems exist and have developed in the open space and in adjacent areas of the Park, including coastal redwoods estimated to be more than 1,000 years old, diverse wildlife species and fragile habitat, and the historic orchard that is undergoing restoration and is located immediately west and upgradient of the Project. The DEIR fails to analyze the impact of the Project's proposed use of surface and groundwater on these biological resources.

Jack London Park Partners expressly identified this concern in a letter commenting on the Notice of Preparation ("NOP") for the Project, submitted to the County on March 25, 2022.[11] Similarly, the Sonoma Land Trust's comments on the NOP point out that "the EIR must consider the impacts of the Project on biological resources within [existing] parks" and that "[a]ll such impacts are particularly likely here given intensity of proposed development and SDC's proximity to major regional parks, including Sonoma Valley Regional Park to the northeast and Jack London State Historic Park to the west."[12] B6-24

In fact, the DEIR acknowledges that "[d]irect impacts to streams and surrounding habitat could result in the loss of suitable habitat or harm of these species if they are present," and that "[d]irect mortality, substantial loss of habitat, or loss of breeding habitat may be considered potentially significant impacts." DEIR, pp. 241-242. However, the DEIR fails to analyze the impacts from this new and massive water usage—either on the biological resources in the open space or on the biological resources of the adjacent Park. Instead, the DEIR merely states that "[i]mplementation of the Proposed Plan would not increase water demand within the Planning Area from historical peak amounts" (DEIR, p. 484), wholly failing to analyze the *impacts* from the Project's water usage on animal and plant species, habitat, ecosystems and other biological resources in the western open space and adjacent areas of the Park. Such impacts must be analyzed for the DEIR to be compliant with CEQA. *See Vineyard Area Citizens*, *supra*, 40 Cal.4th at 434; *Santiago County Water Dist.*, *supra*, 118 Cal.App.3d at 831. B6-24

The failure to include this analysis cannot be salvaged by claiming the Project is self-mitigating. First, the DEIR does not identify and analyze this impact on biological resources in the open space and adjacent Park areas, which is itself a fatal flaw under CEQA. Second, an EIR cannot treat mitigation measures as elements of the Project. An EIR may not proceed by "incorporating the proposed mitigation measures into its description of the project and then concluding that any potential impacts from the project will be less than significant" because, "[b]y compressing the analysis of impacts and mitigation measures into a single issue, the EIR B6-25

[11] *See* Jack London Park Partners Comments on the NOP (March 25, 2022), p. 4 fn. 4. We note that the copy of this comment letter included in DEIR Appendix A omitted the Conceptual Site Plan that was submitted with the letter. A complete copy of the letter with the Conceptual Site Plan is attached hereto.
[12] DEIR, Appendix A, Sonoma Land Trust Comments on the NOP (March 25, 2022), p. 24.

disregards the requirements of CEQA." *Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645, 655-656.

In particular, "[a]bsent a determination regarding the significance of the impacts to [specific biological resources, such as] the root systems of the old growth redwood trees, it is impossible to determine whether mitigation measures are required or to evaluate whether other more effective measures than those proposed should be considered," because a determination that there is a significant impact "would trigger the need to consider a range of specifically targeted mitigation measures, including analysis of whether the project itself could be modified to lessen the impact." *Id.* at 656. Here, the DEIR wholly fails to analyze such impacts.

B6-25

Additionally, the analysis of biological impacts that is included in the DEIR is impermissibly limited to the Project area itself and treats mitigation measures as elements of the Project—including certain Specific Plan Policies and Standard Conditions of Approval —and thereby erroneously finds that although the Project "could have a significant direct or indirect impact on special-status species or habitats if it would result in the removal or degradation of the species or potentially suitable habitat," such impacts would be less-than-significant because "[p]olicies in the Proposed Plan would serve to reduce potential impacts." DEIR, pp. 241-242. This approach does not provide the impact analysis required under CEQA. Furthermore, the policies in the proposed Specific Plan are limited to "identifying the presence of special-status species and sensitive habitats *at proposed development sites.*" DEIR, p. 240 (quoting Specific Plan Policy 2-28, emphasis added). They do not address impacts caused by Project water use on biological resources in the open space and adjacent areas of the Park.[13]

B6-26

In sum, the DEIR's failure to analyze Project water use impacts to biological resources in the open space and adjacent areas of the Park is contrary to well-established requirements of CEQA. The DEIR's conclusion that there are sufficient water resources *for the Project* and that there are no significant impacts to biological resources *at the proposed developments sites* is itself inadequately supported and, moreover, wholly fails to analyze the impacts caused by Project water use on biological resources in the open space and adjacent areas of the Park.

B6-27

E. The Proposed Southern Park Entrance Will Mitigate Unrestricted Access and <u>Traffic and Provide Historic Preservation and Wildlife Corridor Protection</u>

The DEIR finds only two Project impacts to be significant—and finds these to be unavoidable: A substantial adverse change to the significance of an historic district, and an increase in VMT. *See* DEIR, pp. 8-9, 524. As Jack London Park Partners proposed in comments on the NOP,[14] both could be mitigated in part by including a Southern Park Entrance in the area

B6-28

[13] Additionally, even assuming that such policies were expanded and enforced, and the "Standard Conditions of Approval" referenced in the DEIR were required by the County, such policies and conditions are impermissible as deferred mitigation measures. *See, e.g.*, Guidelines §15126.4(a)(1)(B) ("Formulation of mitigation measures shall not be deferred until some future time.").

[14] Jack London Park Partners Comments on the NOP (March 25, 2022), pp. 5-6, attached hereto.

immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive, and adaptively reusing the two historic buildings in that area as a visitor center. Additionally, together with direct transfer to State Parks, the Southern Park Entrance could mitigate biological impacts from unrestricted access to the western open space and adjacent areas of the Park by Project residents and hotel guests, and could promote protection of the wildlife corridor in that area. B6-28

"Without meaningful analysis of alternatives in the EIR, neither the courts nor the public can fulfill their proper roles in the CEQA process." *Laurel Heights I, supra*, 47 Cal.3d at 404. Specifically, "[a]n EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." Guidelines §15126.6(a). Accordingly, "it must consider a reasonable range of potentially feasible alternatives that will foster informed decisionmaking and public participation." *Id.* B6-29

The DEIR's analysis of the Project's impacts to biological resources is insufficient, and the DEIR's failure to recognize significant impacts to such resources results in an inadequate consideration of project alternatives. In addition to failing to consider impacts from the Project's water usage and unrestricted access, as discussed above, the DEIR makes a conclusory statement that "given the extensive park and recreational opportunities that will be offered within the Planning Area, development under the Proposed Plan would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, and this impact is less than significant." DEIR, p. 406. Yet, as noted above, the DEIR also sets forth a "vision" that the estimated 2,400 "[r]esidents [would] enjoy pedestrian access to essential services and parks" and "recreational open space integrated with the surrounding park systems." DEIR, p. 64. Clearly, these "vision" statements are inconsistent with the conclusion, devoid of analysis, that any impacts will be less than significant. B6-30

As noted above and in Jack London Park Partners' March 25 letter, the SDC open space area immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive could provide a Southern Park Entrance for improved public access and mitigate unrestricted access to the Park, including the historic orchard, via existing trailheads and access roads. The area also includes two historic buildings, believed to have been constructed more than 100 years ago, that could be restored and adaptively reused as a visitor center, with ADA accessible parking, visitor parking, and access by public transportation on Arnold Drive. There could also be measures to protect and enhance the wildlife corridor in this area. B6-31

The area is physically separated by Sonoma Creek from the SDC core campus, and adaptive reuse could help protect, and provide opportunities to enhance, the wildlife corridor including potential land bridges. The area is also across Arnold Drive from the SDC open space north of the core campus, which could similarly be adaptively reused to enhance the wildlife corridor, and could provide overflow visitor parking for the proposed visitor center and southern entrance to the Park, as well as visitor parking for Sonoma Valley Regional Park. B6-32

A Conceptual Site Plan of a Southern Park Entrance for this area was an Attachment to Jack London Park Partners' March 25 letter commenting on the NOP, which is attached hereto. As can be seen in that Conceptual Site Plan, the Southern Park Entrance incudes adaptive reuse of existing structures for a visitor center and Jack London Park Partners staff offices, ADA accessible parking and other visitor parking, access to public transportation, and wildlife corridor protections and enhancements in the SDC open space area immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive. B6-33

The DEIR should be revised and recirculated to consider and include the Southern Park Entrance proposed by Jack London Park Partners. The proposal appears consistent with Specific Plan Policy 2-4, which seeks to "[r]ealign and upgrade the trails to improve the use experience and accessibility, while minimizing impacts to open space" (Specific Plan Policy 2-4, pp. 2-9), and the DEIR's recognition of "the 11-acre non-contiguous Camp Via grounds within Jack London State Historic Park" that includes "an existing network of trails and access roads." DEIR, pp. 3-4. B6-34

The Project will dramatically increase both the population in the area and the potential for unrestricted access to the open space and the Park. As noted above, the DEIR projects that the Project will increase the local population by 2,400 residents (DEIR, p. 7), and recognizes multiple potential access points as part of development of the SDC core campus. *See, e.g.*, Specific Plan, Figures 3.1-1 and 3.2-1. The DEIR also recognizes that the open space includes "many acres of valuable wildlife habitat," and that, "[i]n terms of potential operations and maintenance related impacts, some increased risk to special-status species may result from . . . increased recreational use, and domestic pets." DEIR, pp. 3, 241. However, the DEIR fails to identify and analyze such impacts, as discussed above. B6-35

The Southern Park Entrance, together with direct transfer to State Parks and other measures, could mitigate the significant biological impacts that the DEIR currently fails to identify and analyze. The SDC open space northwest of the Jim Berkland Memorial Bridge provides opportunities to protect and enhance this area of the wildlife corridor, and the proposed South Park Entrance and visitor center could reduce the risk of environmental harm that could otherwise result from unrestricted Park and open space access by large numbers of Project residents and hotel guests following development of the SDC core campus. B6-36

As shown on the Conceptual Site Plan attached hereto, there are existing trailheads and access roads leading to the Park from the SDC open space area northwest, and immediately south, of the Jim Berkland Memorial Bridge. There is also an existing, dedicated pedestrian walkway on the western side of the Jim Berkland Memorial Bridge that would provide access between the proposed visitor center, existing trailheads, and the SDC core campus. These access points would be controlled, allowing existing wildlife corridor features to be protected and enhanced, and operation of the Southern Park Entrance and visitor center would be limited to Park hours, avoiding human impacts to wildlife movement. B6-37

The Southern Park Entrance could also help mitigate the two significant impacts identified in the DEIR. The DEIR states that "[t]he Proposed Plan would result in significant and unavoidable impacts related to transportation (Impact 3.14-2), and historic resources (Impact 3.5-2)," and that its discussion of alternatives is intended to "inform the public and decision-makers about feasible alternatives that may avoid or substantially lessen the significant effects of the Proposed Plan." DEIR, pp. 524-25. The Southern Park Entrance and public transportation access on Arnold Drive would reduce traffic that must now continue through the center of Glen Ellen and along London Ranch Road for access to the Park. In addition, the proposed Southern Park Entrance includes adaptive reuse of existing structures for a visitor center and would thus preserve those two historic buildings.

B6-38

Accordingly, the Southern Park Entrance proposed by Jack London Park Partners should be identified in a revised Specific Plan and recirculated DEIR, and analyzed for mitigation of significant impacts to biological resources that the DEIR failed to identify, as well as the significant traffic and historical resources impacts acknowledged by the DEIR.

B6-39

F. <u>Conclusion</u>

On behalf of Jack London Park Partners, we appreciate your consideration of these comments, which we believe are important for public access, water resource, biological resource and environmental protection, enhancement of the wildlife corridor, and the future use of SDC open space as a public resource and public parkland in accordance with the governing statute.

B6-40

Very truly yours,



Christopher Locke

Attachment

cc: Matt Leffert, Executive Director, Jack London Park Partners
Tennis Wick, Director, Permit Sonoma
Supervisor Susan Gorin, Sonoma County, District One
Senator Bill Dodd, California Senate, District 3
Senator Mike McGuire, California Senate, District 2

FARELLA BRAUN + MARTEL LLP

Attachment

Jack London Park Partners' Comments on the Notice of Preparation (March 25, 2022)

JACK LONDON STATE HISTORIC PARK

March 25, 2022

Brian Oh
Comprehensive Planning Manager
Permit Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403

Re: Sonoma Developmental Center – Comments on Notice of Preparation

Dear Brian:

On behalf of Valley of the Moon Natural History Association *dba* Jack London Park Partners ("Jack London Park Partners"), this will provide comments relating to the County of Sonoma's Notice of Preparation ("NOP") and scoping for the proposed Program Environmental Impact Report ("PEIR") under the California Environmental Quality Act ("CEQA"), and related matters, for the future of the Sonoma Developmental Center ("SDC") property under Government ("Gov't") Code §14670.10.5. B6-41

As set forth below, Jack London Park Partners requests that the NOP project description be clarified to provide for, and that the PEIR analyze, (1) direct transfer of the SDC open space west of Arnold Drive to the California Department of Parks and Recreation ("State Parks") to be "preserved as public parkland" and ensure "permanent protection of the open space and natural resources as a public resource," as required by the governing statute, Gov't Code §§14670.10.5(a)(9); and (2) a southern entrance to Jack London State Historic Park (the "Park"), visitor center, and wildlife corridor protections and enhancements in the SDC open space area immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive. B6-42

Jack London Park Partners

Jack London Park Partners emerged during a budgetary crisis in 2012 that would have shuttered many state parks. It was the first non-profit organization to take up management of a state park on behalf of the people of California. Since then, it has been successfully managing, restoring and maintaining the natural and historical features of the Park under contract with State Parks, the owner of the Park. Jack London Park Partners also contributes funds to advance B6-43

cultural and recreational programs, and create educational exhibits, interactive displays, signage and other features at the Park. B6-43

Jack London Park Partners is the outgrowth of Valley of the Moon Natural History Association, a citizens' group established nearly a half-century ago to support the interpretive needs of three parks in Sonoma County, including the Park. The Association has played a vital role in recruiting and organizing the hundreds of volunteers who support all functions of the Park. Among the organization's most noteworthy accomplishments are the award-winning restoration of the cottage that was the residence of Jack and Charmian London after acquiring the "Beauty Ranch," and the completely re-imagined House of Happy Walls Museum which interactively brings the story of Jack and Charmian London to life. B6-44

Most recently, Jack London Park Partners began the restoration of 40 acres of historic orchard, established on SDC property more than a century ago, which became part of the Park in 2002. While many of the trees had died, some were still alive and bearing fruit, and the surviving trees have provided scions to grow new, historically authentic fruit trees to restore the orchard. With a combination of agricultural expertise and tender loving care, the orchard is on its way toward healthy stabilization with revitalized trees producing several varieties of apples and pears, prune plums, apricots, cherries, and quince.[1] Jack London Park Partners has formed a partnership with Farm to Pantry to provide fruit from the orchard to Sonoma organizations that help people facing food insecurity. B6-45

With this history and continuing commitment in mind, Jack London Park Partners has a keen interest in ensuring that "the disposition of the property or property interests shall provide for the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible," as set forth in the statute governing the future of the SDC property, Gov't Code §14670.10.5(c)(3). In these comments, we address issues relating to public access, protection and enhancement of the wildlife corridor, and direct transfer of the open space to ensure that it will be public parkland and a public resource in fulfillment of these goals. B6-46

Direct Transfer of Parkland/Open Space

As noted above, the governing statute expressly provides that "[i]t is the intent of the Legislature that the lands outside the core developed campus and its related infrastructure be preserved as *public* parkland and open space" (Gov't Code §14670.10.5(a)(9)); and that "the disposition of the property or property interests shall provide for the permanent protection of the open space and natural resources as a *public* resource to the greatest extent feasible." Gov't Code §14670.10.5(c)(3)(emphasis added). B6-47

[1] *See* Kenwood Press, *Old orchard gets a makeover, Goals of clearing project include cultural resource preservation and wildfire hazard mitigation* (March 15, 2022), available at https://www.kenwoodpress.com/2022/03/15/the-old-orchard-gets-a-makeover/

The express goal of the SDC Coalition Land Committee's Land and Water Protection Proposal (February 2019)[2] was to ensure a "low cost/no-cost transfer of ownership of the areas outside the existing developed campus of SDC to the California Department of Parks and Recreation (State Parks) or the Sonoma County Regional Parks Department (Regional Parks) to ensure permanent protection." At the January 8, 2022 Community Workshop on the Future of SDC, Sonoma Land Trust similarly observed that a "crucial outcome" is the transfer of the 750 acres of open space to State or County parks, and is vital to protection of the wildlife corridor and other natural resources and the preservation of this land as a public resource. B6-48

The County Staff's SDC Vision Plan Frameworks, Potential Development Types and Outcomes for the January 25 Supervisors' meeting included a reference to State Parks and Regional Parks as among the proposed Government Partnerships (Vision Plan at page 23); and the County Staff's January 25 Summary Report stated that each alternative would "dedicate 750 acres of the 930 acres[3] to open space preservation/park expansion." (Summary Report at page 1). At the January 25 meeting, Supervisor Gorin expressed support for direct transfer of the SDC open space, stating that it is time to "to move it into annexation of the parks, both Jack London State Park and the Regional Park." Other Supervisors supported her comments. B6-49

However, there is nothing in the NOP, the County staff documents for the January 25 Supervisors' meeting, or the materials for the February 17 scoping meeting or the March 22 virtual workshop proposing that the open space will be directly transferred to State Parks and the Regional Park. In fact, the NOP states that the SDC open space will simply be "*linked* to regional parks and open space systems" and, in response to public comments advocating direct transfer at the County's March 22 virtual workshop, the County's consultant stated that "certain complexities" relating to "water rights" would make it "difficult" to transfer the open space to anyone other than the developer of the core campus. The County's consultant also expressed this position at an earlier public meeting. B6-50

Such statements are contrary to the governing statute's requirement that the SDC open space be preserved as *public* parkland and protected as a *public* resource. Gov't Code §§14670.10.5(a)(9) and (c)(3). Moreover, the position of the County's consultant is contrary to the water rights ownership and use provisions expressly included in the statute. Specifically, the statute governing the future of the SDC property provides that "[t]he state owns riparian water rights and pre-1914 and post-1914 appropriative water rights . . . these rights may be held by the B6-51

[2] The Coalition (2017-2019) was comprised of California State Parks, California Department of Fish and Wildlife, Sonoma County Agricultural Preservation and Open Space District, Sonoma County Regional Parks, Sonoma County Water Agency, Sonoma Land Trust, Sonoma Ecology Center, Sonoma Mountain Preservation, Sonoma Mountain Ranch Preservation Foundation, and Jack London Park Partners.

[3] The NOP references the entire SDC property as approximately 945 acres and the open space, including the non-contiguous Camp Via grounds within the Park, as approximately 765 acres.

state for existing and future domestic uses on the property." Gov't Code §14670.10.5(f).[4] The suggestion that water rights issues prevent direct transfer of the open space also ignores the availability of easements and licenses to ensure continued SDC core campus access to water supply sources and infrastructure. B6-51

Similarly, earlier suggestions that including the SDC open space in a sale to core campus developers will increase the potential purchase price or provide tax benefits are not only contrary to the statutory requirement that the land be preserved as public parkland and protected as a public resource, they are also belied by legal authorities disallowing such deductions where, as here, the developer would not be foregoing development rights to the open space, or where the developer would be receiving a *quid pro quo* or substantial benefit. B6-52

We note that the governing statute acknowledges the potential for transfer of a portion of the SDC property after "the county has granted necessary approvals to rezone the property, approved a specific plan or plans for the property, and approved any necessary development agreements needed for disposition of all or any portion of the property, or the director has determined that the transfer, sale, or final disposition is in the best interests of the state." Gov't Code 14670.10.5(e)(2).[5] Following transfer of the SDC open space west of Arnold Drive to State Parks, Jack London Park Partners contemplates a management contract with State Parks on terms similar to those that have achieved significant public benefits, environmental protection, and historic preservation for the existing Park during the past decade. B6-53

For all of these reasons, Jack London Park Partners requests that the project description recognize, and the PEIR analyze, direct transfer of the SDC open space west of Arnold Drive to State Parks to be "preserved as public parkland" and to provide "permanent protection of the B6-54

[4] We also note that although the NOP's Probable Environmental Effects lists Utilities, Service Systems and Hydrology and Water Quality, the NOP does not make reference to any "complexities" related to water rights or specify that the PEIR will provide an analysis of the impact of the proposed core campus development on water resources, including species and habitat dependent on those water resources in the Park and the SDC open space. This analysis is critical, given the continuing drought that has been described as the "driest on record" and the planned restrictions on existing groundwater uses in Sonoma County. *See* https://www.northbaybusinessjournal.com/article/article/noaa-california-drought-continues-for-3rd-year-as-driest-on-record/; https://www.kenwoodpress.com/2022/03/15/groundwater-sustainability-agency-considers-budget-fees-for-groundwater-use/.

[5] Government Code §14670.10.5(e)(1) further states that "[t]his section shall not apply to the transfer of the property to a state agency in accordance with [Gov't Code] Section 11011," which provides that "[e]xcept as otherwise provided by any other law, whenever any land is reported as excess pursuant to this section, the Department of General Services shall determine whether or not the use of the land is needed by any other state agency. If the Department of General Services determines that any land is needed by any other state agency it may transfer the jurisdiction of this land to the other state agency upon the terms and conditions as it may deem to be for the best interests of the state."

open space and natural resources as a public resource," as required by the governing statute. Gov't Code §§14670.10.5(a)(9) and (c)(3). B6-54

Wildlife Corridor/Southern Park Entrance

The SDC open space area immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive could provide a south entrance for improved public access to the Park, including the historic orchard, via existing trailheads and access roads, in addition to protecting and enhancing the wildlife corridor in this area. The area also includes two historic buildings that could be restored and adaptively reused as a visitor center and staff offices, with ADA accessible parking, visitor parking, and access by public transportation on Arnold Drive. A Conceptual Site Plan for this area is an Attachment to these comments. B6-55

The area is physically separated by Sonoma Creek from the SDC core campus, and adaptive reuse could help protect, and provide opportunities to enhance, the wildlife corridor including potential land bridges. The area is also across Arnold Drive from the SDC open space north of the core campus, which could similarly be adaptively reused to enhance the wildlife corridor, and could provide overflow visitor parking for the proposed visitor center and southern entrance to the Park, as well as visitor parking for Sonoma Valley Regional Park.

As shown on the attached Conceptual Site Plan, there are existing trailheads and access roads leading to the Park from the SDC open space area northwest, and immediately south, of the Jim Berkland Memorial Bridge. There is also an existing, dedicated pedestrian walkway on the western side of the Jim Berkland Memorial Bridge that would provide access between the proposed visitor center, existing trailheads, and the SDC core campus. The south entrance and public transportation access on Arnold Drive would also reduce traffic that must now continue through the center of Glen Ellen and along London Ranch Road for access to the Park. B6-56

The wildlife corridor enhancement, environmental protection and adaptive reuse of this area is consistent with the County Staff's Summary Report for the January 25 Supervisors' meeting, which acknowledges that "[t]he Board may consider directing staff to explore additional protection measures for the wildlife corridor." (Summary report at page 6.) Existing wildlife corridor features could be protected and enhanced, and operation of the south entrance and visitor center would be limited to Park hours, avoiding human impacts to wildlife movement, consistent with County's materials and public comments at the March 22 meeting. The adaptive reuse as a visitor center and southern entrance is also consistent with preservation of the two historic buildings in that area, and again, with the governing statute's directive that "[i]t is the intent of the Legislature that the lands outside the core developed campus and its related infrastructure be preserved as public parkland and open space." Gov't Code §14670.10.5(a)(9). B6-57

The County Staff's SDC Specific Plan and PowerPoint slides for the January 25 Supervisors' meeting include multiple access points to the parkland ("Proposed Connections to Open Space" in SDC Specific Plan "Features Common to Alternatives"), including one location in the area of the Jim Berkland Memorial Bridge. Additionally, the Project Setting section of the B6-58

NOP acknowledges that "non-contiguous Camp Via" is within the Park, and that the open space includes "an existing network of trails and access roads."

B6-58

We note that the Project Setting section of the NOP acknowledges "many acres of valuable wildlife habitat" and includes a reference to "Biological Resources" among issues to be addressed in the PEIR. We also note that the materials presented at the County's March 22 workshop reference the need to "promote conservation of existing habitat," and "protect natural resources and critical wildlife habitat, maintain wildlife linkages and foster environmental stewardship." Jack London Park Partners has a history of promoting and achieving these objectives at the Park during the past decade.

The SDC open space northwest of the Jim Berkland Memorial Bridge provides opportunities to protect and enhance this area of the wildlife corridor, and the proposed south entrance and visitor center would reduce the risk of environmental harm that could otherwise result from unrestricted Park and open space access by large numbers of residents and visitors at multiple locations following development of the SDC core campus.

For all of these reasons, Jack London Park Partners requests that the project description be clarified to include, and that the PEIR analyze, a southern entrance to the Park, a visitor center with ADA accessible parking and other visitor parking, access to public transportation, and wildlife corridor protections and enhancements in the SDC open space area immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive.

B6-59

On behalf of Jack London Park Partners, we appreciate your consideration of these points, which we believe are important for public access, environmental protection and enhancement of the wildlife corridor, and the future use of SDC open space as a public resource and public parkland in accordance with the governing statute.

Very truly yours,

Matt Leffert

Matt Leffert
Executive Director

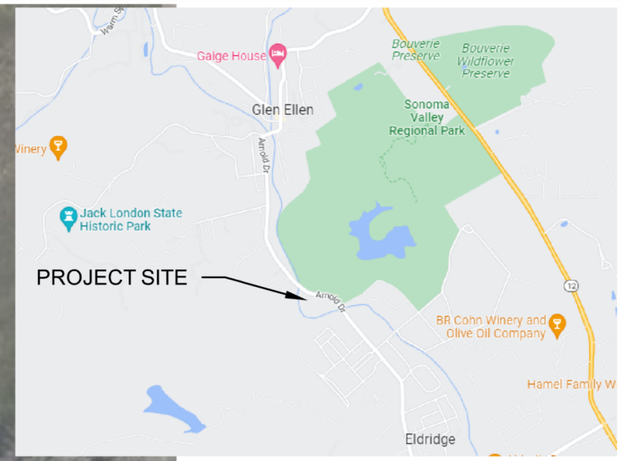
cc: Susan Gorin, Supervisor, District One
Tennis Wick, Director, Permit Sonoma

JACK LONDON STATE HISTORIC PARK

ATTACHMENT

CONCEPTUAL SITE PLAN





VICINITY MAP

KEYNOTES

1. EXISTING HISTORIC BUILDING TO BE ADAPTIVELY REUSED AS VISITOR CENTER
2. EXISTING HISTORIC BUILDING TO BE ADAPTIVELY REUSED AS JLPP STAFF OFFICES
3. PROPOSED ADA PARKING
4. PROPOSED VISITOR PARKING (25 TOTAL)
5. PROPOSED VISITOR DROP OFF AREA
6. PROPOSED STAFF PARKING
7. EXISTING BRIDGE
8. JIM BERKLAND MEMORIAL BRIDGE WITH EXISTING PEDESTRIAN WALKWAY
9. EXISTING TRAIL HEAD/ACCESS ROAD TO JACK LONDON STATE HISTORIC PARK
10. EXISTING TRAIL HEAD TO JACK LONDON STATE HISTORIC PARK ORCHARD AND TRAILS
11. WILDLIFE CORRIDOR PROTECTION AND ENHANCEMENT

Rev	Date	Description	Checked
-	03/18/22	CONCEPTUAL SITE PLAN	KB

CSW | ST2
CSW/Stuber-Stroeh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
45 Leveroni Court
Novato, CA 94949
tel: 415.883.9850
fax: 415.883.9835
http://www.cswst2.com
© 2013

Prepared Under the Direction of:

Job No. 2200073

Date: 03/15/22

Scale: 1" =100'

JACK LONDON PARK PARTNERS
CONCEPTUAL SITE PLAN

PROPOSED SOUTHERN ENTRANCE AND VISITOR CENTER

ELDRIDGE SONOMA COUNTY CALIFORNIA

Valley of the Moon Alliance

September 26, 2022

TO: Permit Sonoma: Brian.Oh@sonoma-county.org,

Planning Commissioners: PlanningAgency@sonoma-county.org,

CC: County Supervisors: Susan.Gorin@sonoma-county.org,David.Rabbit@sonoma-county.org, Lynda.Hopkins@sonoma-county.org,Chris.Coursey@sonoma-county.org, James.Gore@sonoma-county.org, engage@sdcspecificplan.com

RE: **Comments on SDC Specific Plan and DEIR**

To Permit Sonoma, Planning Commissioners, and Board of Supervisors:

Thank you for this opportunity for Valley of The Moon Alliance (VOTMA) to comment on the Sonoma Developmental Center (SDC) Specific Plan (SP) and DEIR. This is the most significant project proposed for the Valley in many decades, and it will permanently affect the whole of Sonoma Valley. The impact could be quite negative if the project is oversized for the area. Your diligence in getting the appropriate plan and development is appreciated by the communities surrounding SDC. B7-1

There has been a lot of discussion and community input into this process and not too many perceived positive results for it. We hope that you will consider and respond to our questions and/or suggestions, and to the other well informed and impacted commentators, including the Sonoma Land Trust, Mobilize Sonoma, and the North Valley Municipal Advisory Committee.

Following are some comments and questions for your response. We have numbered and put in bold the questions, although in some places the text may suggest additional questions. B7-2

1. **Adequacy of the Documents**
   1) **How can the Specific Plan and accompanying EIR be enforced when the language is so imprecise?**

When reviewing the adequacy of the DEIR, one is faced with the dilemma that, as a Specific Plan and a document under CEQA, it is improperly incomplete and inadequate. The current SP contains some goals and objectives that are written with language that is not specific. For example,

> "Policies in the Sonoma Developmental Center Specific Plan (SDC Specific Plan) are prepared in response to analysis in the EIR to ensure that the plan minimizes or reduces significant environmental impacts to *the extent feasible*; in this way the plan is "*self-mitigating*." CEQA also provides opportunities for environmental "tiering," and provides an exemption from subsequent environmental review for certain projects, *including housing developments, that are consistent with a specific plan for which an environmental impact report has been prepared*. If certified, the EIR will apply to development in the Planning Area that is consistent with the Specific Plan, and further environmental review will not be necessary."

B7-3

This is only one of the areas where language is imprecise, and in this case is a bit scary as well, as it appears designed to eliminate or severely curtail further environmental review of project phases. At page 7-2 of the SP, the Director of Permit Sonoma appears to be substituted as the review authority for all Administrative Design Review for building, grading and drainage permits in lieu of the Design Review Committee. **2) How does that make sense in terms of facilitating community input and balanced community assessment? 3) How can the DEIR properly analyze a plan when the plan is not specific, and when its size and scope could vary substantially?** Where is the specificity in the language to assess the impact of a future development on the wildlife corridor, or the impact on the community. There is not adequate analysis to say that no mitigation is needed (i.e., that it is "self-mitigating"). Specific standards are needed now for the County to make an informed decision about this property, its future uses, and its impacts, not later.

B7-4

While different commenters may have different views on aspects of what should be done with the property, this concern for lack of precision is a common complaint of almost all commenters, from ourselves, to the Sonoma Land Trust, to the North Valley MAC.

2. Scale of Development

In the DEIR's ES.2 Areas of Controversy list below, we have some other concerns and questions:

B7-5

A. <u>Neighborhood Character</u>

4)How can the SDC site and the surrounding rural neighborhoods and infrastructure possibly support the maximum 1000 housing units and large-scale non-residential development proposed? The traffic on the roads, the demand for water, and the impacts on the wildlife corridor from this level of development would simply be too great.

B. Community Identity

5)Will this development be an extension of Glen Ellen, or will it be its own community of Eldridge, or could an alternative governance structure be preferable?

B7-5

C. Historic Resource Alternative

6) Why is the Historic Resource Alternative not the preferred project when it is found in the DEIR to be the environmentally superior and otherwise meets the primary objective of the legislation?

B7-6

With 450 housing units, wouldn't this alternative be more be more appropriate for the rural neighborhood community which it is proposed? It was not named the environmentally superior alternative for nothing. It would allow for more opportunities for re-use of the existing buildings and would create housing and jobs for local essential workers. While the Historic Option might be "less" economically feasible, there is no finding that it is not economically feasible. 7**) Why is there no financial model presented that allows a transparent comparison of the economic feasibility of various alternatives?**

D. Legacy of Care

8)Why is the "legacy of Care" spelled out as a goal virtually ignored in the proposed Specific Plan? 9) How did the DEIR arrive at the level of care that the DEIR deemed was adequate? 10) How was the economic feasibility of legacy care units modeled and was any imputed value attributed to preserving the legacy of care?

B7-7

We believe that a more serious attempt is needed to meet goal 2-I of the SP, "to promote the Legacy of Care" in recognition of the work and history of SDC's work. There are presently only five parcels devoted to housing the disabled. **11)What kind and size of parcels are being considered and how many persons with developmental disabilities would be housed in the buildings on those parcels? 12) How was that level of care determined?** There are existing buildings that need to be seriously investigated as sites to provide shelter for the disabled and comfort for the mentally challenged or a rehabilitation center. That investigation is missing from the plan. The SDC was established in this location because of its natural serenity and beauty. There remains a need for these kinds of services in such a setting.

E. Density

B7-8

The DEIR fails to adequately articulate the decision model for determining that 1000 housing units together with a hotel and a quality restaurant should be the preferred project. Economic feasibility is not the primary articulated decision criteria in the legislation. **13)How were the varying objectives in the legislation valued, weighted, and prioritized? 14) Who made the final decision for the preferred project details in terms of housing density and the ratio of affordable vs market rate housing? 15) What decision support model(s) were utilized?**

F. Type, Location and Size of Individual Housing Units

B7-9

The DEIR assumes that major infrastructure facilities must be replaced under all alternatives. **16) Did the DEIR consider whether the scope and level of infrastructure replacement might be less if fewer new units were constructed, and greater restoration and reuse of the existing structures was instead the focus of the development strategy? 17) Did the DEIR consider the operational feasibility of isolating stormwater inflow and the cost savings (including the downstream avoidance of capacity additions to the treatment facilities) that would result from a simplified smaller housing unit strategy and expanded reuse of existing buildings? 18) Did the DEIR evaluate available newer technology to acceptably mitigate asbestos risks in existing building by isolating and sealing off the hazardous materials instead of ripping that material out and disposing of it?** VOTMA believes that increasing the amount of new construction inflates the estimated infrastructure costs and climate change impacts, which in turn inflates the amount and type (i.e., market rate units) of development being proposed to recapture those costs. "Big" becomes self-reinforcing, which it should not be, particularly when the impacts to the environment and community can be so substantial.

B7-9

The DEIR says little if anything about the actual size of various units contemplated in the preferred project. **19) What are the maximum sizes (sq. ft.) for any of the units, and what is the minimum size of the smallest unit? 20) Why did the DEIR not propose a maximum size for any unit, and maximum sizes (sq. ft.) for the various types of units/multifamily facilities?** The legislation from which the SP is being developed focuses on affordable housing. By controlling the maximum size of units, the "market rate" units become more affordable. The DEIR suggests that the preferred project is the most economically feasible. **21) Where is the modeling that supports the proposal that 1000 units with 75% of those units priced at market rate is the appropriate outcome consistent with the legislation?**

G. <u>Connection to Highway 12</u>.

22) What impact on Highway 12 traffic flow would the proposed connector have if the connector is used only for emergency escape? 23) Would there be a new traffic signal for this connector on Highway 12? 24) How far would that signal be from the existing Madrone Road/Hwy 12 signal and how would those signals be coordinated?

B7-10

VOTMA is uncertain about this proposed connection. Another emergency evacuation route, depending on the size of the project, its intensity of use, its precise location, its probable need for yet another stoplight on Highway 12, all need further explanation. Further, the SP, 3-22 proposes to "establish an express bus service to and from Sonoma/ Santa Rosa that would utilize a new connector road between the SDC Core Campus and Hwy 12." **25) Does the proposal assume that the County would provide the funding to construct and operate the line? 26) If not, how would that be funded? 27) What and where is the analysis that supports the conclusion that a new road is needed for that purpose?**

H. <u>Wildlife Corridor</u>.

B7-11

VOTMA believes that the wildlife corridor at issue here is unique in this region of the State, including its usage by mountain lions and black bear**. 28) What studies and representative examples of similar wildlife corridor/adjacent dense development projects influenced your determination that the construction and operation of the 1000 housing units, hotel, quality restaurant, commercial and other enterprise developments that encompass the preferred project would not adversely affect the feasibility of this well-functioning natural wildlife corridor as portrayed by the DEIR and required by the legislation?**

B7-11

VOTMA feels it is essential to protect the existing wildlife corridor, which is both unique to the Bay Area and essential for many important species. The transfer of ownership to the parks, SLT or other agencies that would support and maintain the Corridor is needed outside of the choosing of a developer.

The size of the project also has an obvious and unavoidable impact on the Corridor. The population and traffic resulting from 1,000 new residences, a hotel and many businesses will have substantial and irreversible impacts on wildlife's use of the area. Furthermore, maintaining the integrity of the Corridor and the ability of wildlife to transit and disperse through the SDC property and adjacent parks is critical to meeting sustainability objectives. VOTMA endorses the Sonoma Land Trust's comments on this issue.

I. <u>Wildfires and wildfire evacuation</u>.

29) Were any of the available traffic congestion databases (including those that specifically incorporate the real time traffic conditions on Highway 12 in the Sonoma Valley fires during 2017-2020) used in reaching the conclusion that the evacuation time would not increase significantly if the proposed project were developed? 30) How did you model the conflicting demands of inbound emergency and fire equipment/personnel, with outbound citizen evacuation demands in view of the two-lane status of all major arterials? 31) If done, what were the results and findings?

B7-12

This is a serious consideration especially for those of us who have been evacuated in the past. The testimony given about the length of time it took to get out of the danger zones should cause a recalculation of the timing presented. With this recalculation there needs to be considered how many other people will be trying to leave on the roadways at the same time. In the fires of 2017 and 2020, the traffic was alarming. **31) What happens when other developments, like Kenwood Ranch and Elnoka, are added to the stresses SDC redevelopment poses to Highway 12 as an evacuation corridor?**

J. <u>Water supply</u>.

On page 469, the DEIR claims that "The WSA concludes all future demands within its service area can be met, inclusive of the Proposed Project in normal and multiple dry hydrologic years from 2025 through 2045". This same DEIR only acknowledges the likelihood of "single dry years", rather than a concatenation of multiple dry years**. 33)Why hasn't the WSA considered**

B7-13

the worst-case scenario with multiple dry years – a scenario we are currently facing? This could be our reality**. 34) How does the DEIR look at preventive actions in the face of this uncertainty? 35) Would it be prudent to include the Sonoma Valley Groundwater Sustainability Agency (GSA) for comments since the State still holds surface water rights and groundwater wells may be needed for supply water for this project? 36) Was the transfer of the State's water rights included as a done deal within the DEIR evaluation? 37)What if they continue to hold these rights within the open space, like Lake Suttonfield?**

B7-13

K. <u>Hazardous Materials</u>.

VOTMA filed comments on the need for further environmental assessment work on March 24, 2022, in response for requests for comments in the NOP for the EIR. Those comments are included in pages 459-464 of the appendix to the DEIR. The DEIR acknowledged those comments on page 236 of Section 3.8 Hazards and Hazardous Waste. But the subsequent portion of this section does not add any new analysis of the recognized environmental conditions (REC) that VOTMA referenced**. 38) Why was no further investigation undertaken and presented?**

B7-14

The discussion for the most part addresses hazardous materials and substances issues that were identified as known or likely to exist in the Core Planning Area (CPA). The discussion acknowledged that the 2017 Limited Phase II report identified a variety of areas, both in the Core Planning Area (CPA) and in the lands outside of the CPA where "further investigation was needed". (Page DEIR 248; download, page 425). The discussion at various points indicates that if needed further investigation could be undertaken. Deferral of investigation and mitigation are not an allowed strategy under CEQA. The DEIR appears incomplete and defective on this issue. **39) Why were Phase II environmental assessments regarding hazardous materials and substances in the gap areas of recognized environmental conditions (RECs) identified in the prior Phase I but Limited Phase II investigations not undertaken?**

40) For areas outside the CPA, where agriculture and recreation with public access are contemplated, will disturbance of soil be prohibited? 41) If not, how did the DEIR determine that there was no significant risk that hazardous material and waste that might have resulted from past activities over the last 125 years in those areas and what might be harmful to the persons, crops or wildlife could be disturbed or uncovered?

L. <u>Transportation/Traffic</u>

42) Where is the W-Trans traffic operations analysis that PS suggested in the DEIR footnote 118 had been done? 43) Why was it not made available for review as part of the DEIR?

B7-15

The DEIR analysis of transportation, and specifically traffic issues is inadequate. VMT analysis is acceptable for dense urban projects, but does not capture the rural transportation impacts, especially in an area with defined and limited transportation corridors. Furthermore, if anyone

else has submitted this VMT analysis, the County presumably would have required a peer review. **44)Where is that?**

B7-15

Importantly, the requirement to use VMT for the projects' CEQA analysis does not preclude requiring a Level of Service traffic impact analysis to assist decision making for land use policy planning purposes, for zoning purposes, and for assessing fire/flood/earthquake evacuation risk parameters, and for assessing risks to the wildlife corridor, as wildlife must live within and navigate whatever level of development is approved here.

When asked about this by VOTMA, Permit Sonoma responded that the analysis was in Appendix F of the DEIR appendix. Appendix F at page 748 consists of a one page set of "Traffic Volume Data". There is no text, no interpretation, no assumptions, no contextual analysis. Informed, sound analysis and decision-making require a stand-alone project specific analysis for this project. The textual analysis in the DEIR itself is full of summary and conclusory statements. On the face the findings include 1) on page 442 that traffic from Harney to Glen Ellen would be reduced from peak, 2) on pages 445-446 that household, employment, and total service VMT would be reduced by the project compared to peak, and 3) on page 451 that the project would not result in inadequate emergency access, all seem particularly unsupported, counter-intuitive, and problematic. It is not clear whether the VMT analysis included hotel and quality restaurant VMT (or for that matter whether the GHG analysis included air travel of guests). The GHG analysis and the transportation analysis also do not seem consistent. The GHG analysis does not appear to incorporate emission associated with "fueling" EVs.

B7-16

It would seem relevant in this context to ask some simple foundational questions for both LOS and VMT analysis, such as: **45) Where will the people working at SDC be coming from to work there? 46) Where will the people who live at SDC but work off site be traveling? 47) Where would guests at the hotel be coming from? 48) Where is the nearest pharmacy? 49) Where is the nearest full service affordable market? 50) Where are the nearest medical complexes? 51)What will be the impact on Highway 12 traffic of having another traffic signal at the new proposed connector?** The answers to those questions are not in the transportation segment of the DEIR.

The use of VMT analysis should not be an excuse to avoid real impact analysis for the many decision-making functions the County must exercise with respect to the appropriate level of development of this property.

In developing these comments VOTMA did review some of the earlier documents listed on the SDC SP website. VOTMA now assumes that the August 2022 W Trans Analysis referenced in DEIR footnote 118 was intended to reference the July 2022 Analysis posted on the website. That LOS study uses a single weekday in April 2022 as its sole data source, does not include weekend data, does not include winery event and seasonal data, does not include any segment or intersection data north of the Arnold Drive-Highway 12 intersection, does not include any transportation cumulative impact analysis, and does not reference, reconcile or incorporate the Sonoma Valley

B7-17

Traffic Study the County sponsored in connection with assessing the over-concentration of winery events in Sonoma Valley as it develops the winery event ordinance. The W-Tran is inadequate and incomplete. **52) Was the W-Tran analysis peer reviewed as required by PS guidelines?**

B7-17

M. <u>Cumulative Impacts</u>

53) Where is the detailed cumulative impact analysis? The DEIR basically dodges this requirement by saying that the cumulative impacts are already covered in relevant regional analyses. The community and its representatives must live with these impacts, and we have a right to see a detailed cumulative impact analysis. For example**, 54) have the effects of the known proposed developments of Elnoka and Kenwood Ranch off Highway 12 been considered from either a traffic or water use perspective?**

B7-18

In summary, VOTMA believes that the DEIR is inadequate under CEQA and that the Specific Plan is not precise enough in its project statement to meet the requirements of CEQA. The County needs to ensure that the future use of the SDC is consistent with both the character and limitations of Sonoma Valley and with the communities that reside here. There may be no decision you face that will have a more significant or lasting impact on the Sonoma Valley for decades to come. Please ensure that the unique beauty and character of this special place are not adversely affected by this SDC decision-making process.

Sincerely yours,

Kathy Pons, President

Valley of The Moon Alliance

Board of Directors

SONOMA ECOLOGY CENTER
Protecting the beauty and biodiversity of Sonoma Valley

April 3, 2022

Brian Oh, Comprehensive Planning Manager
Permit Sonoma, County of Sonoma
2550 Ventura Avenue, Santa Rosa, CA 95403
Brian.Oh@sonoma-county.org
Direct: (707) 565-1931

To Brian Oh and Permit Sonoma:

This letter covers two related topics:

A. Empirical, recent biodiversity observations made by SEC for consideration in the SDC Specific Plan
B. Recommendations on policy and programs for the SDC Specific Plan

A. Biodiversity Observations

B8-1

The Sonoma Developmental Center (SDC) property, in addition to its well-known placement at the narrowest point of the Sonoma Valley Wildlife Corridor, is a center of biodiversity. Because of continuous state ownership over the last century, it contains much of the least-disturbed habitat in Sonoma Valley.

Since January 2019, community scientists and Sonoma Ecology Center (SEC) have been working on a project to document the biodiversity throughout the SDC. Organized by SEC biologist Dr. Dan Levitis, community members have used an app called iNaturalist to record observations of species throughout the 945 acres of SDC. **The project has identified 1,175 species of animal, insect, plant, and fungi** based on 14,805 observations. There is no sign that we are running out of new species to find. **We are still collecting observations, which we will share with you.** The findings reinforce the need to preserve the sensitive habitat and rare species throughout SDC. Major findings include the high biodiversity of the entire property, several protected species living on the property which had not been previously documented, and the vital importance of the under-documented wetland features on the east end of the property. Much of the protected biodiversity we found on the property were in either riparian areas or wetlands.

We are providing these publicly available data so that the SDC Specific Plan can comply with CEQA and protect SDC's natural resources.

1. Observers using eBird have documented 114 bird species on the property. https://ebird.org/hotspot/L5410092/
2. Almost 15,000 photo observations uploaded to the citizen science platform, iNaturalist, by 278 community members and SEC staff have thus far documented 1,175 wild species (including animals, plants, fungi, and microorganisms) across SDC. Observations include data from camera trapping by SEC along Sonoma Creek within the Sonoma Valley Wildlife Corridor. These thousands of photo observations have been reviewed and confirmed by experts, and are geo-located, providing a fine-scale understanding of what is living where, and thus which parts of SDC require the greatest protection.
https://www.inaturalist.org/projects/sonoma-developmental-center-umbrella-project

Below please find a list of protected species the SDC property shelters, with a link to an iNaturalist observation of each.

Animals
Specially Protected Mountain Lion https://www.inaturalist.org/observations/107081516
Vulnerable White-tailed Kite https://www.inaturalist.org/observations/21885630
Special Concern Vaux's Swift https://www.inaturalist.org/observations/51438474
Vulnerable Olive-sided Flycatcher https://ebird.org/species/olsfly/L5410092
Special Concern Western Pond Turtle https://www.inaturalist.org/observations/72065647
Special Concern California Giant Salamander
https://www.inaturalist.org/observations/36579284
Vulnerable Foothill Yellow-legged Frog https://www.inaturalist.org/observations/110535841
Threatened California Red-legged Frog https://www.inaturalist.org/observations/37283513
Endangered California Clam-shrimp https://www.inaturalist.org/observations/24482413
Critically Endangered Sonoma Shoulderband Snail
https://www.inaturalist.org/observations/21959054
Critically Endangered California Lancetooth Snail
https://www.inaturalist.org/observations/45612842
Threatened Steelhead Trout https://www.inaturalist.org/taxa/47516-Oncorhynchus-mykiss
Threatened Chinook Salmon https://www.inaturalist.org/observations/110551445
Endangered California freshwater shrimp, https://www.inaturalist.org/observations/39258047
Additional protected birds reported on or over the property include Bald and Golden Eagles, Peregrine Falcon, Osprey, and American White Pelican.

Plants
Endangered Coast Redwood https://www.inaturalist.org/observations/109504361
Vulnerable Hornwort, *Anthoceros fusiformis*
https://www.inaturalist.org/observations/21766069

Fungi
Endangered Golden-gilled Waxycap https://www.inaturalist.org/observations/21562391

Protected species documented on adjoining parcels, but not on SDC itself include:
Critically Endangered Sonoma Sunshine
Endangered Northern Spotted Owl
Special Concern Red-bellied Newt

B. Recommendations on policy and programs for the SDC Specific Plan

B1. Water and wildlife

1. Conduct a full wetland delineation in the eastern portion of the property, and protect wetlands that are likely not currently mapped. Wetlands on the SDC property are generally under-mapped. Surveys for the WRT assessment were conducted late in September. Our staff and volunteers found multiple seasonal ponds and pools that are not on the maps the county has shared, and diverse wetland-dependent wildlife.
    a) Western Pond Turtles (a California species of special concern) breed in the degraded wetlands that run from the northern to the southern edges of the property east of Lake Suttonfield, including the old horse corral. Further, these wetlands on the east end of the property were, prior to development, in many ways similar to, and connected to, wetlands in Sonoma Valley Regional Park where Sonoma Sunshine (*Blennosperma bakeri*) finds one of its few remaining homes.
    b) We were surprised to find the California Clam-shrimp, an Endangered crustacean that specializes in seasonal pools. We found these in unmapped seasonal ponds near the southern proposed route for a road linkage to Hwy 12.
2. Make policy that the wildlife corridor, at its narrowest point along the north side of the campus, shall only ever be widened, not narrowed. Specifically, the developed footprint shall not go north past the location of the current ballfield on the east (removing current buildings Bane, Thompson, and the two houses between the bridges), shall not go northwest onto the hillside above the current kitchen (removing Goddard, Paxton, Industrial), and shall not go northeast beyond Snedeger (removing Roadruck and Bentley).
3. Make policy that paths and recreational areas shall not be placed in the northern areas where the wildlife corridor is narrowest. Remove the pedestrian access point in the narrowest part of the corridor (yellow asterisk on the maps in the 2021 alternatives).
4. Make policy that trails will not occur in riparian corridors except for short distances (these are habitat areas first, recreation areas second).
5. Make policy that there shall be no new pedestrian bridges over Sonoma Creek.
6. Make policy that setbacks along Sonoma Creek will be at least 100 feet, and larger where green infrastructure projects are planned, in accordance with the Upper Sonoma Creek Restoration Vision.

B8-2

B8-3

B8-4

B8-5

7. Make policy that setbacks along Hill/Mill Creek will be 50’ on the north side, and more than 50’ on the south side.
8. Make policy that Lake Suttonfield, Fern Lake, Eldridge Marsh, and all mapped wetlands will have development setbacks of 100’ or greater. B8-6
9. Make policy that connectivity between water features (lakes, creeks, vernal pools, intermittent streams) shall be enhanced and maintained. Connectivity means presence of vegetated native plant cover, absence of roads, ditches, and other barriers to water or animal movement, and absence of human presence.
10. Make policy that water-related features, including swales, intermittent drainages, and seasonal waterways shall not be undergrounded, but instead shall be daylighted and enhanced as visual amenities and wildlife habitat.
11. Make policy that scientific research and monitoring will be permitted freely on the entire property. B8-7
12. Make policy that invasive species will be managed proactively to reduce fire risk and enhance biodiversity. This effort needs to increase, starting immediately–SEC is doing some of this work with grant funding–and continue in perpetuity. B8-8
13. Make policy that Eldridge Marsh will be restored hydrologically and biologically, including retaining more water by blocking the ditches that currently drain it. B8-9
14. Make policy that development will face away from natural and protected areas to reduce interactions that might impact natural systems. B8-10
15. Make policy that Dark Sky standards will be adhered to in all development and maintenance activities. Institute an ongoing compliance program to retain dark skies during operations. B8-11
16. Make policy that all large healthy trees will be retained. B8-12
17. Make policy that regionally native plants, selected for tolerance of climate conditions during the species’ lifespan, will make up at least 80% of landscaping, during both initial construction and ongoing operation. B8-13
18. Make policy mandating the use of Integrated Pest Management, both for construction and ongoing operation. B8-14
19. Set a program to regrade and revegetate the area immediately around the Jim Berkland bridge so that animals can get down to and across Sonoma Creek, to aid wildlife passage east-west across this narrowest section of the property. B8-15
20. Make policy that any owner(s) of the property will participate agreeably with any surrounding properties to improve wildlife habitat and permeability across property boundaries, up to and including the eventual construction and maintenance of a wildlife overpass or underpass across Hwy 12. B8-16
21. Make policy that fencing inside and outside the campus shall be removed and only used in new projects to direct movement and reduce hazards to wildlife. B8-17
22. Make policy that any new or enhanced road connecting to Hwy 12 shall not be paved or lighted, and shall only be accessible during emergencies. Both proposed road linkages from the new campus to Hwy 12 would cross unmapped wetland, endangering wildlife and encumbering any efforts at wetland restoration. The northern route (along Sunrise) in particular cuts through habitat where Western Pond Turtles lay their eggs. B8-18

23. Make policy that fire fuels management activities, such as the proposed “buffers,” adopt and use standards that achieve multiple objectives including enhancing biodiversity, reversing weed invasion, and protecting water resources.
24. Make policy that multi-benefit water resources projects shall be an acceptable use of land inside and outside the campus. "Multi-benefit" here is defined as projects that protect or create habitat and recreation benefits, and don't impede wildlife passage, while delivering water benefits to people and nature. B8-19
25. Set in place a permanent program, starting before demolition or construction begins, to monitor wildlife use patterns, abundance of protected and indicator species, and streamflow. B8-20

B2. Urban design

1. Make policy that the developed campus shall be visually and functionally integrated with the surrounding natural environment. Sight lines shall preserve and invite connections to open space. Trails shall link developed areas to natural spaces.
2. Make policy that existing buildings will be retrofitted and reused to the degree that re-use can be shown to have greater or equal life-cycle environmental benefits than replacing them. Where cherished buildings are to be replaced, replace them with new buildings that are of similar style, in similar locations. B8-21
3. Make policy that collectively the buildings and spaces on the campus shall mirror the diversity seen in the historic buildings: a complexity of angles, materials, styles, and ages.

B3. Climate and emissions

1. Make policy that the site will be net zero energy, net zero or better emissions, as measured during operations, on an island-able, crisis-ready microgrid. B8-22

B4. Housing

1. Make policy that, in perpetuity, the proportion of housing at SDC that is below-market-rate will be maximized through use of private and public funding, and innovation in funding, ownership structures, design such as clustering and greater building heights, and construction materials and techniques. B8-23
2. Include a program that requires future landowners and/or lessees to partner and facilitate potential projects and programs to increase below-market-rate housing.

B5. VMT, Traffic, Transit, and Roads

1. Make policy that developers are required to go beyond conventional Sonoma County requirements to assure increased local and regional transit availability, headways, and actual use, including innovative transit such as car sharing, regional bikeways, and other alternatives to single occupancy vehicles. B8-24

2. Make policy that a bike path should be linked to Sonoma County Regional Parks' Sonoma Valley Trail.
3. Make policy that workplaces and community services shall be promoted at SDC in order reduce vehicle trips, reduce driving time for residents, and create a sense of place.

B8-25

B6. Safety

1. Make policy that buildings, roads, and spaces within the developed area shall be designed to be ready for wildfire, including clustered buildings, roads to the outside, and power lines underground. For reference see "Building to Coexist with Fire: Risk Reduction Measures for New Development" at https://anrcatalog.ucanr.edu/Details.aspx?itemNo=8680.
2. Make policy that development shall be designed with spaces and resources to function as a local emergency resource hub, a place that area residents can evacuate to, not just evacuate from.

B8-26

B7. Governance

1. Make policy that the entire SDC site shall be governed by an entity with a public-benefit mission, governed by representatives for an array of public and private interests, using clear guiding principles. This entity could seek, receive, and spend money to increase the public benefits produced by the site. It would provide an ongoing guide for future development and operations of the entire site, assuring that key principles remain throughout the development of the site and beyond.
2. Set a program to design and create the governance entity described above.

B8-27

We would be happy to discuss these recommendations and datasets with your team.

Thank you for your consideration,



Richard Dale
Executive Director

September 26, 2022

Sent via email, with references via FTP site

Brian Oh
Comprehensive Planning Manager
Permit Sonoma
County of Sonoma
2550 Ventura Ave.
Santa Rosa, CA 95403
Brian.Oh@sonoma-county.org

Re: Sonoma Developmental Center Specific Plan Draft Environmental Impact Report (SCH 2022020222)

B9-1

Dear Brian Oh,

On behalf of the Center for Biological Diversity, we are writing to express our concerns regarding the Draft Environmental Impact Report ("DEIR") for the proposed Sonoma Developmental Center Specific Plan ("Project").

The Center for Biological Diversity ("Center") is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 1.7 million members and online activists throughout California and the United States. The Center and its members have worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Sonoma County.

The DEIR fails to adequately assess and mitigate impacts to sensitive habitats and special-status species, wildlife connectivity, and wildfire risk. As mentioned in the Center's March 4, 2022 comments on the Notice of Preparation ("NOP"), incorporated herein by reference, the Project would sever the last remaining artery of ecosystem connectivity in the area and result in harm to sensitive and imperiled species, loss of biodiversity, reduced resilience to climate change, and increased wildfire risk.

I. The DEIR fails to adequately describe, analyze, and mitigate the Project's significant impacts to wildlife connectivity and special-status species.

B9-2

The DEIR downplays the Project's impacts to special-status species and wildlife connectivity, stating that "Development under the Proposed Plan is anticipated to take place primarily within the developed footprint of the Planning Area, limiting the potential for adverse impacts on special-status species and sensitive natural communities" (DEIR at 241). This ignores the fact that the Sonoma Developmental Center has been unoccupied by people since 2018 and likely serves as both live-in and move-through habitat for numerous species, whether they were

present pre-development, while people were using the campus, or have established or re-established there since the campus became vacant. Placing development in this critical connectivity area, even if it is within an existing (but vacant) development footprint, will undoubtedly have significant impacts to wildlife connectivity and sensitive and imperiled species in the area, from mountain lions to California red-legged frogs. New development that includes commercial and industrial facilities and new roads and infrastructure will fortify existing barriers, increase human activities, and severely degrade this already constrained connectivity area, which will result in both direct and indirect effects to species and ecosystems and reduce climate resilience.

B9-2

The Project's impacts to wildlife connectivity will consequently have significant adverse effects on the many special-status species that rely on such connectivity for live-in and move-through habitat to support population health and long-term survival. Although the DEIR acknowledges the Project area as a "regionally important wildlife corridor" (DEIR at 235), it severely underplays the Project area's importance for wildlife connectivity. The Project is located in the last remaining wildlife connectivity area linking protected open space across Sonoma Valley from Jack London State Park and Sonoma Mountain to the Mayacamas Mountains and beyond. CDFW identifies the Project area as an "Irreplaceable and Essential Corridor" with high levels of biodiversity[1] and the Conservation Lands Network designates it as an "Area Essential to Conservation Goals."[2] The area is important for terrestrial and riparian connectivity essential for both wildlife movement and climate resilience (Gray et al., 2018). It is also immediately adjacent to an important undercrossing under State Route 12. The Sonoma Land Trust has identified multiple wide-ranging species, including deer, bobcats, coyotes, and river otters, that actively use and move through the area. Its riparian corridors are important for numerous special-status species, many of which are currently present in the Project area. Despite the Center's extensive description of these critical habitat resources in its NOP comments, the DEIR omitted this information. The omission undermines the DEIR's analysis of these impacts, and also yields an inadequate description of the baseline physical conditions present on the project site and vicinity, which is required by CEQA and the CEQA Guidelines.

B9-3

The DEIR erroneously concludes that "Implementation of the Proposed Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites" (DEIR at 254, Impact 3.4-4). Similarly, the DEIR states that the Project would not have "a substantial adverse effect" on riparian or other sensitive habitats, arguing that future development would take place "previously developed portions of the Planning Area, limiting the potential for disruption to undeveloped habitat areas" (DEIR at 251). Among other shortcomings, this approach omits consideration of the Project's "edge effects," which will result in habitat loss and induced human presence, traffic, and growth that will further degrade the Project area's connectivity value in this critical connectivity pinch point. Given the importance of riparian corridors for both local and regional wildlife connectivity, the DEIR's Policy 2-25, which requires 50-foot buffers along Sonoma and Mill Creeks (DEIR at 239) and

B9-4

[1] CDFW Areas of Conservation Emphasis available at https://apps.wildlife.ca.gov/ace/ (Accessed February 18, 2022)
[2] CLN Explorer Reporting Tool available at: https://www.bayarealands.org/explorer-v2 (Accessed February 18, 2022).

other policies and best management practices are insufficient to mitigate impacts to these important riparian corridors and the special-status species that occur or have the potential to occur in these habitats to less than significant. B9-4

Riparian ecosystems have long been recognized as biodiversity hotspots performing important ecological functions in a transition zone between freshwater systems and upland habitats. Many species that rely on these aquatic habitats also rely on the adjacent upland habitats (*e.g.*, riparian areas along streams, and grassland habitat adjacent to wetlands). In fact, 60% of amphibian species, 16% of reptiles, 34% of birds and 12% of mammals in the Pacific Coast ecoregion depend on riparian-stream systems for survival (Kelsey and West 1998). Many other species, including mountain lions and bobcats, often use riparian areas and natural ridgelines as migration corridors or foraging habitat (Dickson et al, 2005; Hilty & Merenlender, 2004; Jennings & Lewison, 2013; Jennings & Zeller, 2017). Additionally, fish rely on healthy upland areas to influence suitable spawning habitat (Lohse et al. 2008), and encroachment on these habitats and over-aggressive removal of riparian areas have been identified as a major driver of declines in freshwater and anadromous fish (e.g., Stillwater Sciences 2002; Lohse et al. 2008; Moyle et al. 2011). Therefore, establishing large buffers that allow for connectivity between the aquatic resource and upland habitat in riparian areas is vital for many species to persist. The Project's inadequate mitigation will deteriorate the riparian habitat and connectivity value for federally threatened steelhead, chinook salmon, California giant salamanders, foothill yellow-legged frogs, western pond turtles, and the many other species that occur or have the potential to occur in and around the Project area. B9-5

A literature review found that recommended buffers around aquatic resources for wildlife often far exceeded 100 meters (~325 feet) (Robins, 2002). For example, Kilgo et al. (1998) recommend more than 1,600 feet of riparian buffer to sustain bird diversity. In addition, amphibians, which are considered environmental health indicators, have been found to migrate over 1,000 feet between aquatic and terrestrial habitats through multiple life stages (Cushman, 2006; Fellers & Kleeman, 2007; Semlitsch & Bodie, 2003; Trenham & Shaffer, 2005). For example, California red-legged frogs have been found to migrate about 600 feet between breeding ponds and non-breeding upland habitat and streams, with some individuals roaming over 4,500 feet from the water (Fellers & Kleeman, 2007). Newts have been documented traveling up to a mile from breeding ponds (Trenham, 1998). Western pond turtle nests have been found up to 1,919 feet from aquatic habitats and individuals have been documented to move regularly between aquatic habitats with long-distance movements of up to 2,018 feet (Sloan, 2012). Accommodating the more long-range dispersers is vital for continued survival of species populations and/or recolonization following a local extinction (Cushman, 2006; Semlitsch & Bodie, 2003). Therefore, even the best management practices that require 300-foot buffers from streams, ponds, and other wetlands from Oct 31-June 1 for reptiles and amphibians (BIO-9 – BIO-11) are insufficient for minimizing impacts to these and other species. B9-6

In addition, more extensive buffers provide resiliency in the face of climate change-driven alterations to these habitats, which will cause shifts in species ranges and distributions (Cushman et al., 2013; Heller & Zavaleta, 2009; Warren et al., 2011). With the driest 22-year period in 1,200 years in the western US and drought conditions that will likely continue (Williams et al., 2022) climate change refugia and resilience provided by ecosystems like

riparian areas will be ever more critical for species survival and ecosystem health. This emphasizes the need for sizeable upland buffers around streams and other aquatic resources, as well as connectivity corridors between heterogeneous habitats. The DEIR fails to adequately assess and mitigate impacts to local and regional wildlife movement and habitat connectivity. B9-6

Edge effects of development in and adjacent to open space, like the proposed Project, will likely impact key, wide-ranging predators, such as mountain lions and bobcats (Crooks, 2002; Delaney et al., 2010; Lee et al., 2012; Riley et al., 2006; J. A. Smith et al., 2015, 2017; Vickers et al., 2015; Y. Wang et al., 2017), as well as smaller species with poor dispersal abilities, such as song birds, small mammals, and herpetofauna (Benítez-López et al., 2010; Cushman, 2006; Delaney et al., 2010; Gray, 2017; Kociolek et al., 2011; Slabbekoorn & Ripmeester, 2008). Limiting movement and dispersal can affect species' ability to find food, shelter, mates, and refugia, especially after disturbances like fires or floods. Individuals can die off, populations can become isolated, sensitive species can become locally extinct, and important ecological processes like plant pollination and nutrient cycling can be lost. Negative edge effects from human activity, such as traffic, lighting, noise, domestic pets, pollutants, invasive weeds, and increased fire frequency, have been found to be biologically significant up to 300 meters (~1000 feet) away from anthropogenic features in terrestrial systems (Environmental Law Institute, 2003). For example, field observations and controlled laboratory experiments have shown that traffic noise can significantly degrade habitat value for migrating songbirds (Ware et al., 2015). Subjects exposed to 55 and 61 dBA (simulated traffic noise) exhibited decreased feeding behavior and duration, as well as increased vigilance behavior (Ware et al. 2015). Such behavioral shifts increase the risk of starvation, thus decreasing survival rates. Policies like 2-13 and 2-14 that require signage and fencing to the wildlife corridor and creek corridor (with unspecified boundaries) and restrict off-leash pets, respectively (DEIR at 238), will not reduce the impacts of increased human activity, traffic, noise, light, etc. And although Policy 2-26 prohibits "the use of all pesticides, rodenticides, and poisons in materials and procedures used in landscaping, construction, and site maintenance within the Planning Area" (DEIR at 132), there is no mechanism of enforcement for this (or other best management practices) provided. The DEIR does not provide substantial evidence, as CEQA requires, that its proposed mitigation will reduce the Project's biological impacts to less than significant. B9-7

It is estimated that 90-95% of historic riparian habitat in the state has been lost (Bowler, 1989; Riparian Habitat Joint Venture, 2009). Using 2002 land cover data from CalFire, the Riparian Habitat Joint Venture estimated that riparian vegetation makes up less than 0.5% of California's total land area at about 360,000 acres (Riparian Habitat Joint Venture, 2004). This is alarming because riparian habitats perform a number of biological and physical functions that benefit wildlife, plants, and humans, and loss of what little is left will have severe, harmful impacts on special-status species, overall biodiversity, and ecosystem function. California cannot afford to lose more riparian corridors. B9-8

II. The DEIR fails to adequately describe, assess, and mitigate the Project's significant impacts to wildfire risk. B9-9

The DEIR ignores important wildfire history and therefore fails to adequately describe, assess, and mitigate the Project's impacts to wildfire risk. The DEIR fails to mention or discuss

the area's historical fire regimes and the role Indigenous communities likely played in shaping the fire ecology of habitats in and adjacent to the Project area. Wildfires due to lightning strikes and Indigenous cultural burning have occurred on California's landscapes for millennia. They're a natural and necessary process for many of California's ecosystems. But some of the recent fires have been exceptionally harmful to communities. In the past 200 years since European colonization, forced relocation and cultural genocide of Native Tribes, fire suppression and poor land management combined with poor land-use planning have shifted historical fire regimes throughout the heterogeneous ecosystems of the state. In addition, hotter, drier and more extreme weather conditions due to climate change make the landscape more conducive to wildfire ignitions and spread. Almost all (95-97%) contemporary wildfires are caused by humans and/or human infrastructure (Balch et al., 2017); therefore, the placement of new roads and development in and/or adjacent to high and very high fire hazard severity zones requires careful and comprehensive analyses of the area's fire history, the various ecosystems' fire ecology, and potential mitigation measures to reduce risk of ignition and fire within the Project area and spreading to nearby communities. The DEIR falls tragically short in this respect. B9-9

Decision-makers, including the County, must work to include Indigenous communities in climate change and wildfire discourse and planning. These communities are disproportionately affected by wildfire. Native Americans were found to be six times more likely than other groups to live in high fire-prone areas, and high vulnerability due to socioeconomic barriers makes it more difficult for these communities to recover after a large wildfire (Davies et al., 2018). In addition, farmworkers, who are majority people of color and often include migrant workers that come from Indigenous communities, often have less access to healthcare due to immigration or economic status. They are more vulnerable to the health impacts of poor air quality due to increased exposure to air pollution as they work. Yet farmworkers often have to continue working while fires burn, and smoke fills the air, or risk not getting paid (Herrera, 2018; Kardas-Nelson et al., 2020; Parshley, 2018). B9-10

"Indigenous communities have often been marginalized in the sciences through research approaches that are not inclusive of their cultures and histories." Traditional ecological knowledge ("TEK") is often excluded from analyses or distilled to conform to Western science (Ramos, 2022). The DEIR fails to acknowledge that Indigenous communities and cultural burning played a role in California's historical fire regime. Consultation with local Native Tribes and incorporation of Indigenous science, including but not limited to oral histories, ethnographies (that may include burn scars and charcoal records), and archeological data should be incorporated in fire history analysis. As a society, we need to work towards integrative research that "transcends disciplinary boundaries" and employs a range of methodological options to get a deeper understanding of the relationship between people and ecosystems (Ramos, 2022). Doing so will help inform fire management strategies and mitigation measures that work towards reducing harms of wildfire to people while facilitating beneficial fire for the appropriate ecosystems. The DEIR fails to adequately describe, assess, and mitigate the Project's impacts to wildfire risk and therefore fails to comply with CEQA. B9-11

The DEIR also fails to provide adequate mitigation to reduce wildfire risk to less than significant. For example, the DEIR points to the Mayacamas Volunteer Fire Department and the construction of a new fire station to "meet the needs of the population under buildout" and B9-12

therefore "would not substantially impair [] emergency response procedures" (DEIR at 511). However, it is unclear if human and monetary capital will be sufficient to sustain and maintain the new fire station. The DEIR does not specify how the Applicant will ensure the fire station will be adequately staffed so that quick response times are possible, nor is there assurances that there will be funding to operate and maintain the fire station. As such, it is too vague, unenforceable, and unsupported by evidence to qualify as adequate mitigation under CEQA. B9-12

According to Captain Michael Feyh of the Sacramento Fire Department, California no longer has a fire season (Simon 2018); wildfires in California are now year-round because of increased human ignitions in fire-prone areas. Emergency calls to fire departments have tripled since the 1980s (Gutierrez and Cassidy 2018), and firefighters (and equipment) are being spread thin throughout the state. Firefighters often work 24- to 36-hour shifts for extended periods of time (often weeks at a time), and they are being kept away from their homes and families for more and more days out of the year (Ashton et al. 2018; Bransford et al. 2018; Del Real and Kang 2018; Gutierrez 2018; Simon 2018).

The extended fire season is taking a toll on the physical, mental, and emotional health of firefighters, as well as the emotional health of their families (Ashton et al. 2018; Del Real and Kang 2018; Simon 2018). The physical and mental fatigue of endlessly fighting fires and experiencing trauma can lead to exhaustion, which can cause mistakes in life-or-death situations while on duty, and the constant worry and aftermath that family members endure when their loved ones are away working in life-threatening conditions can be harrowing (Ashton et al. 2018). According to psychologist Dr. Nancy Bohl-Penrod, the strain of fighting fires without having sufficient breaks can impact firefighters' interactions with their families, their emotions, and their personalities (Bransford et al. 2018). There have also been reports that suicide rates and substance abuse have been increasing among firefighters (Greene 2018; Simon 2018). This is not sustainable. And California's firefighter shortage is getting worse while more extreme heat waves due to climate change are making firefighting even more dangerous (Alexander, 2022; H. Smith & Mejia, 2022)(Smith and Mejia 2022; Alexander 2022). B9-13

Recent wildfires have been exceptionally harmful to people. Between 2015 and 2020 almost 200 people in the state were killed in wildfires, more than 50,000 structures burned, hundreds of thousands of people had to evacuate their homes and endure power outages, and millions were exposed to unhealthy levels of smoke and air pollution. Human-caused wildfires at the urban wildland interface that burn through developments are becoming more common with housing and human infrastructure extending into fire-prone habitats, and homes and structures can add fuel to fires and increase spread (Knapp et al., 2021). This is increasing the frequency and toxicity of emissions near communities in and downwind of the fires. Buildings and structures often contain plastic materials, metals, and various stored chemicals that release toxic chemicals when burned, such as pesticides, solvents, paints, and cleaning solutions (Weinhold, 2011). This has been shown with the 2018 Camp Fire that burned 19,000 structures; the smoke caused dangerously high levels of air pollution in the Sacramento Valley and Bay Area and CARB found that high levels of heavy metals like lead and zinc traveled more than 150 miles (CARB, 2021).

In addition, there are significant economic impacts of wildfires on residents throughout the state. One study estimated that wildfire damages from California wildfires in 2018 cost $148.5 billion in capital losses, health costs related to air pollution exposure, and indirect losses due to broader economic disruption cascading along with regional and national supply chains (D. Wang et al., 2021). Meanwhile the cost of fire suppression and damages in areas managed by the California Department of Forestry and Fire (Cal Fire) has skyrocketed to more than $23 billion during the 2015-2018 fire seasons. B9-14

The DEIR fails to acknowledge that development and human infrastructure in high fire-prone areas increases the risk of igniting wildfires. As detailed in a 2021 Center Report (Yap, Rose, Broderick, et al., 2021), development in highly fire-prone areas increases unintentional ignitions, places more people at risk (within and downwind of the Project area), and destroys native shrubland habitats that support high levels of biodiversity. Almost all contemporary wildfires in California (95-97%) are caused by humans in the wildland urban interface (Balch et al., 2017; Radeloff et al., 2018; Syphard et al., 2007; Syphard & Keeley, 2020). For example, the 2019 Kincade Fire, 2018 Camp and Woolsey fires, and 2017 Tubbs and Thomas fires were sparked by powerlines or electrical equipment. And although many of the 2020 fires were sparked by a lightning storm, the Apple Fire was caused by sparks from a vehicle, the El Dorado Fire was caused by pyrotechnics at a gender-reveal celebration, the Blue Ridge Fire was likely caused by a house fire, and electrical equipment is suspected to have ignited the Silverado and Zogg fires. Roads and energy infrastructure are sources of wildfire ignitions, and the Project will be placing both in high and very high fire hazard severity zones.

Policy 2-31 is grossly insufficient to mitigate the Project's impacts to wildfire risk. The proposal to construct a "managed landscape buffer along western and eastern edges of the Core Campus to aid in fire defense consisting of a shaded fuel break in wooded areas and grazed or mown grassland" and bulldozing shrubland and chaparral within the buffer (DEIR at 507) is vague and not based on sound science or substantial evidence. The DEIR disclosed neither the size of the buffer nor its exact location. And the DEIR provides no evidence that such a buffer would reduce ignition risk or prevent the spread of a wildfire either into or out of the Project area. The DEIR is also silent on what the environmental impacts (e.g., additional habitat destruction) will be from implementation of this measure. (CEQA Guidelines § 15126.4(a)(1)(D).) B9-15

The DEIR fails to adequately mitigate the Project's impacts to wildfire ignition risk, and fails to consider feasible mitigation measures. New infrastructure in high fire-prone areas should be avoided. If unavoidable, mitigation measures should require structures to have ember-resistant vents, fire-resistant roofs, and irrigated defensible space immediately adjacent to structures (Knapp et al., 2021; Syphard et al., 2014; Syphard & Keeley, 2020). External sprinklers with an independent water source could reduce structures' flammability. Rooftop solar and clean energy microgrids could reduce fire risk from utilities' infrastructure during extreme weather. The County should commit to evidence-based mitigation measures that include equitably retrofitting existing communities near the Project area with similar fire-resilient measures and providing wildfire personal protective equipment (e.g., N95 masks, air purifiers) to nearby communities. Transmission lines could be placed underground. In addition, education and awareness for

residents, visitors, and nearby communities should be provided and include how to reduce ignition risk. B9-15

In addition, wildfire mitigation must include emergency services and evacuation plans that are inclusive and consider diverse populations and vulnerable groups. Wildfire impacts disproportionately affect low-income and minority communities. As discussed in the Center's 2021 Built to Burn report (Yap et al., 2021): B9-16

> Past environmental hazards have shown that those in at-risk populations (*e.g.,* low-income, elderly, disabled, non-English-speaking, homeless) often have limited resources for disaster planning and preparedness (Richards, 2019). Vulnerable groups also have fewer resources to have cars to evacuate, buy fire insurance, implement defensible space around their homes, or rebuild, and they have less access to disaster relief during recovery (Davis, 2018; Fothergill & Peak, 2004; Harnett, 2018; Morris, 2019; Richards, 2019).
>
> In addition, emergency services often miss at-risk individuals when disasters happen because of limited capacity or language constraints (Richards, 2019). For example, evacuation warnings are often not conveyed to disadvantaged communities (Davies et al., 2018). In the aftermath of wildfires and other environmental disasters, news stories have repeatedly documented the lack of multilingual evacuation warnings leaving non-English speakers in danger. (Axelrod, 2017; Banse, 2018; Gerety, 2015; Richards, 2019). Survivors are left without resources to cope with the death of loved ones, physical injuries and emotional trauma from the chaos that wildfires have inflicted on their communities.
>
> Health impacts from wildfires, particularly increased air pollution from fine particulates ($PM_{2.5}$) in smoke, also disproportionately affect vulnerable populations, including low-income communities, people of color, children, the elderly and people with pre-existing medical conditions (Delfino et al., 2009; Hutchinson et al., 2018; Jones et al., 2020; Künzli et al., 2006; Reid et al., 2016). B9-17
>
> Increased $PM_{2.5}$ levels during wildfire events have been associated with increased respiratory and cardiovascular emergency room visits and hospitalizations, which were disproportionately higher for low socioeconomic status communities and people of color (Hutchinson et al., 2018; Jones et al., 2020; Liu et al., 2017; Reid et al., 2016). Similarly, asthma admissions were found to have increased by 34% due to smoke exposure from the 2003 wildfires in Southern California, with elderly and child age groups being the most affected (Künzli et al., 2006).
>
> Farmworkers, who are majority people of color, often have less access to healthcare due to immigration or economic status. They are more vulnerable to the health impacts of poor air quality due to increased exposure to air pollution as they work. Yet farmworkers often have to continue working while fires burn, and

smoke fills the air, or risk not getting paid (Herrera, 2018; Kardas-Nelson et al., 2020; Parshley, 2018).

B9-17

The DEIR fails to adequately assess and mitigate the Project's impacts to wildfire risk, including evacuation and community safety.

III. Conclusion

B9-18

We are in the midst of a global extinction crisis, with species going extinct at a rate of over 1,000 times the background rate and more than one million species on track to become extinct over the coming decades (Pimm et al., 2014). We are also in the midst of a climate crisis in which intensifying climate change is contributing to increasing extreme fire weather, longer fire seasons, and more area burned annually (Abatzoglou & Williams, 2016). The County should work to safeguard the region's biodiversity, remaining wildlife habitat, and climate change resilience by preserving remaining wildlife connectivity areas, particularly where special-status species are known to occur, like the Project area. The DEIR fails to adequately assess and mitigate the Project's impacts to special-status species, sensitive habitats, wildlife connectivity, and wildfire risk. The County should recirculate a revised EIR that remedies the deficiencies identified in this letter, and recirculate it for public review and comment.

Thank you for the opportunity to submit comments on the DEIR. Please include the Center on your notice list for all future updates to the Project and do not hesitate to contact the Center with any questions at the email addresses listed below.

Sincerely,



Tiffany Yap, D.Env/PhD
Senior Scientist, Wildlife Corridor Advocate
Center for Biological Diversity
1212 Broadway, Suite 800
Oakland, California 94612
tyap@biologicaldiversity.org

Peter Broderick
Urban Wildlands Legal Director, Senior Attorney
Center for Biological Diversity
660 S. Figueroa Street, Suite 100
Los Angeles, California 90017
pbroderick@biologicaldiversity.org

References
(*Provided via OneDrive*)

Abatzoglou, J. T., & Williams, A. P. (2016). Impact of anthropogenic climate change on wildfire across western US forests. *Proceedings of the National Academy of Sciences of the United States of America*, *113*(42), 11770–11775.

Alexander, K. (2022, August 4). 'It scares the heck out of me': California's federal firefighter shortage has gotten dramatically worse. *San Francisco Chronicle*.

Axelrod, J. (2017, December 13). California Wildfires Spark Issues of Bilingual Emergency Communications. *American City and County*.

Balch, J. K., Bradley, B. A., Abatzoglou, J. T., Nagy, R. C., Fusco, E. J., & Mahood, A. L. (2017). Human-started wildfires expand the fire niche across the United States. *Proceedings of the National Academy of Sciences*, *114*(11), 2946–2951.

Banse, T. (2018, April 20). How Do You Say 'Evacuate' in Tagalog? In a Disaster, English Isn't Always Enough. *Northwest Public Broadcasting*.

Benítez-López, A., Alkemade, R., & Verweij, P. A. (2010). The impacts of roads and other infrastructure on mammal and bird populations: A meta-analysis. *Biological Conservation*, *143*, 1307–1316.

Bowler, P. A. (1989). Riparian woodland: An endangered habitat in southern California. *Proceedings of the 15th Annual Symposium Southern California Botanists*, *3*, 80–97.

CARB. (2021). *Camp Fire Air Quality Data Analysis*.

Crooks, K. R. (2002). Relative sensitivities of mammalian carnivores to habitat fragmentation. *Conservation Biology*, *16*(2), 488–502.

Cushman, S. A. (2006). Effects of habitat loss and fragmentation on amphibians: A review and prospectus. *Biological Conservation*, *128*, 231–240.

Cushman, S. A., McRae, B., Adriaensen, F., Beier, P., Shirley, M., & Zeller, K. (2013). Biological corridors and connectivity. In D. W. Macdonald & K. J. Willis (Eds.), *Key Topics in Conservation Biology 2* (First Edit, pp. 384–403). John Wiley & Sons, Ltd.

Davies, I. P., Haugo, R. D., Robertson, J. C., & Levin, P. S. (2018). The unequal vulnerability of communities of color to wildfire. *PLoS ONE*, *13*(11), 1–15.

Davis, M. (2018, December 5). A tale of two wildfires: devastation highlights California's stark divide. *The Guardian*.

Delaney, K. S., Riley, S. P. D., & Fisher, R. N. (2010). A rapid, strong, and convergent genetic response to urban habitat fragmentation in four divergent and widespread vertebrates. *PLoS ONE*, *5*(9), 1–11.

Delfino, R. J., Brummel, S., Wu, J., Stern, H., Ostro, B., Lipsett, M., Winer, A., Street, D. H., Zhang, L., Tjoa, T., & Gillen, D. L. (2009). The relationship of respiratory and cardiovascular hospital admissions to the southern California wildfires of 2003. *Occupational and Environmental Medicine*, *66*(3), 189–197.

Dickson, B. G., Jennes, J. S., & Beier, P. (2005). Influence of Vegetation, Topography, and Roads on Cougar Movement in Southern California. *Journal of Wildlife Management*, *69*(1), 264–276.

Environmental Law Institute. (2003). Conservation thresholds for land use planners. In *Environmental Law*.

Fellers, G. M., & Kleeman, P. M. (2007). California Red-Legged Frog (Rana draytonii)

Movement and Habitat Use : Implications for Conservation. *Journal of Herpetology*, *41*(2), 276–286.
Fothergill, A., & Peak, L. A. (2004). Poverty and disasters in the United States: A review of recent sociological findings. *Natural Hazards*, *34*, 89–110.
Gerety, R. M. (2015, September 1). Farm Workers in Wildfire Areas Aren't Always Aware of Evacuation Plans. *National Public Radio Morning Edition*.
Gray, M. (2017). *The influence of land use and habitat fragmentation on landscape connectivity*. UC Berkeley.
Gray, M., Comendant, T., Micheli, L., & Merenlender, A. M. (2018). *Building Landscape Connectivity for Climate Adaptation: Mayacamas to Beryessa Connectivity Network (M2B)*.
Harnett, S. (2018, September 19). Low-Income Communities Struggle to Recover After a Wildfire. *KQED*.
Heller, N. E., & Zavaleta, E. S. (2009). Biodiversity management in the face of climate change: A review of 22 years of recommendations. *Biological Conservation*, *142*, 14–32.
Herrera, J. (2018, November 14). As Wildire Smoke Fills the Air, Farmworkers Continue to Labor in the Fields. *Pacific Standard*.
Hilty, J. A., & Merenlender, A. M. (2004). Use of Riparian Corridors and Vineyards by Mammalian Predators in Northern California. *Conservation Biology*, *18*(1), 126–135.
Hutchinson, J. A., Vargo, J., Milet, M., French, N. H. F., Billmire, M., Johnson, J., & Hoshiko, S. (2018). The San Diego 2007 wildfires and Medi-Cal emergency department presentations, inpatient hospitalizations, and outpatient visits: An observational study of smoke exposure periods and a bidirectional case-crossover analysis. *PLoS Medicine*, *15*(7), e1002601.
Jennings, M., & Lewison, R. (2013). *Planning for Connectivity Under Climate Change: Using Bobcat Movement To Assess Landscape Connectivity Across San Diego County's Open Space*.
Jennings, M., & Zeller, K. (2017). *Comprehensive Multi-species Connectivity Assessment and Planning for the Highway 67 Region of San Diego County, California*.
Jones, C. G., Rappold, A. G., Vargo, J., Cascio, W. E., Kharrazi, M., McNally, B., & Hoshiko, S. (2020). Out-of-Hospital Cardiac Arrests and Wildfire-Related Particulate Matter During 2015-2017 California Wildfires. *Journal of the American Heart Association*, *9*(8), e014125.
Kardas-Nelson, M., Alvarenga, J., & Tuirán, R. A. (2020, October 6). Farmworkers forced to put harvest over health during wildfires. *Investigate West*.
Kilgo, J. C., Sargent, R. A., Chapman, B. R., & Miller, K. V. (1998). Effect of stand width and adjacent habitat on breeding bird communities in bottomland hardwoods. *The Journal of Wildlife Management*, *62*(1), 72–83.
Knapp, E. E., Valachovic, Y. S., Quarles, S. L., & Johnson, N. G. (2021). Housing arrangement and vegetation factors associated with single-family home survival in the 2018 Camp Fire, California. *Fire Ecology*, *17*.
Kociolek, A. V., Clevenger, A. P., St. Clair, C. C., & Proppe, D. S. (2011). Effects of Road Networks on Bird Populations. *Conservation Biology*, *25*(2), 241–249.
Künzli, N., Avol, E., Wu, J., Gauderman, W. J., Rappaport, E., Millstein, J., Bennion, J., McConnell, R., Gilliland, F. D., Berhane, K., Lurmann, F., Winer, A., & Peters, J. M. (2006). Health effects of the 2003 Southern California wildfires on children. *American Journal of Respiratory and Critical Care Medicine*, *174*, 1221–1228.
Lee, J. S., Ruell, E. W., Boydston, E. E., Lyren, L. M., Alonso, R. S., Troyer, J. L., Crooks, K.

R., & Vandewoude, S. (2012). Gene flow and pathogen transmission among bobcats (Lynx rufus) in a fragmented urban landscape. *Molecular Ecology*, *21*(7), 1617–1631.
Liu, J. C., Wilson, A., Mickley, L. J., Ebisu, K., Sulprizio, M. P., Wang, Y., Peng, R. D., Yue, X., Dominici, F., & Bell, M. L. (2017). Who among the elderly is most vulnerable to exposure to and health risks of fine particulate matter from wildfire smoke? *American Journal of Epidemiology*, *186*(6), 730–735.
Lohse, K. A., Newburn, D. A., Opperman, J. J., & Merenlender, A. M. (2008). Forecasting relative impacts of land use on anadromous fish habitat to guide conservation planning. *Ecological Applications*, *18*(2), 467–482.
Morris, B. (2019, April 23). How the Ultra-Wealthy are Making Themselves Immune to Natural Disasters. *LA Magazine*.
Moyle, P. B., Katz, J. V. E., & Quiñones, R. M. (2011). Rapid decline of California's native inland fishes: A status assessment. *Biological Conservation*, *144*, 2414–2423.
Parshley, L. (2018, December 7). The Lingering Effects of Wildfires Will Disproportionately Hurt People of Color. *Vice*, 1–11.
Pimm, S. L., Jenkins, C. N., Abell, R., Brooks, T. M., Gittleman, J. L., Joppa, L. N., Raven, P. H., Roberts, C. M., & Sexton, J. O. (2014). The biodiversity of species and their rates of extinction, distribution, and protection. *Science*, *344*(6187). https://doi.org/10.1126/science.1246752
Radeloff, V. C., Helmers, D. P., Kramer, H. A., Mockrin, M. H., Alexandre, P. M., Bar-Massada, A., Butsic, V., Hawbaker, T. J., Martinuzzi, S., Syphard, A. D., & Stewart, S. I. (2018). Rapid growth of the US wildland-urban interface raises wildfire risk. *Proceedings of the National Academy of Sciences*, *115*(13), 3314–3319.
Ramos, S. C. (2022). Understanding Yurok traditional ecological knowledge and wildlife management. *The Journal of Wildlife Management*, 1–21.
Reid, C. E., Jerrett, M., Tager, I. B., Petersen, M. L., Mann, J. K., & Balmes, J. R. (2016). Differential respiratory health effects from the 2008 northern California wildfires: A spatiotemporal approach. *Environmental Research*, *150*, 227–235.
Richards, R. (2019, July 25). After the Fire: Vulnerable Communities Respond and Rebuild. *Center for American Progress*.
Riley, S. P. D., Pollinger, J. P., Sauvajot, R. M., York, E. C., Bromley, C., Fuller, T. K., & Wayne, R. K. (2006). A southern California freeway is a physical and social barrier to gene flow in carnivores. *Molecular Ecology*, *15*, 1733–1741.
Riparian Habitat Joint Venture. (2004). *The Riparian Bird Conservation Plan: A strategy for reversing the decline of riparian associated birds in California*. http://www.prbo.org/calpif/pdfs/riparian.v-2.pdf
Riparian Habitat Joint Venture. (2009). *California Riparian Habitat Restoration Handbook*.
Robins, J. D. (2002). *Stream Setback Technical Memo*.
Semlitsch, R. D., & Bodie, J. R. (2003). Biological criteria for buffer zones around wetlands and riparian habitats for amphibians and reptiles. *Conservation Biology*, *17*(5), 1219–1228.
Slabbekoorn, H., & Ripmeester, E. A. P. (2008). Birdsong and anthropogenic noise: implications and applications for conservation. *Molecular Ecology*, *17*, 72–83.
Sloan, L. M. (2012). *Population structure, life history, and terrestrial movements of western pond turtles (Actinemys marmorata) in lentic habitats along the Trinity River, California* (Issue May). http://humboldt-dspace.calstate.edu/handle/2148/960
Smith, H., & Mejia, B. (2022, September 2). Extreme heat waves are making L.A. firefighters

sick, adding new dangers to job. *Los Angeles Times*.
Smith, J. A., Suraci, J. P., Clinchy, M., Crawford, A., Roberts, D., Zanette, L. Y., & Wilmers, C. C. (2017). Fear of the human 'super predator' reduces feeding time in large carnivores. *Proceedings of the Royal Society B: Biological Sciences*, *284*(1857), 20170433.
Smith, J. A., Wang, Y., & Wilmers, C. C. (2015). Top carnivores increase their kill rates on prey as a response to human-induced fear. *Proceedings of the Royal Society B: Biological Sciences*, *282*(1802).
Stillwater Sciences. (2002). *Napa River Basin Limiting Factors Analysis*.
Syphard, A. D., Brennan, T. J., & Keeley, J. E. (2014). The role of defensible space for residential structure protection during wildfires. *International Journal of Wildland Fire*, *23*(8), 1165–1175.
Syphard, A. D., & Keeley, J. E. (2020). Why are so many structures burning in California. *Fremontia*, *47*(2), 28–35.
Syphard, A. D., Radeloff, V. C., Keeley, J. E., Hawbaker, T. J., Clayton, M. K., Stewart, S. I., Hammer, R. B., Syphard, A. D., Radeloff, V. C., Keeley, J. E., Hawbaker, T. J., Stewart, S. I., & Hammer, R. B. (2007). Human influence on California fire regimes. *Ecological Society of America*, *17*(5), 1388–1402.
Trenham, P. C. (1998). *Demography, migration, and metapopulation structure of pond breeding salamanders*. University of Californai Davis. (Not provided)
Trenham, P. C., & Shaffer, H. B. (2005). Amphibian upland habitat use and its consequences for population viability. *Ecological Applications*, *15*(4), 1158–1168.
Vickers, T. W., Sanchez, J. N., Johnson, C. K., Morrison, S. A., Botta, R., Smith, T., Cohen, B. S., Huber, P. R., Ernest, H. B., & Boyce, W. M. (2015). Survival and mortality of pumas (Puma concolor) in a fragmented, urbanizing landscape. *PLoS ONE*, *10*(7), 1–18.
Wang, D., Guan, D., Zhu, S., Kinnon, M. Mac, Geng, G., Zhang, Q., Zheng, H., Lei, T., Shao, S., Gong, P., & Davis, S. J. (2021). Economic footprint of California wildfires in 2018. *Nature Sustainability*, *4*, 252–260.
Wang, Y., Smith, J. A., & Wilmers, C. C. (2017). Residential development alters behavior, movement, and energetics in a top carnivore. *PlosOne*, 1–17.
Ware, H. E., Mcclure, C. J. W., Carlisle, J. D., & Barber, J. R. (2015). A phantom road experiment reveals traffic noise is an invisible source of habitat degradation. *Proceedings of the National Academy of Sciences*, *112*(39), 12105–12109.
Warren, R., Price, J., Fischlin, A., de la Nava Santos, S., & Midgley, G. (2011). Increasing impacts of climate change upon ecosystems with increasing global mean temperature rise. *Climatic Change*, *106*(2), 141–177.
Weinhold, B. (2011). Fields and forests in flames: Vegetation smoke and human health. *Environmental Health Perspectives*, *119*(9), A386–A393.
Williams, A. P., Cook, B. I., & Smerdon, J. E. (2022). Rapid intensification of the emerging southwestern North American megadrought in 2020–2021. *Nature Climate Change*.
Yap, T. A., Rose, J. P., Broderick, P., & Prabhala, A. (2021). *Built to Burn: California's Wildlands Developments Are Playing With Fire*.

SONOMA ECOLOGY CENTER

Beautiful. Sustainable. Sonoma

Brian Oh, Comprehensive Planning Manager
Permit Sonoma, County of Sonoma
2550 Ventura Avenue, Santa Rosa, CA 95403
Brian.Oh@sonoma-county.org
(707) 565-1931

September 26, 2022

Comments on the draft SDC Specific Plan

Significant effort has been made to develop the SDC Specific Plan in response to community and agency issues of concern. While laudable, there are several topics related to areas of our expertise, and in others cases globally, where the plan misses key opportunities, some critical, to address these concerns. Following are comments from Sonoma Ecology Center to support Sonoma County's efforts to develop an exceptional plan for this exceptional site.

Appendix A: Conditions of Approval

B10-1

Most of the policies in the draft Specific Plan have no Conditions of Approval to implement them. This needs to be corrected. Unless Conditions of Approval enforce the Plan's intent, the EIR cannot claim that mitigating actions will occur.

Because many policies are vague or unenforceable–using words like "promote," "encourage," "if feasible"--such words must be removed from the Conditions of Approval, or else the Conditions cannot be considered mitigation commitments.

Conditions of Approval in the draft Plan do not provide any means to control impacts after the construction period; that is, during the decades of operation and occupancy. This needs to be corrected by adding Conditions of Approval that describe enforceable, objective standards that will apply after construction.

Similarly, many policies designed to protect ecological resources must be carried through to the actions of future residents and occupants of the property, and therefore should be required to be included in CC&Rs, as exemplified in a single policy of the draft Plan, Policy 2-26. A list of objective, enforceable items to be included in future CC&Rs (Dark Skies, pet policies, fence specifications, native and drought-tolerant landscaping, no pesticides in landscaping, etc) should be provided in the COM section of the Conditions of Approval.

B10-2

Protections of wetlands are insufficient in the draft Plan. In order to implement Goal 6E, wetlands must be fully documented before any construction occurs. Therefore, add to BIO-1 after the first sentence "Identifying sensitive habitats includes a jurisdictional wetland delineation and designation of wetlands in Sonoma County zoning code." B10-2

BIO Conditions of Approval require two types of corrections before the Plan can claim to mitigate environmental impacts. First, additional species need to be added to the BIO Conditions of Approval, so that the Conditions cover all known occurring species, as detailed in the datasets described in our April 5, 2022 letter and reiterated in our September 26, 2022 comment on the DEIR. Second, Conditions of Approval need to mitigate impacts <u>after</u> construction, during occupation and use of the site. These Conditions will need to codify ongoing mitigations described in the Plan and its policies, within any areas known now or in the future to harbor protected species, such as prohibiting dogs, prohibiting ground-disturbance land management techniques such as tilling, prohibiting entry of heavy equipment such as trucks, masticators, or tractors, etc.

The effectiveness of mitigating provisions and policies cannot be assessed unless the Plan and the Conditions of Approval mandate a permanent monitoring program, beginning before demolition or construction begins, to detect and regularly report wildlife use patterns, abundance of protected and indicator species, streamflow, and water levels in major wetlands. Therefore, please add such a program in both the Plan (Chapters 2, 6, and potentially others) and the Conditions of Approval. B10-3

Revise MOB-2 so that it implements Goals 2D and 2E, as follows: "Construction of the Highway 12 connector ~~should~~ <u>shall</u> avoid damage to <u>biological,</u> scenic and open space resources such as <u>protected biological species, protected habitats such as wetlands,</u> trees, rock outcroppings, and historic buildings ~~to the greatest extent feasible~~." Western Pond Turtles (a California species of special concern) are documented to breed in the degraded wetlands that run from the northern to the southern edges of the property east of Lake Suttonfield, including the old horse corral. These wetlands were once connected to wetlands in Sonoma Valley Regional Park where Endangered Sonoma Sunshine (*Blennosperma bakeri*) occurs. California Clam-shrimp, an Endangered crustacean that specializes in seasonal pools, occurs in unmapped seasonal ponds near the southern proposed route for a road linkage to Hwy 12.

2.1 Open Space Management Framework

Goal 2-B and Table 4.3 suggest there is agriculture planned in Preserved Open Space (i.e. outside the agrihood), but such agricultural uses are not shown on any maps or limited in acreage or location by any text. Please fix this, particularly in light of known sensitive species and habitats in many areas of the Preserved Open Space; otherwise the Plan cannot claim to implement Guiding Principle 3 to Integrate Development with Open Space Conservation. B10-4

2.2 Biological Resources and Wildlife Corridors

A. Figure 4.1-2 and other Plan maps are only partially consistent with Goal 2E and Policy 2-6 to "expand the wildlife corridor." The low/medium residential area north of the ballfields (the location of the Bane/Thompson building) is a key border with the narrowest part of the corridor, including high-value riparian habitat and access to year-round water in Sonoma Creek. To fulfill Goal 2E and Policy 2-6, this area should not be built on, and if it remains as a development area, it should have a 100' setback from Sonoma Creek or preserve all existing native trees, whichever width is greater. Also, to reduce corridor disturbance in this pinchpoint area, structures between the two Arnold Drive bridges should be removed and not replaced. B10-5

B. Policy 2-8 is not enforceable as written and needs to be changed to, for example, "...the Project Sponsor will develop and execute a maintenance program…" B10-6

C. Policy 2-10, as written, can not achieve its intent if its language remains vague and unenforceable. To fix this, remove "If possible".

D. Policy 2-12 restricts development to limited trails and signage, and minimizes development of trails within wildlife and creek corridors. However, this policy's lack of specificity may impact wildlife and other biotic resources. Expand the policy such that: paths and recreational areas shall not be placed on the northern edge of the core campus where the wildlife corridor is narrowest. B10-7

E. Policy 2-16, as written, does not fulfill Goal 2E. To fix this, clarify that the policy applies to "open space" both inside the core campus and outside it, with the exceptions of 1) fenced back yards of residences and 2) fences meant to direct movement of and reduce hazards to wildlife. B10-8

F. Policies 2-25 and 2-27 (riparian corridor protections) do not fulfill Goal 2-D.
    a. To avoid confusion, please use language consistent with Sonoma County policy and zoning by changing "protective buffers" to "riparian corridors". B10-9
    b. The 50' riparian corridor protections mapped by Permit Sonoma (see map) in SDC, and copied in Policies 2-25 and 2-27, are anomalous and should be made consistent with the logic of riparian corridor widths everywhere else in Sonoma Valley; that is, where Sonoma Creek adjoins low-density land uses or open space, the corridor width is 100'.
    c. Riparian corridor setbacks need to be larger where green infrastructure projects are planned to reduce flooding and enhance terrestrial and aquatic wildlife habitat. Please see the Upper Sonoma Creek Restoration Vision. Where there are vertically eroding banks, these projects will pull the top of bank back, to create banks that can slow storm flows and stabilize the creek corridor. Riparian corridors in the Plan should be established from these new top-of-bank locations, which could be 50 or 100 feet or more back from the existing, vertical bank top, rather than using a generic setback width based on today's conditions.
    d. Please either include Asbury Creek alongside Sonoma and Hill Creeks in Policies 2-25 and 2-27, or justify its exclusion.

G. Policy 2-26 and Policy 6-17, which both prohibit use of pesticides in landscaping, need a Condition of Approval to implement them, that applies during operation, not just construction. B10-10

H. Policy 2-28, as written, will not achieve Goal 2D. To fix this, change to "... conduct studies identifying the presence of special-status species and sensitive habitats at proposed development sites, including wetland delineation, …" B10-11

I. Goal 2E, to enhance and expand the wildlife corridor, cannot be implemented unless wildlife permeability extends past the current SDC boundaries. Therefore, add a policy that future owner(s) of the Preserved Open Space shall positively participate with any surrounding property owners, CalTrans, and Sonoma County TPW to improve wildlife habitat and permeability across property boundaries, up to and including the eventual construction and maintenance of a wildlife overpass or underpass across Hwy 12. B10-12

3. Mobility and Access

Policy 3-16 "Create a multi-use creek trail running parallel to Sonoma Creek that connects to a greater Glen Ellen-Eldridge community bikeway." conflicts with Policy 2-25 to protect wildlife and other functions of riparian areas. To correct this, change Policy 3-16 to locate most of the north-south trail outside the riparian corridor setback. Trails should not occur in riparian corridors except for short distances (these are habitat areas first, recreation areas second). Add a policy that there shall be no new pedestrian bridges over Sonoma Creek unless built high above the riparian zone such that wildlife are not affected. B10-13

SCTA has conducted studies showing that a large fraction of passenger vehicle trips in Sonoma Valley are to drop off and pick up school children. In order to fulfill Goal 3-F and Policy 3-41, add a policy to provide free bus service to and from local primary and secondary schools.

4. Land Use

If Goal 2E is to "Maintain and enhance the size and permeability of the Sonoma Valley Wildlife Corridor", then a map of the corridor's current size (Figure 1.6-2) is insufficient to guide land use. That map must be augmented by a map of the future, larger corridor, otherwise it is not possible to know where Policies 2-6 to 2-10, 2-12, and 2-13 "within the wildlife corridor" apply. B10-14

If Goal 2E is to be achieved, special protections are needed for the narrowest, most vulnerable portion of the wildlife corridor, beyond the protections of other areas of Preserved Open Space. To accomplish this, add a new land use designation, potentially called "Corridor Pinchpoint," where no uses (in the sense of "use" in Table 4-3) are permitted. The Corridor Pinchpoint is the area bounded on the south by the ballfields, on the west by a line extending north from Manzanita, on the north by the Planning Area boundary, and on the east by a line extending north from Railroad. Change instances of "the wildlife corridor" in all Policies to "the Corridor Pinchpoint."

Table 4-3, Permitted Uses, must remove or condition land uses that are in conflict with the Plan's Guiding Principles, Goals, and/or the stated intent of the individual land use classifications: B10-15

- Remove Timberland conversion and Tasting Rooms as permitted or conditionally permitted uses from the Agriculture and Resource Based Land Use category of the table in the Preserved Open

Space column. Change all other uses in the Agriculture and Resource Based Land Use category of the table from "Permitted" to "Conditional Use Permit" in the Preserved Open Space column.
- Change all permitted uses in the Transportation, Energy, Public Facilities Land Use category of the table from "Permitted" to "Conditional Use Permit" in the Preserved Open Space and Buffer Open Space columns.

B10-15

The stated purpose of Preserved Open Space (p. 4-10) is not carried through to any policies or Conditions of Approval. To remedy this, add enforceable policies in chapter 4.4, including a policy to the effect that "Within Preserved Open Space, multi-benefit water resources projects shall be an acceptable use of land, where such projects protect or create habitat and recreation benefits, deliver water benefits to people and nature, and do not impede wildlife permeability.

B10-16

6. Public Facilities, Services, and Infrastructure

B10-17

In order to implement Goal 6-E, safeguarding SDC's water supply for human and ecosystem needs, these provisions need to be added to policies in Chapter 2, potentially in Chapter 6, and in the Conditions of Approval:

- Lake Suttonfield, Fern Lake, Eldridge Marsh, and all mapped wetlands shall have development setbacks of 100' or greater. This setback is consistent with Sonoma County's policies (see table of wetland setbacks here).
- Connectivity between water features (lakes, creeks, vernal pools, intermittent streams) shall be enhanced and maintained. Connectivity means the presence of vegetated native plant cover, absence of roads, ditches, and other barriers to water or animal movement, and absence of human presence.
- Water-related features, including swales, intermittent drainages, and seasonal waterways shall not be undergrounded, but instead shall be daylighted and enhanced as visual amenities and wildlife habitat.
- Eldridge Marsh (permanent and seasonal wetlands on the east side) shall be restored hydrologically and biologically, in part by blocking ditches that currently drain the area.

Policies affecting Roulette Springs fail to fulfill Goals 2D and Policy 2-21. As documented in the *Sonoma Developmental Center Existing Conditions Report* (PCI, 2015), this area is unique among wetlands in the region for its provision of a large, perennial, reliable source of water for people and nature. In order to fulfill Goals 2D and Policy 2-21, the policies and Conditions of Approval need to commit to proactively restoring and protecting Roulette Springs, instead of merely avoiding further damage to it and diversions from it, in order to maximize ecological benefit to wetland habitats and listed species.

B10-18

- Add "and Roulette Springs" to Policy 2-21.
- Strengthen Policy 6-30 to proactively restore and protect Roulette Springs, instead of merely avoiding further damage to it, in order to maximize ecological benefit to wetland habitats and listed species.

Chapter 7.6 Funding and Financing Mechanisms

B10-19

This section provides no actual funding/financing plan, just a description of many possible options. Please correct this omission by inserting a table showing the list of planned funding and financing options mechanisms, and how much funding or financing each would contribute to the total cost of implementing the Specific Plan, preferably presented in the phases of section 7.3.

Thank you for your consideration,



Richard Dale
Executive Director
(707) 888-1656
richard@sonomaecologycenter.org

September 26, 2022

Brian Oh, Comprehensive Planning Manager
Permit Sonoma County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403

Dear Mr. Oh:

Sonoma Land Trust (SLT) provides these comments on the Draft Environmental Impact Report ("EIR") for the Sonoma Development Center Specific Plan ("Specific Plan," "Proposed Plan," or "Project"). The Sonoma Developmental Center ("SDC") property can play a pivotal role in providing much-needed affordable housing while protecting Sonoma County's ecological and recreational resources for future generations. The Specific Plan also presents a unique opportunity for California to demonstrate how redevelopment of a state-owned property can deliver community benefits such as climate resilience, affordable housing and expanded park access, while achieving priorities such as the 30x30 biodiversity conservation initiative.

B11-1

Because SDC is owned by the state, there is also a public trust obligation to conserve and protect the property—and especially the Sonoma Valley Wildlife Corridor—as an "ecological unit" above and beyond the specific direction provided by the 2019 legislation[1]. Under the public trust doctrine, navigable waters, tidelands and wildlife resources are held in trust for all of the people, and the state acts as the trustee to protect these resources for present and future generations. This is acknowledged in Guiding Principles #3 and #4 of the Specific Plan.

The Proposed Plan for the redevelopment of the SDC core campus will have significant and unidentified impacts to the local and regional environment—most notably to wildlife connectivity, wildfire safety, hydrology and management of water resources. As discussed in detail in Attachment A and in the analysis provided by biology, transportation, wildfire, and hydrology experts (Attachments B, C, D, E, and F),[2] the

[1] Government Code Section 14670.10.5

[2] The comments in Attachments A through F are incorporated herein by reference. Please refer to these comments for further detail and discussion of the EIR's inadequacies. We request that the County respond both to the comments in this letter and to each of the comments in each of the Attachments.

EIR fails to adequately inform decisionmakers and the public about the numerous environmental impacts of the SDC Specific Plan. Instead the EIR defers both the required analysis and development of mitigation measures to the future, which violates the basic requirements of the California Environmental Quality Act (CEQA).

The detailed comments of SLT focus on the additional analysis and evidence needed to fulfill CEQA's primary responsibility of fully disclosing the environmental consequences of this large-scale development project that will significantly alter the landscape of the Sonoma Valley. The attempt to use the concept of a "self-mitigating" Specific Plan avoids the responsibility of analyzing the impacts first to understand what needs to be mitigated, before jumping to the next step of determining what measures are necessary and effective to reduce impacts to less than significant. Put simply the EIR fails to "show its work" and connect the dots between the Project's significant impacts and the vague (and mostly deferred) mitigation measures contained in the Specific Plan.

B11-2

The incredible environmental values and assets of SDC—and the site's history and legacy of care—require an equally exceptional EIR and Specific Plan. These will be the guiding documents for decades to come, and the rush to meet an unrealistic deadline for approval of the EIR and Project that does not enjoy strong public support is unnecessary. SLT suggests an approach that will allow the County to still move forward in a timely manner to meet Project objectives, satisfy the 2019 legislation related to the disposition and future use of SDC, and improve and correct flaws in the environmental documents. This approach meets CEQA requirements, improves consistency with the County's General Plan and fulfills Guiding Principle #5 to promote sustainable development practices in building and landscape design.

B11-3

SLT recommends that the Planning Commission and Board of Supervisors decline to certify this EIR and instead direct staff to use the historic preservation alternative as the starting place for a new and revised preferred project, and a revised Specific Plan and EIR that addresses the flaws identified in the Attachments to this letter.

We recommend that the historic preservation alternative be revised to start with an affordable housing project of 200+/- homes (Phase 1), and to allow for future development phases consistent with whichever proposal the California Department of General Services (DGS) selects as the winning bid pursuant to their surplus property sale process for the SDC core campus. The EIR acknowledges that the County and public have no accurate estimate of how much development will actually occur at SDC, because we don't know which proposal DGS will select to enter into an Exclusive Negotiating Agreement for the sale of the campus. As the EIR states on page 77:

> "...development of most of the properties in the Planning Area would be implemented through the market-driven decisions that the selected buyer(s) would make for their properties, and no development rights or entitlements are specifically conferred with the Proposed Plan. Furthermore, given that the

majority of future development under the Proposed Plan is residential, varying levels of density bonuses are available under the State depending on the level of affordable housing provided. Thus, it is difficult to project the exact amount and location of future development that may result."

According to the schedule released by DGS, a buyer will be selected in late October, which gives Permit Sonoma, the public and the decision makers an opportunity to focus on a real-world proposal that will drive "*the exact amount and location of future development*." This will also resolve the problem of speculating about financial feasibility and making unfounded assumptions on how much and what type of housing needs to be built on the site to subsidize the affordable housing mandates.

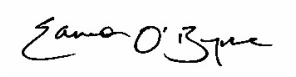
B11-4

Importantly, the historic preservation alternative also requires significant modification to expand the wildlife corridor, riparian and open space protections and setbacks. SLT's top priority is ensuring that the Specific Plan furthers Guiding Principle #3. Therefore, the revised historic preservation alternative must include and meet the following specific performance standards:

- Provide sufficient setbacks from all creeks designed to protect water quality and quantity, instream and riparian habitat, and wildlife connectivity
- Provide a sufficient buffer that reduces the current footprint of the north side of the SDC campus adjacent to Sonoma Creek to allow wildlife to safely travel through the Sonoma Valley Wildlife Corridor
- Ensure human activities and improvements at SDC do not impair wildlife's use
- Ensure new roads and increased traffic do not create a danger to wildlife
- Ensure new development does not create new sources of light, glare, or noise that would impair wildlife's use of the Corridor
- Ensure new development does not increase the risk of wildfires that would harm the natural and built environments
- Ensure runoff from new impermeable development does not result in erosion or contamination of creeks and riparian areas.

Developing these performance standards will require additional study and resources, and SLT is prepared to assist in that effort to ensure that the Sonoma Valley Wildlife Corridor and natural environment continue to function as a regional habitat linkage for the entire North Bay. Thank you for considering the comments and recommendations in this letter and each of the Attachments. We hope that our suggested approach can secure community support before the Specific Plan and EIR go to the Board of Supervisors for consideration and approval.

Sincerely,



Eamon 0'Byrne
Executive Director

Attachments

Attachment A: Sonoma Land Trust's Comments

Attachment B: Prunuske Chatham, Inc. Comments

Attachment C: Pathways for Wildlife Comments

Attachment D: Neal Liddicoat, Griffin Cove Transportation Consulting, PLLC Comments

Attachment E: Alexandra Syphard, Conservation Biology Institute Comments

Attachment F: Gregory Kamman, CBEC Eco Engineering Comments

ATTACHMENT A

Attachment A

Sonoma Land Trust's Comments on the Draft Environmental Impact Report for the Sonoma Developmental Center Specific Plan

These comments provide the Sonoma Land Trust's input on the Draft Environmental Impact Report ("EIR") for the Sonoma Development Center Specific Plan ("Specific Plan," "Proposed Plan," or the "Project"). As discussed below and in the analysis that follows provided by biology, transportation, wildfire, and hydrology experts (Attachments B, C, D, E, and F to September 26, 2022 letter from SLT to Brian Oh),[1] the EIR fails to provide a stable project or analyze the full scope of impacts that would foreseeably result from the buildout of the draft Specific Plan. Relying on the Specific Plan's goals and policies—which are replete with caveats and qualifications—the EIR treats the Specific Plan as a self-mitigating project. But the EIR does not actually do the analysis or present the substantial evidence necessary to support that conclusion. Nor does the EIR incorporate the purported self-mitigating aspects of the Specific Plan into a formal mitigation monitoring and reporting program, which program is required under CEQA to ensure that a project's mitigating elements are meaningful and enforceable and actually achieve their stated goals. B11-5

The errors in the EIR are especially consequential in this case, given the immense specificity of the draft Specific Plan. If the draft Specific Plan is adopted, the County will know substantially where specific uses will be located and what the footprint and intensity of those uses will be. The County is relying on that specificity to streamline future environmental review of development under the Specific Plan, including by avoiding altogether future environmental review wherever possible. Specific Plan at 7-3 (indicating that certain types of development under the Specific Plan might be exempt from further CEQA review and stating that the "County intends to rely on these provisions for exemptions and tiering to the maximum extent feasible"). Particularly given the County's stated objectives, it is critical that the EIR analyze fully all foreseeable impacts of all development allowed under the Specific Plan and that it mitigate those impacts found to be significant. The EIR cannot and should not defer to future environmental review the analysis of the Project's impacts and identification of mitigation.

The EIR also fails to properly include documents referenced and relied on by the EIR. For example, the DEIR references a traffic study for the Project, but fails to attach it as an appendix to the EIR. EIR at 410, Footnote 118 [references the Focused Traffic Operations Analysis for the SDC Specific Plan (W-Trans, August 2022 [actually July 6, 2022])]. B11-6

Similarly, the EIR references an evacuation study for the Project site prepared by Kittelson and Associates, but fails to append this document. EIR at 506. Under well-established B11-7

[1] These expert reports are submitted as part of the Sonoma Land Trust's letter to the County and will not be submitted separately. The County must respond separately to each of the comments in this Attachment A and to each of the comments in each of the expert reports.

case-law, the lead agency is required to present all relevant reports relied upon to prepare the EIR as part of the document.

As described below, the current EIR fails to adequately inform decisionmakers and the public about the environmental impacts of the SDC Specific Plan. The final EIR must be significantly revised to include all necessary evidence, analysis, and mitigation if it is to comply with CEQA.

PROJECT DESCRIPTION

- The EIR fails to provide an accurate, stable, and finite project description. B11-8

- The Project Description does not provide a clear description of the amount of development allowed under the Specific Plan. The EIR also does not include an accurate representation of the amount of development that is identified in the Draft Specific Plan. Table 4-2 in the Specific Plan includes a range of housing units permitted in the various districts of the SDC with a maximum of 1,210 units. The table notes that a +/- 10% deviation in each district is allowed subject to approval by the Community Development Director, which could lead to a maximum of 1,331 units (1,210+121). A footnote to Table 4-2 notes that "While the base housing unit range for each district is represented as a range, the total base number of units built across all districts *should* equal the total shown in the table" (emphasis added). However, there is no further detail describing how this unit count would be implemented and any lesser number (e.g. 733) enforced when each district has a range of unit allotments. Furthermore, the Specific Plan at 4-12 acknowledges that developers would be able to use State and County density bonuses for inclusionary housing and notes an additional 200 market rate units. However neither the Specific Plan nor the EIR explain how that number was developed. Furthermore, the Specific Plan identifies another planned 100-unit affordable housing project that is anticipated to be developed (with County involvement) on the SDC site. According to current State density bonus law, a 100% affordable project could seek a density bonus of up to 80%, which could lead to an additional 80 units beyond the 100 identified. The Specific Plan could accommodate at least 1,331 units before density bonus allowances and sets no upper limit on the number of units allowed, while the EIR analyzes a maximum of 1,000 units (EIR Table 2.5-1).

B11-9

- While the Project Description residential unit count is different than the units identified in the Specific Plan, there are also sections within the EIR that cite statistics with unclear sources, leading to cloudy and unsupportable conclusions. The Project Description notes the development of 1,000 residential units and a future population of 2,400 persons (average size of 2.4 persons per household). This is in contrast with the average household size in Sonoma County of 2.6 persons per household as identified in the EIR at 369 (Population and Housing section). What is the data point to suggest that the average household size at SDC would be lower than the County-wide average? This discrepancy of 200 persons is not reflected in any of the analyses that rely on population, such as Public Service and Recreation, Utilities and Service Systems, Air Quality and Greenhouse Gas Emissions.

- Compounding the confusion over accurate unit counts and the accuracy of analyses, some of the impact sections reference different numbers than the Project Description, resulting in an unstable project description and confusion about key elements of the Project. EIR at 429 (Land Use and Transportation Network Assumptions) states that "the analysis presented in this section is based on an assumption that implementation of the Proposed Plan would result in 1,000 residential units with State and County density bonuses, including 435 single family units, 345 multifamily units, and 220 senior housing units." But neither the EIR Project Description nor the Specific Plan indicates that the 1,000 residential units would be inclusive of State and County density bonuses. Nor does the EIR Project Description or Specific Plan identify the split between single family and multi-family units or provide for senior housing units. Where did these assumptions come from? How can they be relied upon for the Transportation analysis? Other sections that made assumptions regarding the split between units types include Population and Housing, Public Service and Recreation, Utilities and Service Systems. In the Public Services and Recreation section, Table 3.13-4 at p.402 (Student Generation Rates) analyzes 500 single family units and 280 affordable/apartment units (780 in total) to conclude a total new student population number. Not only is this assumption of the number of unit types not in the Project Description (what is the source?), but it is also a different unit split assumption than what is used in the Transportation section. Beyond transportation, what unit assumptions were used for the projected Water Demand Estimates (EIR Table 3.15-1) or the analyses for wastewater, solid waste generation, etc.? Calculations for these utilities are based on different use factors for different unit types, but the data tables do not reference the unit counts assumed and because of the lack of information in the Project Description, there is no clarity or validity to the information.

B11-10

- EIR at 77 states "While the project buildout projection reflects a reasonably foreseeable maximum amount of development for the Planning Area through 2040, *it is not intended as a development prediction or cap that would restrict development in any of the five subareas. Rather, the Proposed Plan allows for flexibility in the quantity and profile of future development within and between subareas, as long as it conforms to the policies and standards, including permitted densities and FARs, in the Specific Plan*" (emphasis added). This statement is problematic in that neither the Specific Plan nor the EIR identify what the maximum development potential for the Specific Plan would be at the permitted densities and FARs of each land use district. Therefore it is impossible to know the actual maximum buildout envisioned by the Specific Plan. Also, what five subareas does this this statement refer to?

B11-11

- Since the overall development capacity permitted by the Specific Plan is unclear, the subsequent analyses that rely on the unit count presented in the Project Description are therefore inaccurate. The unit counts identified in the Specific Plan and EIR are inconsistent and call into question analyses completed for the many of the impact areas, including the transportation section (VMT assessment), air quality and greenhouse gas emissions calculations, noise analysis, wildfire/emergency evacuation analysis, biological resources assessment, and utility needs assessment, among others. The failure to accurately describe the overall development capacity of the Project is a serious and pervasive deficiency, as it renders faulty the EIR's environmental impact analyses as well

B11-12

as the discussion of potential mitigation measures and alternatives to minimize those impacts. As a result of the understatement of development potential, the EIR understates the true impacts of the Project.

- CEQA requires that the EIR analyze all elements of the project. But the EIR's Project Description omits key elements, preventing the reader from fully understanding the full scope of the Project and resulting in an EIR that fails to accurately assesses the impacts of the Project. These deficiencies include the following:

    - The Specific Plan will be adopted along with amendments to the Sonoma County General Plan and Zoning Code, however details of the amendments and proposed zoning are not identified in the Project Description. B11-13

    - A portion of the Core Campus west of Arnold Drive is part of the Sonoma State Home Historic District and includes two individually contributing historic resources—the Sonoma House and the Main Building, which is a National Historic Landmark. The Project Description identifies the total square footage of existing building square footage that will be retained for adaptive reuse (EIR at Table 2.5-3), but does not identify where the buildings are. Which buildings will remain and which buildings will be demolished? B11-14

    - What has been assumed for duration of site work, building demolition, and construction of new buildings as well as reuse of existing facilities? What is the phasing plan for the buildout of the Project? The Specific Plan provides only one concrete policy for phasing (Policy 4-3, which requires completion of at least 10,000 square feet of retail businesses and at least 200 housing units west of Arnold Drive before beginning construction of any housing east of Arnold Drive). But given that buildout will occur over a nearly 20 year period, phasing is critical and can ensure additional future construction occurs only if it will not result in additional significant environmental impacts. B11-15

    - EIR at 59 notes "The site will have a system of distributed energy resources (DERs) that will generate electricity on-site, which could include solar, wind, geothermal, and methane gas co-generation, a process that captures and burns the potent methane gases that are emitted from solid waste, such as from landfills, wastewater treatment plants, dairies, and other facilities." There is no land use district in the Specific Plan that would allow a methane gas co-generation facility at SDC, so it is unclear where such a facility could be located. The Specific Plan and EIR contain a "Utilities" land use classification, but a gas co-generation facility is not identified in this category and there are no areas on EIR Figure 2.4-1 (Proposed Land Uses) that are designated "Utilities". Where would this facility be located? Where are the impacts of a new methane co-generation facility analyzed? They do not appear to be addressed in any other sections of the EIR. Likewise, the Project Description and Utilities classifications omit geothermal, even though the SDC property has geothermal wells, which are not identified in the Specific Plan or EIR. B11-16 B11-17

- There are existing uses outside of the Core Campus (in the agricultural area between the Core Campus and Hwy 12 and the current recreational uses on the west side of the SDC). Were they included in the baseline/existing conditions? What assumptions have been made regarding their continued operation and/or expansion of these uses? B11-18

- The EIR repeatedly identifies the Core Campus as the focus of future development, but future uses and any improvements outside the core campus must be identified and analyzed as well – especially as they relate to impacts on sensitive resources. Since the General Plan amendment(s) and proposed rezoning(s) for the SDC site in its entirety is unknown, the permitted uses in areas outside the Core Campus is unclear. What land use changes are contemplated for areas outside of the Core Campus? What zoning, specific plan, and general plan land use designations will apply to SDC property outside of the Core Campus? B11-19

- The EIR does not fully describe the intensity and distribution of future residential and non-residential development. EIR Figure 2.4-1 identifies the location of future land use designations, but the Project Description should provide a summary table that identifies proposed land use districts, amount of land (acreage) with that designation, and the maximum development potential in that district (non-residential square foot and residential units). Without this information, it is not clear how residential units and non-residential square footage will be distributed throughout the site and what impacts that distribution might have. How many acres are identified in each land use designation? What is the maximum development potential for each land use category based on the acreage and allowed density (for both residential units and non-residential square footage)? How do the units and square footage overlay on the land use map provide a sense of development distribution throughout the Core Campus? How much development is allowed in more sensitive areas east of Sonoma Creek? How can the public and decisionmakers understand the actual impacts and correctly identify different areas and subareas if the boundaries are to be determined? B11-20

- EIR at 51 states “Appendix A of the Specific Plan contains a Standard Conditions of Approval document that shall consist of conditions required to be implemented upon development of the Proposed Plan to mitigate potential environmental impacts. In addition, the Proposed Plan includes amendments to the County’s General Plan and Zoning Code.” Will all of the policies and standard conditions of approval that comprise mitigation to project impacts be adopted in a reporting program of some sort? How will the policies and standard conditions be enacted and implemented as effectively and with as much accountability as mitigation measures? B11-21

- EIR at 82 states that “the Proposed Plan would require the following approvals and discretionary and ministerial actions by the County of Sonoma: Adoption of B11-22

ordinances, guidelines, programs, and other mechanisms for implementation of the Proposed Plan." This is a very vague description of a long list of future actions that will need to be taken to ensure the successful implementation of the Specific Plan (and the policies/programs that are serving as mitigation for project impacts). CEQA Guidelines Section 15124(d) requires that the Project Description contain a "list of permits and other approvals required to implement the project," so this section should be more detailed and clear. What specific ordinances, programs, and other implementation mechanisms are proposed for adoption? What amendments to the Zoning Code and/or General Plan are contemplated with the adoption of the Specific Plan? What other County policy documents might be impacted/amended as a result of the Specific Plan?

BIOLOGICAL RESOURCES

B11-23

- The comments presented below refer to and build on comments prepared by Prunuske Chatham, Inc. ("PCI Comments") and Pathways for Wildlife ("Pathways Comments") on the EIR and Specific Plan, attached below as Attachments B and C to Sonoma Land Trust's September 26, 2022 letter to Brian Oh. The County must respond to these comments *and* the comments in Attachments B and C.

- The EIR fails to adequately analyze or mitigate the Project's impacts on biological resources. The EIR's analysis both understates the severity of the potential harm to biological resources within and adjacent to the proposed Project site and neglects to identify sufficient mitigation to minimize these impacts. What little analysis is present is not supported by data or substantial evidence. Given that analysis and mitigation of such impacts are at the heart of CEQA, the EIR must remedy these deficiencies to comply with CEQA.

- The "programmatic" nature of the proposed EIR is no excuse for a lack of detailed analysis. The EIR must provide an in-depth analysis of the Project, looking at effects as specifically and comprehensively as possible. Because it looks at the big picture, a program level EIR must provide *more* exhaustive consideration of effects and alternatives than an EIR for an individual action, and must consider cumulative impacts that might be slighted by a case-by-case analysis.

- Further, it is only at this early stage of the redevelopment of SDC that the County can design wide-ranging measures to mitigate County-wide environmental impacts. A "program" or "first tier" EIR is *not* a device to be used for deferring the analysis of significant environmental impacts. It is instead an opportunity to analyze impacts common to a series of smaller projects, in order to avoid repetitious analyses. Thus, it is particularly important that the EIR for the Project provide detailed and comprehensive analysis of the existing conditions and the full range of development proposed by the Specific Plan, rather than deferring such analysis to when specific development is proposed at a later time. Meaningful analysis of impacts now would help inform the design and details of the Specific Plan to best minimize environmental impacts.

B11-24

- The EIR fails to address Executive Order N-82-20, which establishes the state's goal to conserve at least 30 percent of California's land and coastal waters by 2030 with a particular focus on protecting and enhancing wildlife corridors.

    - The Specific Plan proposes to permanently conserve approximately 755 acres of contiguous open space outside the Core Campus. How does this open space preservation fit within the State's goals under Executive Order N-82-20?

    - The Sonoma Valley Wildlife Corridor encompasses over 10,000 acres of land stretching from Sonoma Mountain east across Sonoma Valley to the Mayacamas Mountains. It is a key linkage in a larger corridor from coastal Marin County to eastern Napa County. SDC lies at the heart of the Corridor. Since the 1990s, the Sonoma Valley Wildlife Corridor has been recognized as an area of significant wildlife presence and movement. The critical linkages and wildlife use have been well established by the scientific community.[2] Maintaining and enhancing the permeability of the Corridor and the ability of wildlife to use and disperse through SDC is therefore critical to meeting the Project's sustainability and open space conservation guiding principles and to ensure the viability and efficacy of other conserved lands in the Corridor throughout Sonoma County. *E.g.*, EIR at 65 (Guiding Principle 3: "Integrate Development with Open Space Conservation. Promote a sustainable, climate-resilient community surrounded by preserved open space and parkland that protects natural resources, fosters environmental stewardship, and *maintains and enhances the permeability of the Sonoma Valley Wildlife Corridor* for safe wildlife movement throughout the site. Support responsible use of open space as a recreation resource for the community.") (emphasis added). Given its recognized role in wildlife migration, how does the Specific Plan ensure protection and enhancement of the Sonoma Valley Wildlife Corridor pursuant to the Specific Plan's guiding principles and Executive Order N-82-20?

    - How would the Wildlife Corridor contribute to or impact the overall effect of land conservation efforts under Executive Order N-82-20?

    - Why does the EIR not address Executive Order N-82-20 or analyze the Project's consistency with a mandate for conservation of biodiversity resources on state-owned property?

    - Is the Specific Plan consistent with Executive Order N-82-20?

    - Will the Specific Plan impact the State's ability to meaningfully conserve at least 30 percent of California's land and coastal waters by 2030 in Sonoma County?

[2] Bay Area Open Space Council. 2011. The Conservation Lands Network: San Francisco Bay Area Upland Habitat Goals Project Report. Berkeley, CA; Penrod et al. 2013. Critical Linkages: Bay Area & Beyond. Produced by Science & Collaboration for Connected Wildlands, Fair Oaks, CA in colloboration with the Bay Area Open Space Council's Conservation Lands Network.
Merenlender et al. 2010. Mayacamas Connectivity Report.

- How will the Specific Plan impact the effectiveness of conservation efforts under Executive Order N-82-20?

- There are significant information gaps regarding wildlife use at SDC that must be resolved to understand the scope of impacts from the proposed redevelopment. Obtaining this information will be critical to informing protection areas, buffer sizes, levels and location of development, and appropriate best management practices or improvements to avoid or minimize Project impacts. *See generally* PCI Comments; Pathways Comments. B11-25

    - For example, the EIR indicates that no site survey was completed to determine the presence or location of special-status or other species. The EIR cannot determine the impacts of development under the Specific Plan—the locations and footprints of which are known—until such survey is completed. *E.g.*, PCI Comments at 13. The EIR should also make use of existing data sources, such as the species observation list previously shared by the Sonoma Ecology Center, which the EIR inexplicably ignores.

    - Similarly, the EIR does not include data regarding use of the Sonoma Valley Wildlife Corridor by special-status species or other wildlife. Pathways Comments at 10-11.The study proposal that Pathways for Wildlife prepared for Sonoma Land Trust, which was included in Sonoma Land Trust's comments on the Notice of Preparation, is representative of the vetted and scientifically proven methodology for conducting wildlife connectivity studies. This type of study is necessary to be able to determine and analyze the Project's impacts to Wildlife Corridor. The Sonoma Land Trust had offered to partner with the County and State to conduct this study so that this information would be available and could be used as part of the EIR, but their offer was not accepted prior to release of these documents.

- The County must first identify the information gaps that need to be filled in order to determine the impacts of the Project. For example, a detailed study is needed to establish a baseline of wildlife use on SDC prior to redevelopment. What other information gaps need to be filled in order to determine the impacts of the Project? B11-26

- How will the phased build-out of the Project induce or modify impacts to biological resources?

- Would the impacts to biological resources be different if the Project were phased differently?

- How would the impacts to biological resources vary if only a portion of the Project were built out?

- How will the County determine whether redevelopment of SDC increases interference with wildlife movement or use within the property or across the larger corridor? What

metrics will the County use to gauge impacts to wildlife movement? Which species will be analyzed? What specific performance standards must development meet to ensure that the Wildlife Corridor remains permeable and viable as development is phased in?

- How will the County ensure that SDC redevelopment does not result in a reduction of wildlife species diversity?

- How will the County ensure that SDC redevelopment does not result in a reduction of wildlife species abundance?

- The EIR acknowledges that wildlife and their habitat may be considered sensitive to noise and other operational impacts. *E.g.*, EIR at 337-338. The Specific Plan proposes more than 1,000 units of residential development in addition to commercial and visitor-serving development. By contrast, in recent years, the human activity at SDC has been considerably reduced. Even before facility closure, the site only supported approximately 415 clients living there, 470,000 sf of client housing, 49,000 sf staff housing, and 643,400 sf offices, shops, etc. California Department of Developmental Services. (2012). Sonoma Developmental Center Building Use Survey. Department of Developmental Services. October 2012.

    - Do the impacts identified by the EIR scale in a linear fashion based on the amount of development, the number of residents, and the extent of human activity at operation?

    - How did or will the County quantify the change in magnitude of operational impacts by virtue of the significant increase in population and operational activities under the Specific Plan as compared to a recent baseline?

B11-27

- The EIR fails to identify a consistent baseline against which the Project is evaluated. Selection of an appropriate baseline is particularly important in this case because the SDC property has been gradually vacated since the 1960s, as facility operations wound down and the facility ultimately closed in 2018.[3] In the meantime, development of the surrounding area has proceeded with reduced assumptions about the level of human activity at SDC—for example, evacuation capacity of roadways, levels of sewer service, water use, and recreation. Further, SDC's historic operations are not a reliable benchmark for the intensity of the proposed Project, as the former institutional use did not have the same level of impacts as proposed residential and commercial development. SDC residents did not drive cars and the employees operated in shifts, reducing traffic and

B11-28

[3] Sonoma Developmental Center Existing Conditions Assessment, Chapter 6 at 200 (noting that growth "reversed in the 1960s owing to a national trend towards deinstitutionalization"), available at https://transformsdc.files.wordpress.com/2020/01/1-chapter6.pdf; Plan for Closure of the Sonoma Developmental Center, California Health and Human Services Agency, October 1, 2015, at 16 (by May of 2015, SDC served only 405 residents); Gov. Code § 14670.10.5(a)(4) (SDC ceased all residential operations in 2018).

other impacts. Estimates of this Project's impacts should therefore be made based on comparisons to recent, rather than historic, site occupation and use.

- With respect to biological resources, the EIR fails to adequately describe the baseline condition of the Sonoma Valley Wildlife Corridor. B11-29

    - The EIR provides no data regarding actual use of the Wildlife Corridor by individual species.

    - The EIR does not analyze whether or how the gradual reduction in human activity at SDC since the 1960s has changed the operational characteristics of the Wildlife Corridor.

    - The EIR does not provide data or analysis to show whether or how increasing human activity in the Core Campus in excess of historic levels will impact wildlife movements within and through the Wildlife Corridor.

- The EIR acknowledges that wildlife and their habitats may be sensitive to noise impacts. EIR at 337-338. However, the EIR fails to analyze or mitigate for noise impacts to these specific sensitive receptors. B11-30

    - The EIR relies on quantitative thresholds from the CEQA guidelines, but it fails to analyze or explain whether these thresholds are applicable to wildlife or habitat receptors. EIR at 345-346.

    - The EIR's vibration threshold only contains standards for human receivers and structures. EIR at 346. It is silent as to what constitutes a significant impact to wildlife or habitat.

    - The Specific Plan policies that "address noise" ignore wildlife and habitat receptors.

        - Policy HAZ-1 defines "noise-sensitive receiver" as "residences, schools, day care facilities, hospitals, nursing homes, long term medical or mental care facilities, places or worship, libraries and museums, transient lodging, and office building interiors." EIR at 347.

        - Policy HAZ-1 does not impose standards for nighttime construction noise that are designed to reduce impacts to wildlife or habitat. EIR at 347-348.

        - Policy HAZ-2 establishes quantitative vibration standards only with respect to humans and structures. Policy HAZ-2 does not establish quantitative vibration standards designed to reduce impacts to wildlife or habitat. EIR at 348-349.

- Notwithstanding that the Specific Plan defines "noise-sensitive receiver" to exclude wildlife or habitat, the EIR concludes that construction noise impacts to "noise-sensitive receivers, such as Special Status species and their habitat … would be less than significant" because, inter alia, nighttime construction noise would be subject to the Sonoma County General Plan 2020 noise standards. EIR at 349-350. This conclusion is unsupported and is contradicted by the Specific Plan. Per Policy HAZ-1, nighttime construction noise is only subject to the Sonoma County General Plan 2020 Table NE-2 standards "If construction activities occur … within 0.5 miles of a noise-sensitive receiver (residences, schools, day care facilities, hospitals, nursing homes, long term medical or mental care facilities, places or worship, libraries and museums, transient lodging, and office building interiors)." EIR at 347.

- Project-generated noise is a particular concern because noise has been shown to modify the behavior of species that are present at or are similar to those present at the SDC site. Noise can affect the spatial distribution of wildlife and can cause changes in predation and other critical behaviors. If project-generated noise were to alter the dispersal of wildlife through the Sonoma Valley Wildlife Corridor or otherwise substantially affect the behavior of special-status species or species of concern, those impacts would constitute significant impacts under the EIR's chosen significance thresholds. *See* Biological Resources Criterion 1 (a significant impact is one that causes a "substantial adverse effect … on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service"); *see also* Biological Resources Criterion 4 (a significant impact is one that affects movement of wildlife through a wildlife corridor). The EIR must therefore analyze a range of noise-related impacts and other operational impacts in detail to ensure that those impacts will not constitute unmitigated significant impacts.

    - Mountain lions in particular are known to be sensitive to noise. Mountain lions have been documented using the Sonoma Valley Wildlife Corridor through the SDC property. Mountain lions are also a species of concern, facing significant threats in the Bay Area and around the state. The EIR does not even acknowledge the presence of mountain lions at the SDC site, let alone analyze and mitigate impacts to mountain lions. Because mountain lions are designated as a "Specially Protected Mammal" by the California Department of Fish and Wildlife, impacts to mountain lions could constitute significant project impacts under Biological Resources Criterion 1. The EIR must study and mitigate potentially significant impacts to mountain lions.

    - Similar considerations apply to the project's light impacts. The EIR must document wildlife dispersal through the SDC site and compare those data to the Project's various development plans in order to analyze the Project's construction and operational light impacts to biological resources.

- The EIR also fails to disclose or analyze the projected impacts of the proposed Highway 12 connector road. Two options for connector roads are shown in Specific Plan Figure

3.1-1, and three types of facilities (a direct connection to Highway 12, an emergency access connection, and a pedestrian/bike connection) are all alluded to in accompanying text. These connections would have foreseeable direct, indirect, and cumulative impacts on the Project's biological resources, including wetlands, drainages, and the Sonoma Valley Wildlife Corridor. How does the EIR propose to address and mitigate the impacts of these connectors?

B11-31

- Given intensity of proposed development and SDC's proximity to major regional parks, including Sonoma Valley Regional Park to the northeast and Jack London State Historic Park to the west, it is foreseeable that the Project's biological and other impacts will extend to and impact resources in those parks. The EIR must consider the impacts of the Project on biological resources within existing parks, including but not limited to impacts to biological resources from the increased water demand that would result from the construction, occupation, and operation of more than 1,000 residential units, a hotel, and other facilities.

B11-32

- The EIR fails as an informational document because it does not analyze the Project's significant *unmitigated* environmental effects *before* identifying mitigation measures and analyzing their effectiveness. The County cannot condense these two steps into one or disguise mitigation actions as project features. Even if mitigation measures can be implemented as features of the Project, the EIR must evaluate the Project's true impacts without those measures in place before it can propose, analyze, and adopt needed mitigation. The EIR here skips this crucial step and fails to connect the dots between the Project's impacts and selected "mitigation." As a result, decisionmakers and the public do not know what the Project's unmitigated impacts would be or how the cited policies and conditions would purport to mitigate those impacts.

B11-33

    - The EIR fails to describe fully the environmental setting of the Project. An EIR's description of a project's environmental setting crucially provides the baseline physical conditions by which a Lead Agency determines whether an impact is significant. Here, the EIR fails to accurately portray the site's underlying environmental conditions and therefore undercuts the legitimacy of the environmental impact analysis.

        - For example, the EIR judges impacts to biological resources primarily by estimating impacts to special-status plants and wildlife. EIR 221-251. But the EIR does not include any observational data regarding the presence or absence of these species. *Id.*

            - The EIR relies exclusively on the California Natural Diversity Database to "identify special-status species *with the potential* to occur in the SDC area." EIR at 221 (emphasis added). By definition, the species identified in the EIR *may not occur* in the SDC area. Likewise, as the EIR admits, the EIR's identification of special-status species may be under-inclusive. *Id.* ("Lack of information in the CNDDB and other reports … does not imply

that the species does not occur… This lack of information may reflect a lack of Project or reporting more than absence of special-status species. Thus, there may be additional occurrences of special-status species within this area that have not yet been surveyed and/or mapped.").

- Surveys for sensitive plant and animal species are entirely absent.

- Instead, the EIR improperly defers critical studies and surveys until after project approval.

- The EIR cannot identify what the impacts to specific special-status species will be or how significant those impacts will be, because the EIR cannot state with any degree of certainty whether or to what degree those species are present in the areas planned for development.

- The EIR cannot remedy its lack of analysis by punting to "[f]uture project specific biological surveys [that] will be necessary to confirm presence or absence of sensitive resources on future development sites." EIR at 237. The Specific Plan is incredibly detailed. It shows specifically where different types of development will be located within the Core Campus and describes in detail what each type of development will look like. *E.g.,* EIR at 69-80. The Specific Plan breaks the Core Campus into development districts (EIR at 74) and identifies building square footage for commercial, hotel, office, public, institutional, and utility use (EIR at 80). In short, the County already knows what types of development could occur under the Specific Plan and substantially where those different types of development would occur. The EIR cannot avoid analyzing the foreseeable impacts of that development simply because more granular analysis may later be required.

  - The EIR similarly indicates that the Project may impact wetlands and other waters. EIR at 235. However, the EIR admits that "formal wetland delineations have not been performed for the SDC and it is anticipated that additional wetlands will be mapped during future site assessments." *Id.* The EIR cannot analyze or explain what the impacts to wetlands will be, how significant those impacts will be, or even if development will be possible in the areas planned for development if the EIR does not know where wetlands are located on the SDC site.

- The EIR improperly defers analysis of Project impacts until later stages of development and fails to explain how it reaches its conclusion that impacts will be less than significant.

B11-34

- The EIR's impact methodology violates CEQA because it does not actually disclose or analyze any particular impacts. It simply states without analysis, explanation, or substantial evidence that certain unspecified impacts may occur. Decisionmakers and the public thus lack sufficient information about the nature and scope of potential impacts to evaluate those impacts for themselves.

    - For example, the EIR states that "[t]wo specific projects could have the potential to impact special status species and sensitive natural communities. The proposed Highway 12 connector project would follow Sonoma Creek in a southerly direction, and then proceed east adjacent to the open space area outside the SDC core area." EIR at 241. The EIR concludes that "[w]ith implementation of Station Conditions of Approval BIO-1 through BIO-13, potential impacts would be less than significant." *Id.* But at no point does the EIR disclose what potential impacts the Highway 12 connector project could have on special status species or sensitive natural communities. Decisionmakers and the public have no way of knowing whether the connector threatens habitat loss, increased mortality from vehicle strikes, or something altogether different. And without knowing what the impact is, decisionmakers cannot know what it is that Conditions of Approval BIO-1 through BIO-13 are supposed to be mitigating. Equally significant, the EIR does not disclose what the second of the "[t]wo specific projects" that threaten impacts is. Decisionmakers and the public are left to guess.

        - What specifically are the anticipated impacts of the Highway 12 connector?

        - How will Conditions of Approval BIO-1 through BIO-13 mitigate those impacts?

        - What is the second specific project that could impact special status species and sensitive natural communities?

        - What specifically are the anticipated impacts of that second project?

        - How will Conditions of Approval BIO-1 through BIO-13 mitigate those impacts?

    - The EIR also states that "stream restoration and bridge maintenance projects are expected within aquatic features, [so]

B11-35

direct impacts would occur." EIR at 252. But the EIR fails to elaborate about what those "direct impacts" might include.

  - What specific impacts are anticipated from stream restoration and bridge maintenance projects?

  - How frequently are such projects anticipated to occur and at what locations?

- The EIR states that the Project would not have a substantial adverse effect on state or federally protected wetlands in part because no new ground-disturbing activities would occur during Project operation. But the EIR does not discuss or analyze potential operational impacts to wetlands from recreation or other non-construction activities during Project operation. EIR at 254.

  - The Specific Plan proposes using known wetlands for recreational purposes. *E.g.,* Specific Plan at 2-2 ("Designating an area at Suttonfield Lake for off-leash dogs and water recreation…"). What are the specific anticipated impacts from recreational uses and off-leash dog use at Suttonfield Lake?

B11-36

- The EIR states that "[i]mplementation of the Proposed Plan would have a significant impact on migratory species, corridors, or nursery sites if the siting, construction, or operation of development allowed under the Proposed Plan would impede on or remove migratory corridors or nursery sites." EIR at 255. The EIR then concludes that the Project would not impede migratory corridors or nursery sites. *Id.* But the EIR never defines what level of imposition rises to the level of a significant impact. *Id.* The EIR states that "recreational trails, in or near habitats that include wildlife corridors … are considered to be uses consistent with open space management and are not considered substantial impacts to the wildlife corridor functionality of the site." *Id.* But the EIR's conclusory statements provide no data or analysis about the impact of recreational trails or other uses on wildlife behavior, especially if over 2000 new residents and 900 employees significantly expand public use and recreation. The EIR's conclusions are not supported by substantial evidence.

- The EIR next concludes that the "Proposed plan does not conflict with local ordinances, therefore, impacts related to conflict with local policies or ordinances would be less than significant." EIR at 257. However, the EIR does not identify specific local policies or ordinances against which the Project was analyzed. It simply states

that the "[f]uture projects under the Proposed Plan would conform with local policies and ordinances including the Sonoma County Tree Protection Ordinance and the Sonoma County General Plan." *Id.* The EIR's so-called "analysis" fails to mention other local rules and policies that the EIR identified as applicable to the Project, including the County Heritage or Landmark Tree Ordinance or the Valley Oak Habitat Combining District (EIR at 210). Nor does the Biological Resources section discuss or analyze the Project's consistency with Measure K, through which Sonoma County residents renewed protections for community separators and protected tens of thousands of acres of open space and agricultural land from subdivision and sprawl. EIR at 207-212. Without substantial evidence of consistency—or at least a more complete accounting of applicable policies and regulations—the EIR's consistency determination is just a conclusory statement. *See* EIR at 257. Decisionmakers and the public cannot independently verify the Project's consistency with local rules and regulations, and the EIR fails as an informational document.

- The EIR does not explain why its selected significance criteria are relevant or appropriate. B11-37

    - The EIR identifies six significance criteria for impacts to biological resources, but fails to explain why these criteria were selected. EIR at 236. The EIR neither discloses the origin of these criteria nor provides data or analysis to support their use as significance thresholds under CEQA. Due to this lack of evidence, decisionmakers and the public cannot meaningfully gauge whether the EIR's significance criteria are adequate markers of the Project's environmental impacts.

    - How did the County select its chosen significance criteria?

    - Why were other significance criteria not considered?

- The EIR's approach to mitigation presents two issues. First, the EIR evades responsibility for developing, enforcing, and monitoring mitigation measures by incorporating its chosen mitigation directly into the Specific Plan. The EIR cannot disclose the Project's "unmitigated" impacts because, under the EIR's approach, no impacts have gone unmitigated. Second, the purported mitigation that County incorporates in the Specific Plan punts to uncertain future actions and thus defers the analysis and development of any meaningful mitigation to a later date. By incorporating deferred mitigation into the Specific Plan, the EIR cannot meaningfully analyze what mitigation may be appropriate or how effective that mitigation may be. In so doing, the EIR denies decisionmakers and the public the B11-38

opportunity to fully understand the Project's impacts and improperly delegates the County's legal responsibility to mitigate those impacts.

- The EIR relies on Specific Plan policies and Conditions of Approval to avoid, reduce, or mitigate the Project's potentially significant impacts. The EIR must therefore treat these policies and conditions as formal mitigation measures. It must analyze fully the effectiveness of the mitigation against specific identified impacts and must include the mitigation measures in a Mitigation Monitoring and Reporting Program.

    - The EIR's conclusions as to the effectiveness of mitigating policies and conditions are not supported by analysis or substantial evidence. They are simply a means by which the EIR avoids identifying or analyzing the Project's unmitigated impacts, as required by CEQA. This approach fails to disclose unmitigated impacts and fails to support the County's chosen mitigation.

        - For example, the EIR concludes that with the implementation of Specific Plan Policies 2-6 through 2-26 and Conditions of Approval BIO-1 through BIO-13, "the impact of future development under the Proposed Plan on species identified as candidate, sensitive, or special-status species would be less than significant." EIR at 242. But the EIR neither identifies specific impacts that the Project will have on specific candidate, sensitive, or special-status species, nor explains how or to what degree the cited policies and conditions would reduce those impacts. EIR at 241-251.

            - What analysis supports the County's conclusion that Specific Plan Policies 2-6 through 2-26 and Conditions of Approval BIO-1 through BIO-13 would reduce impacts to special-status species to less-than-significant levels?

            - How can the County conclude that the cited policies and conditions will reduce impacts if it has not yet identified and analyzed those specific impacts or the impacted species?

            - How does the County anticipate the cited policies and conditions would reduce impacts to special-status species?

        - Similarly, the EIR asserts that "implementation of policies 2-25, 2-27, 2-29, and 2-30 would ensure impacts to riparian

resources [from the proposed highway connector project] would be less than significant." EIR at 252. But again, the EIR fails to identify what specific impacts the connector road would have or indicate how and to what degree the cited policies would mitigate those impacts.

- The EIR further asserts that the "implementation of applicable policies" would render "the operational impact on riparian habitat and other sensitive activities … less than significant." EIR at 252. The EIR asserts that applicable policies would restrict access by humans and domestic animals to specific areas and would reduce the trampling or degradation of riparian habitat. But the EIR is silent about other potential and foreseeable impacts, such as litter, fire risk, noise, lighting, and vibration.

- To the extent the Specific Plan policies and Conditions of Approval cited in the EIR could mitigate for the Project's impacts, that mitigation is impermissibly deferred.

  - For example, Condition of Approval BIO-14 improperly relies on existing regulatory programs and the permitting processes of other agencies to "[a]void, minimize, or mitigate for impacts to aquatic communities." EIR at 252. In so doing, the County delegates its legal responsibility to assess and mitigate Project impacts to "the Army Corps, RWQCB, [or] CDFW." Condition of Approval BIO-14 defers to the issuer of any required permit(s) to design appropriate mitigation and provides no clear benchmark or performance standard(s) that that mitigation must meet. Unless the County is the permitting agency, Condition of Approval BIO-14 does not clearly provide for County oversight of this process. Such delegation of authority to analyze and mitigate environmental impacts is improper.

  - Similarly, Condition of Approval BIO-16 requires the Project Sponsor to develop a habitat mitigation plan subject to approval by the agency or agencies with oversight over any impacted aquatic resource. EIR at 254. That Condition defers to the habitat mitigation plan—and therefore the Project Sponsor(s) and other agencies—to analyze the scope and effect of the impact to aquatic resources and to design appropriate mitigation. Here, too, the County improperly delegates its legal responsibility to future developers and regulators and fails to provide concrete performance standards for resulting mitigation.

B11-39

- Analysis of impacts and mitigation cannot be deferred to a later date but must be performed prior to project approval. Nor may a lead agency satisfy CEQA by approving a project subject to conditions requiring the applicant to prepare future studies and mitigation measures, because in so doing the agency would be improperly delegating its legal responsibility to assess a project's environmental impact. Instead, the lead agency itself must prepare or contract for the preparation of impact assessments that reflect the agency's independent judgement. Where the finalization of mitigation is deferred, the EIR must explain why it cannot be finalized now and must establish performance standards for such mitigation that will ensure the impact will be reduced to a less-than-significant level. How does the EIR here meet these requirements?

    - The EIR's conclusions that impacts to biological resources are insignificant is unsupported by either meaningful analysis or substantial evidence.

- Even if the EIR could mitigate impacts through Specific Plan policies and conditions of approval, the policies and conditions identified in the EIR are not sufficient to avoid potentially significant impacts.

    - The EIR failed to conduct field studies or survey plants and wildlife at the SDC site. EIR at 221, 236. The EIR therefore admits that there may be special-status plants and wildlife present on site that are not accounted for in the EIR's list of special-status species. EIR at 221. However, the EIR concludes that "[i]mplementation of the Proposed Plan would not have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species" because future development will comply with standard conditions of approval that target special-status species. EIR at 241-251 (BIO-2 [special-status bats], BIO-3 [American badger], BIO-4 [nesting raptors], BIO-5 [burrowing owl], BIO-6 [northern spotted owl], BIO-7 [tricolored blackbird], BIO-8 [special status nesting birds], BIO-9 [western pond turtle], BIO-10 [foothill yellow-legged frog, red-bellied newt, and California giant salamander], BIO-11 [California red-legged frog], BIO-12 [California freshwater shrimp and listed salmonids], BIO-13 [special-status plants]. Even if these conditions of approval were sufficient to address the named special-status species, they would not address impacts to candidate, sensitive, or special-status mammals, reptiles, or amphibians that may be present in the SDC area but which may not be captured in the EIR's list of special-status species. *See* EIR at 221. The County simply cannot know, and EIR cannot analyze, whether and to what degree the Project may impact as-yet unidentified special-status species until the County conducts appropriate surveys.

B11-40

- The EIR's analysis and mitigating policies and conditions focus only on construction impacts. *See, e.g.,* Conditions of Approval BIO-1 through BIO-14. But operational impacts could be equally if not more significant. B11-41

    - For example, significantly increased recreational uses from thousands of new residents and workers near the Wildlife Corridor or Suttonfield Lake could have potentially significant impacts to wildlife movement, wetlands, or special-status species by locating hikers and pets near critical habitat. The EIR generally assumes these impacts are less than significant because recreational uses are broadly consistent with open space management principles. But consistency with open space management principles does not necessarily mean that these uses would not negatively and significantly impact habitat or wildlife behavior. Increased visitor use along trails across SDC may alter behaviors and cause some species to avoid those areas.

    - Increased vehicular traffic that results from the development would also likely increase human-wildlife interactions. Wildlife are already documented to traverse Highway 12. How will development under the Specific Plan contribute to and mitigate the risk of vehicular collusions? How will increased traffic change wildlife behavior in the Sonoma Valley Wildlife Corridor and throughout the SDC site? The EIR cannot presently answer these questions because it has not analyzed the operational impacts of the Project on wildlife.

    - The surveys and related work discussed in Conditions of Approval BIO-1 through BIO-14 only apply when development is occurring. They do not continue to apply during Project operation and thus cannot mitigate operational impacts that are driven simply by the presence of humans and human activity. The EIR must analyze and mitigate operational impacts in addition to construction impacts.

- The EIR relies on policies and conditions that are vague and unenforceable. The EIR fails to show how these vague and unenforceable policies and conditions could definitively avoid or mitigate potential significant impacts to biological resources. B11-42

    - Specific Plan Policy 2-7: Prohibit lights within the wildlife corridor and along the creek corridor.

        - This policy prohibits lights from being physically located within the wildlife corridor and along the creek corridor, but it does not clearly prohibit light intrusion into the wildlife corridor or the creek corridor from lights located outside the corridors. Without prohibiting light intrusion, the EIR cannot show that project

lighting will not impact biological resources in the wildlife and creek corridors.

- Specific Plan Policy 2-8: Maintain wildlife crossing structures by periodically checking for and clearing debris, vegetation overgrowth, and other blockages from culvert and bridge crossing structures; within the Core Campus, the Project Sponsor should develop and execute a maintenance program in collaboration with the owner and operator of the preserved parkland and open space.

    - This policy is vague and unenforceable. It provides only that the Project Sponsor "*should* develop and execute a maintenance program." There is no guarantee that a maintenance program will be developed or executed.

- Specific Plan Policy 2-10: Within the wildlife corridor, limit mowing and the removal of dead plant material to the absolute minimum required for fire safety. If possible, mowing should be conducted outside the nesting bird season, or nesting bird surveys should be constructed within 14 days of mowing.

    - This policy is vague and unenforceable. It states that mowing *should be* conducted outside the nesting bird season and that nesting bird surveys *should* be "*constructed*" within 14 days of mowing only *if possible*. As an initial matter, it is not clear what it means for a nesting bird survey to be "constructed." Surveys must be *completed* within an appropriate time of any mowing activity in order to adequately inform whether and how that mowing activity is conducted. Further, this policy provides no indication what entity will be responsible for determining whether nesting bird surveys are possible or whether it is possible to mow outside of the nesting season.

        - Who does the County envision will be responsible for those decisions?

        - What sort of oversight will the County, the Project proponent, the owner, etc. have to ensure this policy is actually complied with?

        - What are the impacts to nesting birds if is it not possible to avoid mowing during the nesting bird season or if it is not possible to conduct timely surveys?

B11-43

- How often does the County anticipate it would not be possible to avoid mowing during the nesting bird season or that it would not be possible to conduct timely surveys?

- What factors would contribute to compliance with this policy not being possible?

- How effective would this mitigation be if it is regularly not possible to avoid mowing during the nesting bird season?

- How will the County enforce compliance?

- Specific Plan Policy 2-15: Collaborate with local wildlife protection groups to create and distribute educational information and regulations for residents and employees to guide safe interactions with wildlife onsite. Materials should be accessible to all ages and abilities and could include posted signs, disclosures, fliers, or informational sessions, among other things.

B11-44

  - This policy is vague and unenforceable. Materials *must* be accessible to all ages and abilities (not should).

  - How will the County gauge compliance with this policy?

  - How will the County enforce compliance with this policy and regulations?

  - Until the County identifies what regulations will be implemented, how can the County know that the regulations implemented will be sufficient to mitigate impacts to wildlife?

- Specific Plan Policy 2-17: Adhere to residential nighttime noise standards to the extent feasible.

  - This policy is vague and unenforceable.

  - It is not clear to which standards this Policy refers. What are the standards with which the County envisions compliance?

  - Who determines whether and when it is feasible to adhere to residential nighttime noise standards?

  - How often does the County anticipate that it will not be feasible to adhere to residential nighttime noise standards?

- Under what circumstances does the County anticipate that it would not be feasible to adhere to residential nighttime noise standards?

- What are the activities for which the County anticipates that it may not be feasible to adhere to residential nighttime noise standards?

- What additional mitigation would be required if it is not feasible to adhere to residential nighttime noise standards? Or if no further mitigation would be required, the impact would be significant and must be identified and analyzed in the EIR. What would be the impacts if the mitigation is infeasible?

▪ Specific Plan Policy 2-20: Require that new development preserve existing trees to the fullest extent feasible. Locate new construction and public realm improvements around existing landscaping features.

B11-44

- This policy is vague and unenforceable.

- Who determines whether and when it is feasible to preserve existing trees?

- How often does the County anticipate that it will not be feasible to preserve existing trees?

- Under what circumstances does the County anticipate that it would not be feasible to preserve existing trees?

- What are the types of development for which the County anticipates that it may not be feasible to preserve existing trees?

- What additional mitigation would be required if it is not feasible to preserve existing trees? Or if no further mitigation would be required, the impact would be significant and must be identified and analyzed in the EIR. What would be the impacts if the mitigation is infeasible?

▪ Specific Plan Policy 2-21: Preserve and enhance the wetlands east of the core campus as a fire break, groundwater recharge, and habitat area.

B11-45

- This policy is vague and unenforceable.

- This policy is not valid mitigation because it lacks clearly defined standards and is not specific enough to effectively implement or enforce. Who will determine whether wetlands are sufficiently

"preserved" or "enhanced"? On what basis will those determinations be made?

- Specific Plan Policy 2-22: Leave standing or downed dead trees in place for wildlife habitat whenever they do not present a hazard for fire safety or recreational users, except within the managed landscape buffer.

    - This policy is vague and unenforceable.

    - This policy is not valid mitigation because it lacks clearly defined standards and is not specific enough to effectively implement or enforce.

    - Who determines whether dead trees present a hazard for fire safety or recreational users?

    - What constitutes a sufficient hazard that would authorize removal?

    - How frequently does the County anticipate that dead trees would constitute a hazard and would be removed pursuant to this policy?

    - What additional mitigation would be required if trees are removed?

- Specific Plan Policy 2-25: Include protective buffers of at least 50 feet along Sonoma and Mill creeks, as measured from the top-of-bank and as shown on Figure 2.2-1: Open Space Framework, to protect wildlife habitat and species diversity, facilitate movement of stream flows and ground water recharge, improve water quality, and maintain the integrity and permeability of the Sonoma Valley Wildlife Corridor, and the ability of wildlife to use and disperse through the SDC site. Manage protective buffers so that they support continuous stands of healthy native plant communities.

    - The EIR does not analyze or explain why a 50-foot buffer is appropriate or sufficient to reduce impacts to creeks at SDC. Merely stating that an impact will occur is insufficient; an EIR must also provide information about how adverse the adverse impact will be. Likewise, merely stating that an impact will be mitigated is insufficient; an EIR must explain how the mitigation will avoid or reduce impacts.

    - A 50-foot buffer is not sufficient to reduce impacts to riparian resources. The EIR states that the riparian forest along Sonoma Creek has an average width of 150 to 300 feet—three to six times the width of the proposed buffer. Why is the required buffer so

B11-46

significantly smaller than the riparian resources it is meant to protect?

- What and where is Mill Creek?

- The 2019 Land and Water Protection Proposal (which was signed off on by Regional Parks, California Department of Fish and Wildlife, and Sonoma County Ag + Open Space calls for significantly larger buffers, including a 300-foot buffer along Sonoma Creek, a 300-foot buffer along Asbury, Mill/Hill, and Butler Canyon Creeks (exception for a 100-foot buffer along Mill/Hill Creek within the core campus), and a 100-foot wetland buffer.

    - Why did the EIR depart from this approved proposal?

    - On what basis does the EIR conclude that smaller buffers will protect wildlife?

- Specific Plan Policy 2-26: Prohibit the use of all pesticides, rodenticides, and poisons in materials and procedures used in landscaping, construction, and site maintenance within the Planning Area. This restriction *should* be included in all Declarations of Covenants, Conditions and Restrictions (CC&Rs) to ensure that future homeowners are aware of the requirements (emphasis added).

    - This policy is vague and unenforceable. It does not guarantee that the prohibition on pesticides, rodenticides, and poisons will be included in all CC&Rs.

B11-47

- Specific Plan Policy 2-28: Prior to the commencement of the approval of any specific project in the Proposed Plan area, Project Sponsors shall contract a qualified biologist to conduct studies identifying the presence of special-status species and sensitive habitats at proposed development sites and ensure implementation of appropriate mitigation measures to reduce impacts to sensitive habitat or habitat function to a less than significant level.

    - This policy improperly defers analysis of impacts and mitigation that must be conducted now in this EIR. Analysis of impacts cannot be deferred to a later date but must be performed prior to project approval. Conducting thorough analysis at this stage is the only way decision-makers and the public can have sufficient information about impacts and mitigation to be able to evaluate the impacts of a proposed project for themselves. The needed analysis could then inform the location of various uses and development

within the Sonoma Development Center and allow consideration of alternatives that minimize biological impacts. By deferring analysis of Project impacts and mitigation through implementation of the Specific Plan, the EIR fails to provide sufficient information to the public and decisionmakers and therefore fails as an informational document.

TRANSPORTATION

B11-48

- The comments presented below reference comments prepared by Neal Liddicoat, Griffin Cove Transportation Consulting, PLLC ("GCTC") on the EIR and Specific Plan, attached below as Attachment D to Sonoma Land Trust's September 26, 2022 letter to Brian Oh.

- The Specific Plan and its EIR include goals and objectives for this Project that include a focus on non-motorized modes of transportation within and between the Project area and local communities (e.g., Specific Plan at 3-2 and DEIR at 6. However, the proposed site maps do not demonstrate any such connections. Creating walkable and bikeable connections to Glen Ellen (including Eldridge) will be critical to encouraging non-motorized forms of transportation. How will Project design ensure connections would be implemented to meet the Project's stated goals with respect to sustainability and community character?

- The Project requires some new road development—even if only for emergency access—and will result in substantial increases in traffic volumes. Increased traffic through the property on Arnold Drive will put tremendous pressure on wildlife. Additionally, development of new roadways (e.g., on the east side of SDC) will impair existing ecological connections across the Sonoma Valley Wildlife Corridor. The EIR fails to address the impact of increased traffic on wildlife.

- Wildlife movement within SDC and across the Corridor is already constrained. Currently, there are only two options for wildlife to move east-west across the core campus without having to cross the Arnold Drive roadway: along Sonoma Creek or along Hill Creek. Along the eastern edge of SDC, safe wildlife crossing of Highway 12 is limited to three culverts on Butler Creek and its tributaries. These small crossings under Highway 12 are the most critical locations for wildlife moving east-west across Highway 12 both within SDC and on nearby lands. High levels of wildlife movement have been documented at all three of the culverted crossings. The increased traffic and development of the Project will further constrain wildlifes' east-west movement opportunities, resulting in will have significant impacts on wildlife. How will Project design ensure safe wildlife crossings are retained?

- The Project, including the Specific Plan policies, fail to ensure that new road construction, increased traffic volumes, and traffic speeds on SDC do not increase interference with wildlife movement and use within the property or across the larger corridor or result in increased road mortality. Development and human activities should

be limited near the crossing structures. To help mitigate these impact, the Project design should:

- limit new road, driveway, and trail construction, especially outside the core campus area
- If new roads are constructed or old roads upgraded, incorporate crossing structures to accommodate wildlife
- Install speed bumps and wildlife crossing signage at critical junctures

B11-49

- The EIR's transportation analysis presents a description of the Project, including a specific breakdown of housing unit types, that is inconsistent with both the EIR Project Description and with the description of the project in the Specific Plan document. GCTC at p. 2. The transportation analysis assumes a maximum of 1000 residential units, but assigns a specific breakdown of uses (i.e., 435 single family units, 345 multi-family units, and 220 senior residential units). GCTC Report at 1. Different types of housing typically result in different amounts of trip generation and VMT. Neither the Specific Plan nor the DEIR specify this particular breakdown of uses. On what basis does the EIR base the assumption of different types of residential units?

- The EIR bases its analysis of VMT on a model completed by MTC. EIR at 433. However, the EIR uses the average VMT per capita for the entire nine county Bay Area for comparison of the Project's VMT. This comparison is inappropriate because in rural areas without established mass transit and limited alternative transportation options, the VMT is likely to be higher. The EIR analysis should have used average VMT figures for the County, or preferably, for a sub-area that includes all of the towns in the vicinity of the Project.

- The EIR assumes the existing VMT is 59,654 and the proposed Project would result in a VMT of 60,285 in 2040. DEIR at 183. The EIR provides no explanation regarding how these figures were derived. Given that the SDC campus is largely unoccupied, it appears that the existing VMT figure is artificially inflated, which skews the VMT analysis. The EIR's assumed VMT calculation suggests that the total VMT will only increase by 631. Without accounting for non-residential uses (e.g., office, commercial, etc.) the VMT for the 1,000 residential units would amount to an increase in VMT of 0.631 per dwelling unit, which is not realistic. If we consider the non-residential uses, the incremental increase in project-related VMT is even lower. In addition, the air quality section of the EIR indicates that the Project-related population will increase by 2,500 people for the residential portion of the Project. The Transportation section states that ". . . residential uses in the Plan area with implementation of the Proposed Plan would on average generate 15.2 VMT per capita . . ." EIR at 445. The population increase of 2,500 multiplied by 15.2 VMT per capita would result in 38,000 VMT, which is far greater than the total increase of 631 claimed in the EIR. This calculation only considers residential uses so the actual VMT would be far greater. Therefore, the EIR's VMT calculation as presented is simply not credible. Moreover, the EIR admits that the Specific Plan policies

cannot be guaranteed to reduce significant VMT impacts so the correct conclusion regarding this impact after mitigation is that it would remain significant. EIR at 35.

B11-50

- The EIR does not provide a transportation analysis of the proposed Project without assuming the construction of the new Hwy 12 connector. Since the feasibility of this road has not been determined, what are the LOS and VMT impacts without the new connector?

- The EIR presents a flawed analysis of the Project's consistency with applicable plans.

    - The EIR acknowledges that the Sonoma County General Plan objectives require traffic operation standards of level-of-service ("LOS") C on roadway segments and LOS D at intersections. EIR at 443. The EIR concedes that the Project may exceed the established LOS standards. *Id.* Even though LOS is no longer used for evaluating a project's traffic impacts, when the general plan includes LOS standards, LOS does need to be considered when evaluating a project's consistency with the general plan.

    - Instead of estimating Project-related traffic and evaluating the Project's consistency with County LOS standards, the EIR concludes, absent any evidence, that the Project would be consistent with LOS targets established in the General Plan. EIR at 444. As discussed below, this conclusion appears to be erroneous. GCTC at p. 2.

    - The EIR references a traffic impact analysis prepared for the Project, but fails to include it in the EIR. GCTC at p. 2. Specifically, the EIR references the Focused Traffic Operations Analysis for the SDC Specific Plan (W-Trans, August 2022). EIR at 410, Footnote 118. The focused traffic study revealed that under future conditions with implementation of the SDC Specific Plan, two intersections are projected to operate unacceptably if no modifications to the current roadway configurations are made. GCTC at 2 and 3. The intersection at Arnold Drive/Harney Street would operate unacceptably at LOS F during the p.m. peak hour and the future new intersection on SR 12 at the new SDC Connector Road would have unacceptable LOS E operation on the stop-controlled connector road approach. *Id.* The study also revealed that at buildout of Project, the segment of SR 12 between Arnold Drive and Trinity Road and the segment of Arnold Drive between SDC and Madrone Roadwould would continue to operate below the County's standard at LOS D. GCTC at 3. Although these road segments are also identified as falling short of the County LOS standard without the Project, no mitigation measures were proposed to allow operation at an acceptable LOS. In any event, it is clear that these two roadway segments will fail to meet the County LOS standard upon completion of the Project, thereby violating the General Plan objectives. *Id.* The information necessary to address conformance with General Plan Objective CT-4.1 and CT-4.2 exists, but was not included within the DEIR, which would have allowed public review.

- Although the focused traffic study identifies improvements to would remedy LOS deficiencies, no assurance is provided that those measures would be implemented. GCTC at 3. Why does the EIR not disclose this study or its contents? The County must make this traffic report available to the public.

- The EIR underestimates Project trip generation.

B11-51

  - The EIR employs the SCTM19 travel demand forecasting model used by the Sonoma County Transportation Authority ("SCTA") to estimate the Project's trip generation. However, the EIR fails to disclose the specific trip generation factors employed in the trip generation model. As a result, it is impossible for document reviewers to understand or evaluate the accuracy of those factors or the resulting trip generation estimates. GCTC at p. 3. What specific trip generation factors were used? What is the substantial evidence to support those factors?

  - Traffic impact analyses frequently evaluate trip generation using the Institute of Transportation Engineers ("ITE") document Trip Generation Manual. An estimate of trip generation based on the ITE Manual information (hereto referred to as the "ITE estimate") versus the estimate documented in the EIR provides perspective on the credibility of the EIR Project's transportation analysis. GCTC at p. 3. For purposes of comparison, the ITE estimate considers two scenarios: one uses the Project plan described in the EIR transportation section and one considers the maximum residential development scenario described in the Specific Plan document. *Id.* Using industry-accepted procedures and conservative assumptions, both ITE estimate results indicate a substantially higher trip generation than disclosed in the EIR. GCTC Letter, Table 1 at p. 5.

  - For the first ITE estimate using the EIR Project plan, the trip generation estimate shows 6,556 residential trips and 5,697 non-residential daily trips for a total of estimated trip generation of 12, 253. GCTC at p. 5 and 6. This denotes a difference of approximately 114 percent more trips than the EIR estimate of 5,736. GCTC letter at p. 5 and EIR at 440. Although a small difference between model-based trip generation and ITE trip rates is expected, a difference of this magnitude brings into question the validity of the EIR's analysis. *Id.*

  - For the second ITE estimate using the maximum residential development scenario described in the Specific Plan document, the trip generation breakdown shows 8,593 residential trips and 5,697 non-residential trips for a total of estimated trip generation of 14,290, which is an even larger difference than the EIR estimate. GCTC at p.6.

  - The ITE analysis presented in the GCTC letter reveals that the EIR substantially underestimates the Project's trip generation. This faulty analysis implicates the EIR's vehicle miles travelled ("VMT"). GCTC at p. 7. Trip increases described in the GCTC letter will similarly translate to roughly equivalent increases in VMT. *Id.* and EIR at 447. Although the EIR already concludes that VMT impacts would

be significant and unavoidable, the EIR's failure to accurately estimate trips results in a failure to disclose the extent and severity of those impacts, which is impermissible under CEQA.

- The EIR substantially overestimates internal trips. B11-52

    - The EIR's transportation analysis assumes that 24.4 percent (approximately 1,398 of the Project's total 5,736 daily trips) of Project-generated trips would never leave the project site ("internal trips"). EIR at 440 and GCTC at p. 7. However, here too, the EIR is overly optimistic and over estimates the internal trips. Even where job opportunities and other amenities exist within the Specific Plan area, residents will still commute to existing jobs and drive off site to nearby communities. There is no guarantee that people who live on site will work there. GCTC employed three different methods to estimate internal trips at the SDC site. GCTC at pps. 7 and 8. Under each of the methods, GCTC found internal trip values ranging from 6.5 to 8.8 percent, all substantially lower that the 24.4 percent value used in the EIR analysis. GCTC at p. 8. Consequently, the DEIR analysis has substantially overstated the number of internal trips and grossly underestimated the number of external trips. *Id.* In this way, the EIR failed to accurately assess the off-site transportation-related impacts of the Project. *Id.*

    - The EIR's underestimate of the number of external trips, leads to similarly understated Project-related VMT, which serves as basis for determining the significance of the Project's transportation impact. In short, the Project's transportation impact has been greatly understated due to a failure to provide an accurate estimate of the volume of traffic resulting from the Project. See, GCTC Table 3 at p. 9. This failure to accurately estimate traffic impacts in turn implicates the air quality and greenhouse gas analyses, noise analysis, wildfire/emergency evacuation analysis, and biological resources assessment, among others.

- The EIR presents a flawed Project traffic assignment. B11-53

    - The EIR presents a flawed analysis of projected traffic volumes for the three road segments that provide access to the Project site: Arnold Drive north of the site, Arnold Drive south of the site, and the proposed Highway 12 connector. GCTC letter at p. 9. Despite the fact that the EIR omitted some of the data related to Project existing traffic volumes, GCTC was able to derive the Project traffic assignment on each roadway segment. *Id.* In each scenario analyzed in the EIR, the volume of project trips assigned to regional access roads falls substantially short of the 4,338 external trips claimed in the EIR. GCTC at p. 9 and Table 4 at p. 10. In the analyses implementing the Highway 12 connector, the volume of traffic on Arnold Drive north of the site is shown to be reduced upon completion of the Project, which seems highly unlikely. *Id.* Although some variability in these types of analyses can sometimes occur, none of the factors that would contribute to such variability (such as the presence of alternative routes that

allows for redirecting traffic to less congested routes) apply at the Project site. GCTC at p. 10.Therefore, substantial evidence fails to support the EIR's analysis and conclusions, and the EIR fails to accurately account for the full volume of Project-related traffic.

- The EIR's vehicle- miles travelled analysis is inaccurate and misleading.

    - The EIR's VMT analysis is equally concerning and is flawed for several reasons. GCTC at 11. First, the VMT analysis assumes a 15 percent reduction in VMT based on transportation demand management ("TDM") trip reductions. *Id.* However, the EIR provides no support for its assumption regarding a 15 percent trip reduction. *Id.* Even the EIR admits that "the ability for individual development projects to achieve a 15 percent reduction in VMT is uncertain." EIR at 447. The GCTC analysis suggests that the VMT would be substantially greater than disclosed. GCTC at 11. Second, the employment VMT figures (also called "Home-Work VMT per Worker") presented by the EIR are highly questionable. *Id.* Specifically, the planning area baseline average (7.1), the countywide baseline average (12.4), and the regional baseline average (16.9) for home-based commute VMT per worker are all higher than the EIR value assigned for home-based commute VMT. *Id.* The EIR's finding that the Project's home-based commute VMT would be 4.8 is approximately 67 percent of the corresponding value for the Planning Area, 39 percent of the Countywide value, and only 28 percent of the Bay Area Region value. *Id.* This unexplained discrepancy, along with the aforementioned flaws in the analysis raises serious concerns about the EIR's credibility. GCTC at p.12.

    - The EIR relies on Specific Plan Policy 3-41 to reduce the Project's VMT impact. GCTC at p.12. This policy requires all development to reduce vehicle trips by 15 percent below rates listed in the ITE Trip Generation Manual using TDM strategies. *Id.* and Specific Plan at p. 3-12. However, as the GCTC letter explains, this policy does not make sense given that the Project's proposed trip generation is already so low. *Id.* In other words, if the Project's trip generation estimate is to be believed, the Project trip rate is already substantially less than 15 percent below ITE trip rates. Therefore, unless the Project's trip generation estimate is corrected, Specific Plan Policy 3-41 is meaningless. GCTC at p.13.

- CEQA requires EIRs to include all feasible mitigation to reduce a significant impact to an insignificant level even where an impact is significant and unavoidable. Here, the EIR fails to identify mitigation measures that would reduce the Project's traffic impacts. These include measures found in the California Air Pollution Control Officers Association ("CAPCOA") report "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity, Public Draft, August 2021, found at https://www.airquality.org/ClimateChange/Documents/Handbook%20Public%20Draft_2021-Aug.pdf. Some of these measures could include, for example:

B11-54

MM T-7: Bus Shelter for Existing/Planned Transit Service - Bus or streetcar service provides headways of one hour or less for stops within one-quarter mile; project provides safe and convenient bicycle/pedestrian access to transit stop(s) and provides essential transit stop improvements (i.e., shelters, route information, benches, and lighting).

MMT-31: Orient Project Toward Transit, Bicycle, or Pedestrian Facility

MM T-38: Implement Preferential Parking Permit Program. (For electric vehicle and other alternative fuel vehicles.)

MM T-39: Implement School Bus Program

MM T-40: Implement a School Pool Program

MM T-42: Provide Electric Shuttles

MMT-47: Required Project Contributions to Transportation Infrastructure Improvement

MM E-23: Use Microgrids and Energy Storage

- In sum, the EIR's transportation analysis is flawed. Particular deficiencies were identified with respect to the volume of traffic associated with the Project, how much of that traffic will be captured internally, the assignment of that traffic to the stud y area roads, and the validity of the estimate of Project-related vehicle-miles traveled. GCTC at 13. These failures implicate the validity of the conclusions presented in the EIR. *Id.*

- The errors and omissions in the Transportation analysis implicate the EIR's analyses of other topics, including air quality and greenhouse gas emission impacts.

WILDFIRE RISKS AND EVACUATION PLANS

B11-55

- The comments presented below reference comments on the EIR and Specific Plan prepared by Alexandra Syphard, Senior research ecologist specializing in wildfire science and fire ecology, Conservation Biology Institute ("Syphard Letter"), attached as Attachment E to Sonoma Land Trust's September 26, 2022 letter to Brian Oh.

- The EIR fails to adequately analyze Project-related impacts related to evacuation during a wildfire. The EIR references an evacuation analysis prepared by Kittelson & Associates that is not included in the EIR or its Appendices and is not available anywhere on the SDC Specific Plan website. The County must make this report available to the public.

    - The EIR fails to adequately describe the baseline conditions relevant to evacuation. In past fires, Highway 12 became so congested that it took hours to drive even short distances.

- The evaluation of project-related wildfire evacuation impacts lacks adequate information. For example, the EIR fails to provide details related to implementation of the proposed vegetated fuel buffers, their size, how they would be managed, and how they would be maintained.

- In addition, it defies logic that the evacuation of more than 2,000 cars (and potentially 3,000 or more depending on the number of housing units and number of jobs) during a wildfire would increase travel time during an evacuation by fewer than 15 seconds. The EIR fails to provide the basis for this conclusion or provide or even summarize the evacuation analysis prepared by Kittelson & Associates.

- In addition, the unstable project description and the flawed transportation analysis add to the uncertainty regarding the number of proposed housing units and the corresponding amount of increased traffic, which will exacerbate fire risk and the ability to safely evacuate.

- The EIR fails to adequately evaluate project-related wildfire risk.

B11-56

  - It is common knowledge that fire is an ever-present danger in Sonoma County. Decades of fire suppression, a changing climate, the epidemic of dead and dying trees, combined with a record drought equate to a recipe for disaster in the region. As County staff acknowledge, the combination of dense forests, heavy fuel loads, low humidity, potential for high winds, and the steep terrain can rapidly turn even small fires into lethal, major disasters. EIR at 500 and 501.

- The environmental destruction wrought by wildfires is exacerbated by development in the Wildland-Urban Interface, which unwisely places people and structures directly in the line of fire.

  - Here, not only is the proposed Project located within the Wildland-Urban Interface, it is surrounded by lands designated as moderate, high, or very-high fire hazard severity zones ("FHSZ"). EIR Figure 3.16-2 Fire Constraints.

  - As the EIR recognizes, the site's natural vegetation and slopes are conducive to the rapid spread of wildland fires as was the case during the Sonoma Complex fires in 2017. EIR at 502.

- As the EIR acknowledges regarding wildfire ignition risk, " the majority—95 percent—are caused by human activity." EIR at 500.

  - Increased housing density, the location, and the pattern of development drives wildfire risk. Syphard et al. 2013. Isolated or remote clusters of development, such as the one proposed here, are particularly vulnerable (Syphard et al. 2016).

  - This is especially true when the housing is surrounded by high FHSZs.

- It is well established that most human-caused wildfires start near roads and housing development (Syphard and Keeley 2015 and others). Therefore, not only is the likelihood that more fires will start near the project site (that in turn increases the number of fires that could become destructive), but the increase in transportation into and out of the new development increases the likelihood of fires starting in the area. The EIR fails to address this fact.

B11-57

- The EIR states that impacts related to wildfire risk will only be considered significant if "the Proposed Plan risks exacerbating those existing environmental conditions." EIR at 506. The EIR lists several criteria for evaluating fire risk, but fails to evaluate the risk of having a substantial increase in population on-site and increased use of the open space.

- The proposed increase in population on-site, particularly at the maximum level allowed, would exacerbate fire risks for three reasons:

    - increased housing density

    - a substantial increase in vehicles on the site and

    - a substantial increase in use of the undeveloped open space areas.

- Increased housing density and population on site, especially at the proposed low- to medium densities, would increase opportunities for fires to ignite; and there is still ample continuous vegetation in the surrounding landscape for wildfires to spread. (Syphard et al. 2007, Syphard et al. 2019, Radeloff et al. 2018).

- Research shows that the location of human ignitions tends to occur closest to roads and human infrastructure (Molina et al. 2019, Chen and Jin 2022). Increased vehicles on site would increase opportunities for fires to ignite. Therefore, the addition of people coming into and out of the area because of the new development increases the likelihood of more fires starting on-site and in adjacent areas.

- In addition, it is reasonable to assume that with an increased population of 2,400 people, or more, there will be a significant increase in use of open space areas, which will in turn, increase wildfire ignition risk. Therefore, the Project would exacerbate wildfire risk, especially if the site can eventually house even more people.

- The EIR fails to analyze any of these factors, fails to provide evidence that the Project will not exacerbate wildfire risk, and incorrectly concludes that impacts related to wildfire risk are less-than-significant.

- The EIR fails to adequately analyze project-related wildfire risk exposure of people and structures due to flooding, landslides, runoff, post-fire slope instability, or drainage changes.

B11-58

- The Specific Plan and its EIR indicate that all proposed development would be located on the flat part of site. However, some structures located near the boundaries of the Core Campus are adjacent to steep slopes (within areas preserved as open space), which are known landslide-susceptible areas, and contain vegetative wildfire fuels. EIR at 521.

- The EIR relies on Policy 2-31 to reduce risks of flooding and landslides. However, as indicated above, this policy lacks details about how fuel management would be implemented and maintained in areas susceptible to flooding and landslides.

    - This information is important because some types of vegetation are more prone to ignition than others.

    - In addition, vegetation removal could result in unintended consequences, such as exacerbating slope instability especially after a wildfire.

- The EIR entirely ignores potential exposure and risk to people from flooding, runoff, or drainage changes.

    - As explained further in the section on hydrology and water quality below, the EIR defers all analysis related to exposing people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow. EIR at 299 to 301.

    - The EIR presents contradictory information related to the potential for flood risk. Specifically, the EIR discloses high risk of flood hazards (EIR at 286 and 287) but defers analysis and identification of feasible mitigations until after Project approval. EIR at 300.

    - The EIR's approach of deferring analysis and mitigation violates CEQA.

- The EIR does not adequately analyze increased fire risk to neighboring residents and wildlife

B11-59

    - Given the increased sources of ignition associated with new development and increased traffic, how will the Project exacerbate risk of wildfire ignitions to neighboring communities, e.g., Glen Ellen, Sonoma?

    - How will the Project exacerbate risks to biological resources due to increased risks of wildfires?

- The EIR fails to provide evidence that proposed policies and measures will reduce impacts to less than significant levels.

B11-60

- The Project proposes vegetated fuel management buffers but fails to provide details related to buffer size, management, and maintenance.
    - Why is there no fuel management buffer on the north side of the development site?
    - How will annual grass areas be managed to reduce ignitability of the landscape?
    - What criteria will be applied to determine what types of trees or shrubs will be removed and what types will be retained?
    - What is the plan regarding maintenance of native vegetation, such as chaparral, trees, and shrubs that provide shade and humidity and may be less likely to ignite than grass?
- Proposed Policy 2-31states that "shrubs and chaparral *should* be limited within the managed landscape buffer" (emphasis added).
    - How will this "limit" be established? Given that this is not a mandatory requirement, what impacts will occur if it is not?
- Proposed Policy 2-34 indicates that "minimum clearance of fuels surrounding each structure will range from 4 feet to 40 feet in all directions, both horizontally and vertically" and that areas with "greater fire hazards will require greater separation between hazards." EIR at 508.
- What areas of the campus have greater fire hazards that may require more intensive vegetation removal? What sort of shrubs and trees, and therefore wildlife habitat, would be removed under this policy? What would be the biological impacts of such removal?
- What entity is responsible for ensuring that the fuel management buffers are properly implemented and maintained?
- The County must provide answers to these critical questions and identify other measures for avoiding risk other than vegetation removal, such as avoiding development altogether in areas of greater fire risk.

B11-61

- Many of the policies relied upon to mitigate the significant increased risk of wildfires are inadequate because the measures are vague and unenforceable.
    - For example: SP Policy 2-42 provides for an educational campaign regarding wildfire risk to future residents. However, the EIR fails to specify the details of implementation.

- Who is ultimately responsible for ensuring that the policies are followed?

- Who will ensure that the educational campaign referred to in Policy 2-42 is updated and continued?

- How long will these policies serve to help offset the increased risk that comes with the development?

- The EIR fails to identify measures that would reduce personal vehicle use through implementation of mass transit. Having thousands of people driving vehicles on roadways on the site will increase opportunities for fire ignitions.

    - The EIR should consider additional mitigation. For example, the Project should include on-site shuttles for the life of the Project, providing transportation for residents to and from the Project site and Eldridge area to the towns of Sonoma, Napa, Petaluma, Rohnert Park, and Santa Rosa throughout the day and evening.

- All policies and best management practices should be included as measures in a Mitigation Monitoring and Reporting Plan to ensure implementation and enforceability.

HYDROLOGY AND WATER QUALITY

B11-62

- The comments presented below reference comments prepared by Gregory Kamman, CBEC Eco Engineering ("CBEC") on the EIR and Specific Plan, attached below as Attachment F to Sonoma Land Trust's September 26, 2022 letter to Brian Oh.

- The EIR Project Description and Project Plan fail to provide sufficient detail about land use changes to complete the necessary hydrologic and water quality assessments to evaluate the Project's hydrological impacts. Due to the lack of an adequate Project Description, the EIR determinations that potential hydrologic and water quality impacts are less than significant requiring no mitigation measures is unsupported.

- Redevelopment of the SDC site has the potential to impact the hydrology of interconnected groundwater, spring, and stream systems through changes in land cover, storm water management, and water use. Impacts may include changes to the quantity, quality, and timing of storm water runoff, infiltrated water available for vegetation and groundwater recharge, and the magnitude, frequency, and extent of critical low flows in steams and low water conditions in wetlands. The EIR does not adequately analyze these impacts.

- The EIR leaves many questions related to hydrology and water quality unanswered. For instance:

    - What is the extent of change in impervious surface footprint under this Project? The EIR states only that the Proposed Plan may increase the amount of impervious surfaces. EIR at 298. Even if final numbers will not be known until

developers submit future development proposal, the Specific Plan provides the location and types of uses such that the EIR can estimate the changes to impervious surfaces at SDC.

- How would the change in impervious surfaces impact the quantity and quality of discharge into Sonoma Creek or its tributaries?
- How would proposed stormwater facilities change those processes?
- What are the quantitative impacts on the recharge of groundwater aquifers that will result from the Project?
- How will the change in extraction of raw water from streams, springs, and aquifers impact environmental quality, including species of concern at the SDC site and beyond compared to recent demand at SDC?
- How will projected changes to patterns of temperature and precipitation, such prolonged periods of drought combined with more intense precipitation events affect water needs and impacts of proposed development at SDC?

- The EIR cannot defer the analysis and development of mitigation measures for the Project's impacts on hydrology and water quality. The Specific Plan identifies the location, intensity, and square footage of the different land uses proposed in the Specific Plan: residential, commercial, hotel, office, public, institutional, and utility use (EIR at 80). In short, the County already knows what types of development could occur under the Specific Plan and substantially where those different types of development would occur. Yet, the EIR fails to address the following questions:

B11-63

  - How would Project design ensure there would be no substantial increase in the magnitude, frequency, duration, or extent of low-flow events or flood events on springs, streams, and wetlands located at or downstream of the SDC property that may result from changes in land cover, storm water management, and/or the volume, rate, or duration of surface run-off from the site?
  - How would Project design ensure there would be no substantial degradation of water quality (as per state and local water quality standards), including pollutant load transported by storm water runoff from the site (e.g., sediment load, nutrients, metals, and hydrocarbons) that may impact the extent and quality of aquatic habitats?
  - How would Project design ensure there would be no substantial reduction of infiltration and ground-water recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table?

- How would Project design ensure there would be no substantial increase in water temperatures in receiving streams resulting from runoff of warm storm water from the site?

- How would Project design ensure there would be no substantial net increase in withdrawals or diversions from area springs and streams, including Roulette Springs, Hill Creek, Asbury Creek, and Sonoma Creek, within critical low-flow periods (summer, fall, drought conditions) or as annual averages?

- How would Project design ensure there would be maximum possible on-site reuse of treated wastewater as water supply for landscape irrigation, groundwater recharge, or other water supply needs, to minimize environmental impacts of raw water sourcing?

- The EIR fails to adequately analyze Project-related impacts tied to compliance with applicable regulations protecting water quality. EIR at 294.

B11-64

  - Impact 3.9-1 - The EIR concludes that impacts related to implementation of the Proposed Plan would not violate any federal, state, or local water quality standards or waste discharge requirements. EIR at 29 and 294. However, the EIR fails to actually analyze how changes in site runoff and associated erosion potential will change.

    - Performing the required analysis would require detailed hydrologic and hydraulic modeling that incorporates all changes in land use (i.e., impervious surfaces) and runoff estimates to determine where and by how much flow rates and erosion potential may impact receiving waterways. Best Management Practices and other measures could then be designed correctly to mitigate these impacts. Without this information, the EIR cannot adequately evaluate the impacts before and after mitigation.

    - The EIR bases its conclusion, in part, on implementation of proposed Policy WQ-1. However, this policy only requires consistency with existing laws and regulations. Under CEQA, merely requiring compliance with existing laws and agency regulations does not conclusively indicate that a proposed project would not have a significant and adverse impact.

    - The EIR also relies on implementation of as yet unspecified Best Management Practices ("BMPs"). EIR at 294. The EIR provides only a laundry list of potential BMPs with no indication or commitment regarding which ones may be implemented or what performance standards they must meet. The EIR fails to address the following questions: What BMPs would be appropriate given specific site conditions? What is the expected efficacy of each measure? What residual impacts might remain after implementation of specific BMPs?

        - An EIR may not defer preparation of mitigation measures except in limited circumstances. Without performance standards and an explanation of why mitigation cannot be developed now, the EIR cannot insist the anticipated impacts will be insignificant and defer the development of specific mitigation measures to some future time. Guidelines § 15126.4 (a)(1)(B). The EIR failed to comply with this bedrock CEQA requirement.

- The EIR fails to adequately analyze Project-related impacts related groundwater recharge. B11-65

    - Impact 3.9-2 - The EIR concludes that the project will not interfere with groundwater recharge such that it may impede sustainable groundwater management of the basin and associated potential impacts are less than significant. *Id.* Similar to its analysis of other hydrological impacts, the EIR fails to provide any analysis of how the proposed Project development will alter groundwater recharge. Having failed to analyze the impact, the DEIR again relies on compliance with existing regulations and unspecified BMPs.

    - The EIR has an obligation to describe any potential changes in recharge. Simply stating that unspecified BMPs that support groundwater recharge will be integrated into the Project is insufficient information to demonstrate that the measures will be effective to mitigate potential impacts.

- The EIR fails to adequately analyze Project-related impacts related to flooding and erosion. B11-66

    - The Specific Plan indicates that the site is potentially vulnerable to flooding and dam inundation from a failure of the Fern and Suttonfield dams and spillways. Specific Plan at p.2-6. The EIR explains that future flood events would pose risks to structures such as bridges and culverts and that failure of the dams would exacerbate flood risks. EIR at 286 and 287. Inundation from a dam failure at Fern Lake, could flood a large portion of the Core Campus area, as well as a large area of the Eldridge community just south of the Planning Area. Suttonfield Lake is the largest dam on the site and inundation from a failure at this lake would flood areas east of Sonoma Creek. Both failures would impact proposed residential areas.

    - The EIR concludes that Project development would not substantially alter the existing drainage patterns or result in substantial erosion and flooding on- or off-site or contribute runoff that would exceed the capacity of existing or planned storm drain systems. EIR at 297 and 298. Here too, these conclusions are not substantiated.

        - The EIR fails to perform and/or present results from any hydrologic or hydraulic analyses to demonstrate to what degree the project may increase runoff rates and erosion potential from new or redeveloped plan areas.

- The EIR assumes that adhering to existing County regulations will reduce flooding and erosion impact; yet the DEIR fails to demonstrate that would be the case.

- The EIR relies on proposed policies WQ-1 and WQ-4 regarding compliance with applicable plans which, as discussed above, is not adequate to fulfill CEQA requirements. How would these plans insure impacts were reduced to an insignificant level?

- The EIR fails to adequately analyze Project impacts related to exposing people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow. EIR at 299 to 301. B11-67

    - This conclusion is contrary to the California Division of Safety of Dams ("DSOD") conclusions about Project dam safety presented in section 3.9.2.5 (Flooding – Flooding from Dam Failure) of the EIR. EIR at 286-287.

    - The EIR states, "The DSOD has classified the downstream hazard of a failure at Fern Lake as high". EIR at 286. The DEIR further states, "[T]he DSOD has classified the downstream hazard of a failure at Suttonfield Lake as extremely high." EIR at 287. These statements alone provide evidence in the record that potential flooding impacts are potentially significant and require thorough analysis.

    - Despite these disclosures, the EIR impermissibly defers necessary subsurface exploration, laboratory testing, and geotechnical studies of the dam sites to determine potential for failure and need for mitigations. EIR at 300.

    - The EIR relies on implementation of Policies WQ-2 and WQ-3 as mitigation for the significant risks associated with locating housing and businesses in the inundation zone, stating that these policies provide for future geotechnical evaluations. *Id.*

        - WQ-2 states "Any potential hazard to life or property in the Planning Area shall be properly investigated by the appropriate licensed professional."

        - WQ-3 states "All development that requires a geotechnical, hydrological, or environmental report shall utilize the recommendations of said report and be in compliance with regulatory agencies." EIR at 294 [listed as standard conditions of approval].

        - These proposed policies fail to mitigate potential impacts. Instead, they defer analysis and mitigation until after project approval and leave important questions unanswered. For example:

        - On what basis is the County concluding that dam failure would not pose a significant risk to people on- and off- site?
        - When would the required studies be performed?
        - Where would the anticipated embankments and installation of subsurface drainage control measures be implemented?
        - What is the risk of potentially locating thousands of people on the site given the condition of the dam and the known high risk that it may fail?
        - How will the required Emergency Action Plan impact the proposed Project? EIR at 300.
        - How would potential short term mitigation measures (i.e., lowering of the water levels in the Lakes through spillways at lower elevations) impact the environment on- and off-site? *Id.*
        - How would implementation of potential long term stabilization measures (i.e., reconstruction of the dam) impact the environment on- and off-site? *Id.* When will appropriate evaluations be performed?
    - Under CEQA, studies related to hazards that have the potential to increase safety risks to life and property must be performed prior to project approval. It is critical to perform such evaluations now to determine the level of risk and to include necessary mitigations, which could include changes to the Specific Plan, major repairs or fortifications of the dams, or other mitigation measures as appropriate to avoid or minimize those risks.

- The EIR concludes that Project impacts related to obstructing implementation of a water quality control plan or sustainable groundwater management plan would result in less-than-significant impacts, absent any analysis or evidence. EIR at 301.
    - As with all of the other hydrology impacts listed above, the EIR relies on compliance with existing policies and regulations to minimize impacts and fails to present any analysis to support its conclusion.

WATER SUPPLY

- The comments presented below reference comments prepared by Gregory Kamman, CBEC Eco Engineering ("CBEC") on the EIR and Specific Plan, attached below as Attachment F to Sonoma Land Trust's September 26, 2022 letter to County Planner, Brian Oh.

B11-68

- The EIR presents a flawed analysis of Project-related water demands and available supply.

    - The EIR asserts that the analysis of water supply and projected water demand is conservative. EIR Appendix D at pdf page 593. But this is not the case.

    - As an initial matter, the proposed Project water demand estimate is based on the assumption that the Project consists of *516* residential units along with non-residential uses. EIR Appendix D Table 2 at 605. But EIR Appendix D Table 1 (at p. 602) indicates that at build-out in 2045, the Project will have constructed 1000 units plus commercial, hotel, office, public, institutional, and utility uses. And as explained above with respect to the Project Description, the number of residential units could exceed 1300. Even if allowed to build out to only 1000 residential units, the EIR underestimates water demand by 484 units or roughly half.

    - The EIR analysis of the availability of water supplies to meet proposed project water demands is flawed. EIR Appendix D presents the results of this analysis. Based on review of Appendix D by CBEC at 4 and 5, the analysis is faulty and fails to demonstrate there is sufficient water supply to meet the Project's future (full buildout) water demands.

        - The EIR indicates that estimated Project water demands by the year 2045 will be 342 acre-feet per year (AFY). EIR Appendix D, Table 2 at p.14. The EIR indicates that the available reliable supply of water for the period 2030-2045 is 356 AFY. EIR Appendix D, Table 9 at p. 31. Given how close the reliable water supply (356 AFY) is to full buildout demands (342 AFY), there is little room for error in terms of future water supply management.

        - The EIR water supply estimate shows that the historic (1969-2007) water use (demands) for the SDC averaged 622 AFY and peaked at 1,143 AFY in 1986 (pg. 12, Appendix D).

        - According to the EIR, the water use estimated for full buildout (2045) of the Project is a little more than half historic SDC water demands. How can this be given that the Project proposes 1000 residential units, a hotel, commercial, and industrial uses? See, EIR Appendix D, Table 1 at p. 13. Even with conservation measures, it appears that Project water demands would be similar to, if not greater, than the historic use.

    - Upon review and cross-checking data and information presented in the EIR, CBEC identified several questionable results that suggest the EIR water demands are significantly underestimated. EIR Appendix D, Tables 1 and 2. These findings are as follows:

- The EIR only provides water use estimates for the proposed hotel but considers only water used by employees. EIR Appendix D Table 2 at p.16. Water use by guests staying at the proposed 100,000 square-foot hotel is not accounted for in the annual water demand estimate. Incorporating guest water use into the demand estimate could easily result in total annual Project demands that exceed available reliable supply.

- CBEC identified a significant math error in the DEIR demand estimates for General Commercial, Office, Public/Industrial, and Research & Development land uses presented in EIR Appendix D, Table 2 at p.16. This is shown in Table A of CBEC's report, which merges data from Tables 1 and 2 in EIR Appendix D. When independently calculating water demands using the 2045 land use areas and Water Use Factors provided in Appendix D, the respective 2045 water demands for the General Commercial, Office, Public/Industrial, and Research & Development land uses result in values that are two orders of magnitude higher than those reported in the EIR, which results in an increased annual Project water demand of 9,846 AFY (see CBEC Letter at Table A).

- The EIR's water supply evaluation is inconsistent with Sonoma County guidelines.

B11-69

  - The Permit Sonoma website provides guidelines (8-2-1 Water Supply, Use and Conservation Assessment Guidelines) for the preparation of Water Supply Assessments. The purpose of this policy is to provide guidance to applicants and their representatives on how to prepare a Water Supply, Use, and Conservation Assessment (henceforth, the "Assessment"). The Assessment may be a stand-alone document, or supplemental to a hydrogeologic study, Zero Net Use report, or other water supply related report. These guidelines are intended for discretionary and ministerial projects. Discretionary projects that are dependent on groundwater or surface water will typically require an Assessment with the use permit application. The Assessment will inform the environmental review process and conditions of approval.

  - The authority of the Assessment falls under Sonoma County General Plan, Water Resource Element Goals WR-2 and WR-4, Objective WR-4.1, WR-4.2, and WR-4.3, and Policies WR-2c, WR-2d, WR-2e, WR-4b, and WR-4f. Therefore, the EIR Water Supply Assessment (EIR at Appendix D) should adhere to County Guidelines. Appendix A to the County's Guidelines includes water use estimates for residential, landscape, agricultural, and Commercial and Industrial uses that are greater than those factors presented in EIR Appendix D, Table 2 (see CBEC Letter Table B). Applying the Sonoma County water use estimates to Project water demand estimates results in higher residential and irrigated area water demands than presented in the EIR. *Id.*

  - CBEC's analysis, which corrects the EIR's math errors and applies the Sonoma County guidelines' water use estimates to the EIR demand estimate tables, results

in a total annual Project water demand of 10,231 AFY, a values three times higher than reported reliable supply (356 AFY). This annual total demand will be even higher when hotel guest water use is considered.

- Based on the aforementioned skewed water supply evaluation, how will Project water demand affect water supply for wildlife and habitat? How will it affect other resources?

OTHER ENVIRONMENTAL IMPACTS

- In 2016, Sonoma County voters passed Measure K, which renewed critical protections for community separators throughout the County. The EIR must analyze how locating new development—particularly the high-density development proposed as the upper end of the Project description—is consistent with the County's general plan, especially if the Project requires a new road through the Glen Ellen/Agua Caliente Community Separator. This analysis must include a complete accounting of whether and how the Project would comply with Community Separator objectives and policies, which require, inter alia, that development minimize the removal of trees and mature vegetation and minimize impervious surfaces. While the EIR acknowledges that most of the SDC property is located within a local voter-approved Community Separator overlay, it fails to adequately analyze the impact of road development therein. B11-70

- The EIR must clearly analyze the impact of the proposed Highway 12 connector not only on VMT, but also on each of the impact areas for which increased vehicle traffic threatens other impacts. For example, the construction of a new roadway has foreseeable impacts to biological resources through habitat degradation and interference with wildlife movement and connectivity. Similarly, use of a new roadway would increase wildfire risk by siting new human activity and ignition sources, such as vehicles, where none previously existed. A new road also induces growth by providing access to new areas and decreasing travel times. The EIR does not adequately analyze the full scope of foreseeable impacts from the proposed Highway 12 connector and therefore cannot adequately mitigate those impacts. B11-71

- The EIR does not adequately analyze the Project's consistent with the County's general plan, especially the policies and goals designed to protect biological resources. B11-72

- The EIR fails to analyze the Project's construction impacts, claiming the analysis would be speculative without more details about the development projects. However, the County has information about the proposed land use types, and square footage, and can therefore include an analysis of anticipated construction period impacts based on that information. In addition, the EIR should have included a quantitative assessment of health risk impacts.

- The EIR relies on the 2017 Scoping Plan rather than the current Draft 2022 Scoping Plan. The newer plan includes incorporates the State's carbon neutrality goals and consistency B11-73

with Executive Order EO B-55-18) and an updated Efficiency Threshold. The updated Scoping Plan requirements should have been considered in the EIR.

- The EIR calls for future geotechnical study/investigation to establish appropriate mitigations. However, the EIR fails to include performance standards for the mitigation measures. Therefore, the EIR defers both analysis and mitigation for geotechnical impacts.

- The EIR discloses that noise along the Highway 12 Connector would increase from zero to 59 decibels. EIR at Table 3.11-9 at p. 352 and 353. However, the EIR concludes that this increase would not result in a significant impact because the increase noise level does not increase by more than 3 decibels. This is clearly an error. EIR at 353. B11-74

- The EIR insists that, given the extensive park and recreational opportunities that will be offered within the Planning Area, development under the Proposed Plan would not increase the use of existing neighborhood and regional. EIR at 406. However, the EIR provides no evidence that the planning area parks will meet all park needs of residences. B11-75

- The EIR identifies a number of Specific Plan policies purportedly designed to reduce impacts to cultural and historic resources. But the EIR fails to explain how these policies would actually achieve that goal. B11-76

    - Policy 2-47: Consider adaptively reusing Sonoma House as a museum dedicated to the history of the SDC facility, collaborating with Sonoma County, the State of California, the Glen Ellen Historical Society, and other community groups for design and programming of the space, if feasible.

        - This policy is vague and unenforceable. It does not require adaptive reuse of Sonoma House or set forth standards to guide whether adaptive reuse would be feasible.

        - Who determines whether adaptive reuse is feasible?

        - What benchmarks must be met for adaptive reuse to be feasible in this context?

    - Policy 2-48: Provide resources and learning opportunities for residents and visitors about all phases of the history of the site. Materials should be accessible to all ages and abilities and could include posted signs, fliers, or informational sessions, among other things.

        - This policy is vague and unenforceable. Resources and learning opportunities *must* be available to people of all ages and abilities.

- Policy 2-52: Require any unanticipated discovery of archeological or paleontological resources to be evaluated by a qualified archeologist or paleontologist.

    - This policy is vague and unenforceable.

    - What standards must guide the evaluation by an archeologist or paleontologist?

    - What additional mitigation would be required if the archeologist or paleontologist were to identify resources of cultural or historic significance?

- The cultural resources analysis suffers from the same self-mitigating errors as the majority of the EIR. For example, the EIR concludes that "the impact of implementation of the Proposed Plan on individually significant historical resources would be less than significant with implementation of the proposed policies and actions referenced [in the EIR] and existing State regulations." EIR at 295. The EIR must first analyze the Project's unmitigated impacts before it can propose mitigation. Otherwise, decisionmakers and the public cannot meaningfully evaluate whether, how, and to what degree the purported mitigation would actually reduce significant impacts.

- The EIR acknowledges that certain land use policies or designations in the County's General Plan are relevant to the SDC redevelopment and that the Specific Plan is inconsistent with some of those policies or designations. EIR at 305, 312, 321. Yet the EIR fails to specify which General Plan policies or designations it analyzes. Decisionmakers and the public therefore cannot rely on the EIR or independently evaluate its analysis.

    - The EIR must identify the specific General Plan goals, policies, and designations that are relevant to SDC. For example, Sonoma County General Plan Policy LU-4l directs the County to "[c]onsider construction of pedestrian access, pathways, and streetlights in some Community Opportunity Areas which may be deficient in such infrastructure, particularly … Glen Ellen." Similarly, Policy LU-20i instructs that commercial lands in Glen Ellen should support uses of a "size, scale, and intensity" that "is consistent and compatible with the character of the local community." Development in Glen Ellen must also comply with the Glen Ellen Development and Design Guidelines. General Plan Policy LU-20hh. The EIR must analyze any inconsistency with these and other applicable land use planning directives.

    - The EIR also states that the Project will require a General Plan amendment and zoning amendment, both of which will ostensibly be adopted at the same time as the Specific Plan. EIR at 321. But the EIR fails to disclose what those amendments will entail or analyze the environmental impacts of those amendments.

B11-76

- The EIR states that the Project would have a significant impact to land use if development would "physically divide an established community." EIR at 317. The EIR concludes that no division would occur because the Project includes a bike path and other features to enhance connectivity around the Project site. But the EIR ignores that the development proposed under the Specific Plan would nonetheless create a physical barrier in the Sonoma Valley and the Sonoma Valley Wildlife Corridor where none currently exists. Further, in addition to creating a physical barrier, the Project would dramatically increase human activity over present levels. Even if the Project contains elements that could increase connectivity, the population increase that results from the Project would foreseeably result in less tangible barriers, such as increased traffic. The EIR must acknowledge and fully analyze how these impacts would divide Glen Ellen, including the portions of Glen Ellen on either side of the campus, and Sonoma Valley communities more broadly.

- The EIR also acknowledges that "[n]ew construction has the potential to disconnect the remaining contributing resources in the Core Campus from those in Community Separator and Regional Parks lands to the east and west, consequently disrupting the feeling and character within the historic district. This would affect the cohesiveness of SSHHD's overall integrity to the point that it would no longer be eligible for listing in the NRHP, CRHR, or as a California Historic Landmark." EIR at 296. In other words, the Project would physically divide a historic district and thereby destroy its character as such.

    - How is this not a physical division of an established community that would constitute a significant land use impact?

- As discussed in the above sections, the draft Specific Plan fails to include adequate performance standards to ensure that impacts from development will remain less than significant as the Project is built out. Particularly if the EIR is going to defer development of key mitigation—and it should not do so—the EIR and Specific Plan should adopt a phased-development model that establishes clear and robust performance standards that must be met before the next phase of proposed development can proceed. Build-out should begin with the most important phase(s) of development, namely the construction of affordable housing.

B11-77

- The EIR fails to adequately analyze the Project's air quality and greenhouse gas emissions.

    - The EIR's air quality analysis is based on a description of the Project that assumes construction of 1,000 residential units, 190,000 square feet of office use, 40,000 square feet of commercial/retail use, and 90,000 square feet of hotel, 90,000 square feet of public/institutional/utility uses. EIR at 168. As discussed above, this description is inconsistent with the other descriptions in the Specific Plan and EIR. As discussed throughout these comments, the unstable project description implicates the environmental analysis, including the analysis of impacts to air

B11-78

quality. The result is that by underestimating residential units, traffic, and VMT, the EIR underestimates air quality and greenhouse gas emission impacts

- For example, the EIR claims that the Project would not conflict with BAAQMD's 2017 Clean Air Plan, based in part on a screening of the Project's estimated impacts against four criterion. EIR at 183. One of those criteria addresses whether the Project will result in an increase in projected VMT or vehicle trips that is less than or equal to projected population increase. *Id.* Given the significant underestimation of Project-related traffic and related VMT, as discussed above, the EIR's analysis of air quality impacts is also unreliable and its conclusion that the Project would be consistent with the Clean Air Plan is unsupported.

- The EIR fails to adequately analyze and mitigate the Specific Plan's aesthetic impacts. B11-79

  - The EIR lacks support for its conclusion that development under the Specific Plan would not have a substantial adverse effect on a scenic vista (Criterion 1).

    - EIR at 89 states that that the SDC site is within a Historic Combining District, which is designed to "protect those structures, sites and areas that are remainders of past eras, events and persons important in local, state or national history, or which provide significant examples of architectural styles of the past, or which are unique and irreplaceable assets to the county and its communities. Alterations to existing structures and construction of new structures within historic districts shall be consistent with the historic district design guidelines adopted by the board of supervisors."

    - EIR at 102 notes that the current County General Plan requires the County to identify and preserve roadside landscapes that have a high visual quality as they contribute to the living environment of local residents and to the County's tourism economy. Furthermore, General Plan objectives additionally aim to provide guidelines so future land uses, development, and roadway construction are compatible with the preservation of scenic values along designated scenic corridors, of which Arnold Road is one.

    - The SDC's historic landscape creates a unique scenic vista along the length of Arnold Road. Some Specific Plan policies identify historic buildings and contributing buildings to be retained, however the policy language is vague and unenforceable, which results in uncertainty as to whether the resources are going to be retained or whether the scenic vista is going to be lost. For instance, Specific Plan Policy 4-23 states "Preserve and reuse the contributing resources identified in Figure 4.3-1, to the greatest extent feasible." How can it be ensured that scenic

resources including the Arnold Road historic landscape will be retained and maintained? Without firm and enforceable requirements, it cannot be concluded that the impacts to roadside landscapes and scenic vistas is less than significant.

- Furthermore, the EIR does not identify a threshold of significance to determine what loss of historic/scenic resources would be acceptable and considered less than significant. Therefore, it is impossible to determine whether the policies identified in the Specific Plan are sufficient to prevent a substantial degradation to a scenic resource, which in this case is the high-quality roadside landscape of Arnold Road.

- For Impact 3.1-1, EIR at 103 concludes that since "construction will be clustered only in the previously developed Core Campus and that new development will keep with the overall scale and development height variation of the current SDC campus, adverse effects on the scenic vistas of SR 12 on the eastern edge of the Planning Area and the scenic landscape unit on the western edge of the Planning Area would be less than significant." However, the EIR fails to recognize that the existing SDC campus is considered a scenic resource due to its historic significance and roadside landscape along a scenic corridor. The substantial change to the scenic resource allowed by the lax policies to protect contributing buildings will result in a substantial adverse impact and cannot be substantiated as a less than significant impact.

- The EIR lacks support for its conclusion that the Specific Plan would not substantially degrade the existing visual character or quality of public views of the site and its surroundings (Criterion 3).

    - Arnold Road is a known scenic corridor with a 200' buffer on either side that is subject to development restrictions and design criteria (Sonoma County General Plan 2020 Figure OSRC-1). Specific Plan Policy 5-O states that "Arnold Drive, development *should* maintain the feel and scale of the buildings and landscape along Arnold Drive, including with a variety of building types and scales, a continuous landscape setback, activity, and views into the SDC site" (emphasis added). While this is a laudable goal, it is also an unenforceable measure with ambiguous language ("should") and cannot be relied upon to ensure that the existing visual character will be maintained along this scenic corridor.

    - EIR at 106 states that "with adherence to existing and proposed policies and standards, development under the Proposed Plan would improve rather than substantially degrade the existing visual character of the site, and this impact would be less than significant." By what

metric is the visual character being measured to determine that it will improve with the proposed project?

- The EIR does not identify thresholds against which the proposed degradation of the visual character and quality views of the site can be assessed to come to the conclusion that the impacts will be less than significant. Therefore, this conclusion is unfounded.

- The EIR lacks support for its conclusion that the Specific Plan would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area (Criterion 4)

    - The EIR qualitatively discusses the light and glare impacts that will result from the operation of the project (lighting from future building fixtures, building windows, automobile headlights, parking lot lighting). What are the expected impacts from security lighting or other sources during the construction phases of the project?

    - The EIR references Specific Plan Policy 2-7, which prohibits lights within the wildlife corridor and along the creek corridor. To what sections and at what width of the creek corridor would this prohibition apply? For the purposes of enforcement of this requirement, what area is considered a "wildlife corridor?" The whole SDC area is designated a Habitat Connectivity Corridor – is that the area this policy is referring to?

    - The EIR references Specific Plan policies 5-32, 5-39, and 5-43, which all refer to maintaining a thick buffer of vegetation in order to buffer lights to protect wildlife within the preserved open space areas. For each of these policies, which serve as mitigation to address light and glare impacts, what are the type and/or height of needed vegetation or depth/width of the buffers to provide suitable light and glare protection to the creek corridors? The EIR or Specific Plan should contain policies or mitigation measures requiring a photometric plan or other metric by which light impacts can be assessed and should also have a policy or mitigation measure addressing maximum light standard height and spacing.

    - EIR at 107 concludes that "with adherence to existing and proposed policies and standards, development under the Proposed Plan would not substantially increase the amount of nighttime lighting or glare in the already previously developed Core Campus or surrounding open space areas. Impacts associated with light and glare would be less than significant." What thresholds of significance have been used to quantify this statement? What data has been collected regarding the

existing light environment and the proposed light environment to be able to draw this conclusion?

ALTERNATIVES

- The EIR fails to analyze a reasonable range of alternatives to the proposed Project. Though couched as "alternatives," each of the alternatives discussed in the EIR would inexplicably implement the draft Specific Plan policies—in other words, each alternative assumes the de facto adoption of the draft Specific Plan policies even if the draft Specific Plan is not formally adopted by the County. Additionally, with the exception of the Historic Preservation Alternative, the impacts of the proposed alternatives are substantially the same. The EIR's decision to constrain alternatives in this way is not only unsupported, but also threatens to obscure project alternatives that could actually reduce project impacts, such as alternatives with fewer residences and less commercial concentrated on a smaller development footprint. The EIR must analyze a reasonable range of alternatives, including an alternative based on the development proposal that the State ultimately chooses through its RFP process. Once the State selects a development proposal, the County will better understand the location and intensity of proposed development and will therefore be able to conduct a more thorough analysis of project impacts. B11-80

- The County should decline to certify this EIR and instead direct staff to use the Historic Preservation Alternative as the starting point for a new and revised preferred project, with a revised Specific Plan and EIR that address the flaws identified in this and the following Attachments.

    - The Historic Preservation Alternative should be revised to start with an affordable housing project of 200+/- homes (Phase 1), and to allow for future development phases consistent with whichever proposal the California Department of General Services (DGS) selects as the winning bid pursuant to their surplus property sale process for the SDC core campus. The EIR acknowledges that the County and public have no real idea of how much development will actually occur at SDC, because we do not know which proposal DGS will select to enter into an Exclusive Negotiating Agreement for the sale of the campus. EIR at 77. Since we will know by late October who DGS has selected as the buyer, developing an alternative based on the DGS-selected proposal will give Permit Sonoma, the public, and decisionmakers an opportunity to focus on a real-world proposal that will drive "*the exact amount and location of future development*." EIR at 77 (emphasis added). This approach would also resolve the problem of speculating about financial feasibility and making unfounded assumptions regarding how much and what type of housing needs to be built on the site to subsidize the affordable housing mandates.

    - Importantly, the historic preservation alternative also requires significant modification to expand wildlife corridor, riparian and open space protections and

setbacks. In order to further Guiding Principle #3, the revised historic preservation alternative must include and meet the following specific performance standards:

- Provide sufficient setbacks from all creeks designed to protect water quality and quantity, instream and riparian habitat and wildlife connectivity
- Provide a sufficient buffer that reduces the current footprint of the north side of the SDC campus adjacent to Sonoma Creek to allow wildlife to safely travel through the Sonoma Valley Wildlife Corridor
- Ensure human activities and improvements at SDC do not impair wildlife's use
- Ensure roads and traffic do not create a danger to wildlife
- Ensure new development does not create new sources of light, glare or noise that would impair wildlife's use of the Corridor
- Ensure new development does not increase the risk of wildfires that would harm the natural and built environments
- Ensure runoff from new impermeable development does not result in erosion or contamination of creeks and riparian areas.

- The EIR mischaracterizes and misapplies the State legislation governing the disposition and planning process for SDC.

B11-81

  - Government Code section 14670.10.5 (the "Legislation") does not establish any financial objectives for the redevelopment of SDC.
    - The EIR repeatedly states that economic viability is a stated objective of the State Legislation governing disposition of the SDC property. *E.g.*, EIR at 527 (stating the guiding principles "seek to further the State's goals for the SDC site established in California Government Code Section 14670.10.5 for promoting housing, especially affordable housing and housing for those with development disabilities; preserving open space surrounding the Core Campus; and ensuring that development is economically viable."); EIR at 532 ("State law stipulates that the SDC Specific Plan … ensure the financial feasibility of development"); EIR at 533 (concluding an outcome would be "contrary to the economic objectives codified in State law") (citing the Legislation). Not so. The "Legislation only directs that the County consider the economic viability of future development during the planning process: "The planning process shall facilitate the disposition of the property by amending the general

plan of the county and any appropriate zoning ordinances, completing any environmental review, and addressing the economic feasibility of future development." Gov. Code § 14670.10.5(c)(1). It does *not* require that the County ensure economic viability or even prioritize economic viability. *Compare id. with* Gov. Code 14670.10.5(c)(3) ("shall provide for the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible") *and* (c)(4) ("shall require that housing be a priority in the planning process and that any housing proposal determined to be appropriate for the property shall include affordable housing"). Protection of open space and affordable housing are priorities under the Legislation; economic viability is merely a *consideration*.

- The only objective that requires financial feasibility is the County's own guiding principle.

  - The County—not the State—requires that the Specific Plan "[e]nsure that the proposed plan is financially feasible and sustainable, as financial feasibility is essential to the long-term success of the project." EIR at 528. The EIR proposes to ensure financial feasibility by ensuring "that the proposed plan supports funding for necessary infrastructure improvements and historic preservation while supporting the Sonoma Valley community's needs and galvanizing regional economic growth." *Id.*

    - The County's goal to ensure long-term fiscal sustainability is a binary goal. A project either is feasible (i.e., capable of being completed) or it is not. A project either is sustainable or is it not. A project either pencils or it does not. Nothing directs the County to *maximize* economic returns or to compare the relative returns of the various alternatives. *E.g.*, EIR at 532 (criticizing the Reduced Development Alternative as "less economically viable … than the Proposed Plan"). As discussed above, the *only* two Project features that must be maximized under the Legislation are open space preservation and affordable housing. *See generally* Gov. Code § 14670.10.5.

    - The County provides a clear path towards ensuring that the Project is financially feasible and sustainable by ensuring that the Project will generate enough revenue for the developer to be able to fund the necessary infrastructure improvements the site requires.

    - Nothing in the County's objectives or in the Legislation requires the Project to prioritize returns on investment or requires the EIR to analyze the comparative returns of the various project alternatives. Yet comparison of hypothetical and speculative returns on investment inexplicably forms a central pillar of the

EIR's alternatives analysis. *E.g.*, EIR at 530 (comparing the relative economic value of the No Project Low Development Alternative against the Proposed Plan), 531 (same with respect to the No Project High Development Alternative), 532 (same with respect to the Reduced Development Alternative), 533 (same with respect to the Historic Preservation Alternative). Because alternatives must be studied to reduce environmental impacts—not to maximize economic returns—this approach is not only unjustified but contrary to CEQA.

- The alternatives analysis cites inconsistent assumptions to guide its analysis and justify its conclusions. Because it is unclear on which assumptions the EIR actually relies, decisionmakers and the public cannot decipher the anticipated impacts of the proposed alternatives or independently judge the EIR's analysis.

B11-82

    - For example, on page 530, the EIR concludes that the No Project: Low Development Alternative would result in a greater number of "small-lot and townhome units" because those units "generate much higher financial returns." On page 537, the EIR removes any reference to townhomes and concludes that that same alternative would prioritize "single-family homes to maximize financial feasibility." Then on page 541, the EIR backtracks, stating again that the No Project: Low Development Alternative "would likely have a larger proportion of small-lot single family and townhomes … to achieve financial feasibility." The EIR further muddies the water in its analysis of the Reduced Development Alternative, which the EIR concludes would exhibit "a preference for more *large lot*, single family homes to maximize financial feasibility." EIR at 553 (emphasis added). On page 557, the EIR further specifies that these large lot residential developments would focus "more on single-family *detached* residential units than other typologies." (emphasis added). Finally, in its discussion of the Historic Preservation Alternative, the EIR again states that "large lot, single-family homes" would "maximize financial feasibility." EIR at 561; *see also* EIR at 566 (noting that the Historic Preservation Alternative would also prioritize "single-family *detached* residential units") (emphasis added).

        - Even assuming that the State's chosen developer would prioritize maximizing financial returns when selecting housing typologies—and the EIR has given no justification to support that assumption—it is logically impossible for three different housing types to each provide higher returns on investment than the next. Either townhomes provide higher returns or large-lot detached single-family residences do. The EIR's conclusions about which housing typologies would be employed under each alternative are therefore contradictory and unsupported by substantial evidence.

            - Which housing typology or typologies would provide the highest financial returns?

- Why does the County believe it fair to assume that a developer would prioritize financial returns from housing when selecting housing typologies for this complex development, which includes multiple revenue streams and a mandatory obligation to prioritize affordable housing?

- Further, even if these housing types provided similar returns on investment, the EIR does not explain why one alternative would maximize returns with townhomes while another would maximize returns with large-lot detached single-family homes. The EIR needs to justify why those design choices are appropriate assumptions in order for the alternatives analysis to be meaningful.

- The EIR also makes inconsistent assumptions about the impacts of increased or decreased development on the amount of construction activity that the Project will generate. Because the EIR fails to apply its assumptions consistently, decisionmakers and the public cannot rely on the analysis that is based on those assumptions.

  - For example, the analysis of the No Project: Low Development Alternative concludes that impacts to air quality and biological resources would be reduced because less residential and non-residential development would occur. EIR at 537-538 (this alternative "would result in somewhat reduced impacts on biological resources . . . because a reduced level of ground disturbance and construction activities would occur"); *see also* EIR at 539 (energy and greenhouse gas impacts would be "slightly less" because "construction activity would be somewhat reduced"). But this understanding that less construction results in less grading and ground disturbance does not carry uniformly through the analysis. For example, the EIR concludes that "[s]imilar impacts on cultural resources, and tribal cultural resources would result from the No Project: Low Development Alternative compared with the Proposed Plan because excavation, grading, and demolition would likely still be required for construction." EIR at 538. For similar reasons, the EIR concludes that this alternative would have "[s]imilar impacts on geology, soils, and seismicity … compared with the Proposed Plan. EIR at 540. Why would reduced construction activity reduce grading and ground-disturbance based impacts to one class of resources but not to another?

  - Similarly, notwithstanding the EIR's concession that construction-related impacts would be reduced under the No Project: Low Development Alternative, the EIR concludes that "[i]mpacts related to hazards and hazardous materials … would be similar to those of the Proposed Plan because construction would have similar risks, associated with the accidental release of hazardous materials." EIR at 540; *see also* EIR at 570 (applying the same assumptions to the Reduced Development and

Historical Preservation alternatives). Why would less development reduce certain construction-related impacts but not others?

- The EIR does not draw equivalent conclusions with respect to the No Project: High Development Alternative. In that case, the EIR notes that "[g]reater impacts on cultural resources, and tribal cultural resources would result from the No Project: High Development Alternative compared with the Proposed Plan because more development would increase excavation, grading, and demolition of existing buildings and construction requirements." EIR at 546. Likewise, the EIR concludes that "construction activity would be increased, resulting in slightly greater construction-related and operations GHG emissions." EIR at 547. And "[g]reater impacts on geology, soils, and seismicity would result … compared with the Proposed Plan because excavation, grading, and demolition would still be required and increased for demolition of existing buildings and construction of new residential and non-residential units." EIR at 548. It is logical that increased construction would result in increased construction-related impacts. But it is equally logical that decreased construction would result in decreased construction-related impacts. The EIR does not explain why it assumes the former to be true but not the latter. Its analysis is facially inconsistent and does not provide adequate information by which decisionmakers and the public could independently judge the relative merits of each of the alternatives.

- The alternatives analysis relies on assumptions that are not justified or supported by substantial evidence.

B11-83

  - For example, the EIR assumes without justification that key policies and conditions of approval from the Draft Specific Plan would survive and be implemented even if the Specific Plan is not adopted.

    - On page 538, the EIR concludes that the No Project: Low Development Alternative would have less than significant impacts on air quality "[w]ith implementation of the [Specific Plan] policies outlined in Section 3.3." But the No Project Alternatives assume that the Specific Plan is *not* adopted. EIR at 529 ("should the County not adopt the Specific Plan … the mostly likely course would be for the State to achieve its desired land use objectives through mechanisms other than the Proposed Plan").

      - Why would policies and conditions of approval developed in the Specific Plan to address air quality impacts of the Specific Plan exist and be implemented if the Specific Plan is not adopted?

    - The EIR also assumes that the No Project: Low Development Alternative would implement "policies similar to those" in the Biological Resources Analysis. EIR at 538 ("The policies outlined in Section 3.4, as well as the

biological resource protection practices identifies in the Standard Conditions of Approval are assumed to be similar in the Low Development Alternative.").

- Why would policies and conditions of approval developed in the Specific Plan to address biological impacts of the Specific Plan exist and be implemented if the Specific Plan is not adopted?

- The EIR assumes the same for policies related to Cultural, Historic, and Tribal Resources. EIR at 538 ("The relevant policies and Standard Conditions of Approval identifies in Section 3.5 are assumed to be similar in the No Project Low Development Alternative.")

    - Why would policies and conditions of approval developed in the Specific Plan to address cultural, historic, and tribal cultural resource impacts of the Specific Plan exist and be implemented if the Specific Plan is not adopted?

- The EIR assumes the same for policies related to Geology, Soils, and Mineral Resources. EIR at 540 ("Policies and Standard Conditions of Approval identified in Section 3.7 are assumed to be similar in this Alternative.")

    - Why would policies and conditions of approval developed in the Specific Plan to address geologic impacts of the Specific Plan exist and be implemented if the Specific Plan is not adopted?

- The EIR repeats these assumptions for the No Project: High Development Alternative. EIR at 546 (stating the same assumptions for policies and conditions related to air quality, biological resources, and cultural, historic, and tribal resources); EIR at 548 (stating the same for policies and conditions related to geology, soils, and mineral resources).

    - Why would policies and conditions of approval developed in the Specific Plan to address impacts of the Specific Plan exist and be implemented if the Specific Plan is not adopted?

- It might be reasonable to assume that certain Specific Plan policies or conditions of approval would persist or be implemented under the Reduced Development Alternative or the Historic Preservation Alternative, since those alternatives would still result in a modified specific plan being adopted. But under the No Project Alternatives, the Specific Plan is—by definition—*not adopted*. EIR at 529. If the Specific Plan is not adopted, logic would dictate that the Specific Plan's policies and conditions of approval would not be implemented. The EIR needs to justify its contrary assumption why the Specific Plan's policies and

conditions would be implemented in the absence of the Proposed Plan. Without that justification, the EIR's conclusions regarding the relative impacts of the various project alternatives are unsupported by reason or substantial evidence.

- The EIR also fails to adequately justify the assumptions underlying the selection of the No Project Alternatives. B11-84

  - The No Project Alternative(s) needs to examine what would occur if the Draft Specific Plan is not approved. As the EIR acknowledges, however, determining what would happen if the Draft Specific Plan is not approved is largely speculative. See EIR at 529 ("this EIR cannot pre-judge the State's actions").

    - The Legislature and the State Department of General Services "recognized the unique natural and historic resources of the [SDC] property and acknowledged that it was not the intent of the state to follow the traditional state surplus property process." Gov. Code § 14670.10.5(a)(3). The State has expressed an intent to prioritize affordable housing on the site and to protect the site's "exceptional open-space, natural resources, and wildlife habitat characteristics." Gov. Code § 14670.10.5(a)(6), (7), and (9). And the State has provided a framework by which the County may assume planning responsibility consistent with the objectives. Gov. Code § 14670.10.5(a)(8), (c). But nothing in the State Legislation requires the planning process to include any particular elements other than affordable housing and open space preservation. *See generally* Gov. Code § 14670.10.5. And equally significant, the State Legislation does not mandate that the State sell the SDC property through the planning process. *See* Gov. Code § 14670.10.5(c)(1) ("The director *may* … enter into an agreement with the county for the county to develop a specific plan for the property and to manage the land use planning process.") (emphasis added); *see also* Gov. Code § 14670.10.5(e)(1) ("This section shall not apply to the transfer of the property to a state agency in accordance with Section 11011."). The logical conclusion is that if the Specific Plan is not adopted, the Department of General Services could take a number of different paths, including allowing the County to develop a different specific plan for the site or transferring the property to a state agency in accordance with Section 11011. Yet the EIR concludes without explanation or justification that, if the Specific Plan is not adopted, the State would proceed with development of the site in substantial conformity with the rejected draft Specific Plan.

- On what basis does the EIR conclude that this outcome is more likely than any other possible outcome, such as DGS transferring the property to another state agency or DGS waiting for the County to develop an alternative specific plan?

- The EIR appears to rely on its claim that the current Draft Specific Plan most fully achieves the objectives outlined in the State Legislation. See EIR at 529 (concluding that "the State [would] retain[] planning control over the campus unfettered by local regulations to achieve these land use objectives" and that as a result, "the No Project Alternative would result in a palette of uses similar to those outlined in the Proposed Plan." But the only two objectives codified in the State Legislation are the mandate to prioritize affordable housing and the mandate to protect open space. *See generally* Gov. Code § 14670.10.5. So the State Legislation, standing alone, cannot justify the EIR's conclusion that the No Project Alternative would result in the same palette of uses as the Proposed Plan, which palette is designed to achieve the County's objectives—not the State's. *Compare* Gov. Code § 14670.10.5 *with* EIR at 527-528. Without further justification, the EIR cannot demonstrate that its purported No Project Alternatives reflect what would actually occur if the Specific Plan is not adopted.

- Similarly, the EIR fails to explain why the development levels in the two No Project Alternatives—which appear to be entirely arbitrary 25 percent increases and decreases in development—would be reasonably predicted to occur.

  - What data support the EIR's chosen housing and job count for the No Project: Low Development Alternative?

  - What analysis supports the EIR's chosen housing and job count for the No Project: Low Development Alternative?

  - What assumptions support the EIR's chosen housing and job count for the No Project: Low Development Alternative?

  - What data support the EIR's chosen housing and job count for the No Project: High Development Alternative?

  - What analysis supports the EIR's chosen housing and job count for the No Project: High Development Alternative?

B11-85

- What assumptions support the EIR's chosen housing and job count for the No Project: High Development Alternative?

- The EIR draws conclusions about the relative merits of its proposed alternatives without actually analyzing potential impacts or supporting its conclusions with substantial evidence. These failures obscure the EIR's reasoning and make it impossible for decisionmakers or the public to comprehend how the EIR draws it conclusions, particularly where the EIR's conclusions appear to contradict the EIR's own limited analysis.

    - For example, the EIR concludes that No Project: Low Development Alternative would result in "lower financial feasibility" that the Proposed Plan. EIR at 537. But the EIR does not document or explain why the No Project: Low Development Alternative would be less financially feasible. To the contrary, the EIR states that the alternative's development mix would shift, for example by prioritizing more single-family homes, "to maximize financial feasibility." EIR at 537.

        - What are the specific financial drivers that influence the financial feasibility of the No Project: Low Development Alternative?

        - How specifically does the financial outlook of this alternative compare to that of the Proposed Project?

    - The EIR also states that "the No Project: Low Development Alternative would have an equivalent impact related to land use, population, and housing compared to the Proposed Plan" (EIR at 541-541), notwithstanding that the No Project: Low Development Alternative would develop "to a lesser extent and in a smaller area" (EIR at 541).

        - Why did the EIR conclude that impacts would be the same even though development intensity is reduced?

        - Why does the financial feasibility of various alternatives appear to vary so greatly but the impacts do not?

    - The EIR assumes without explanation or justification that the No Project: Low Development Alternative, the Reduced Development Alternative, and the Historic Preservation Alternative would "shift some of the planned growth in the Planning Area to other locations in the region." EIR at 543, 559, 568.

        - Why is the growth planned by the Draft Specific Plan assumed to be inevitable in Sonoma County?

B11-86

- The EIR concludes that the Historic Preservation Alternative "is projected to result in approximately 50 percent fewer vehicle trips than the Proposed Plan, indicating that the total VMT generated may also be roughly 50 percent lower." EIR at 569. The EIR does not cite data or analysis to support this statement.
    - How did the EIR reach these numbers?
- The EIR states that the reduction in VMT under the Historic Preservation Alternative "would be substantial though would not necessarily translate to less residential VMT per capita, which is the efficiency metric for which a significant VMT impact was identified." EIR at 569. In light of its chosen significance threshold, the EIR cannot meaningfully compare the VMT impacts of the various alternatives unless it quantifies VMT per capita for each alternative.
    - What data or analysis would be needed to determine whether the substantial reduction in VMT under the Historic Preservation Alternative would translate to less residential VMT for capita?
    - Under what circumstances does a change in total VMT translate or not translate to a change in VMT per capita?
    - The EIR states that it is uncertain whether the reduction in VMT would translate to a reduction in VMT per capita, but nevertheless goes on to conclude that the alternative's "reductions in VMT and VMT per capita would be insufficient to avoid a significant and unavoidable VMT impact." EIR at 539. By definition the EIR cannot determine the significance of the alternative's VMT per capita impact if the EIR does not know that the alternative's VMT per capita impact is. The EIR's conclusion is therefore unsupported by analysis or substantial evidence.
- The EIR does not provide a meaningful analysis of the impacts of each of the alternatives, using terms such as "largely comparable," "slightly greater," and "slightly reduced." These terms are especially inappropriate for the Historic Preservation Alternative, which is the environmentally superior alternative. The EIR incorrectly concludes that the proposed Project's impacts are "largely comparable" to reduced development alternatives. But the Historic Preservation Alternative would significantly reduce the magnitude of impacts on traffic, climate change, historic resources, noise, biological resources, public services and land use.
- The EIR states that the Proposed Project would have "superior financial feasibility" than the alternatives. EIR at 571. But the EIR does not provide data or other substantial evidence to support that conclusion. All of the statements about financial feasibility in the alternatives analysis are conclusory and lack substantiating evidence or discussion. *See* EIR at 536-571.

B11-87

- The EIR defines the No Project Low Development alternative by a reduction in overall housing and job numbers. It then concludes that "[t]he proportion of both income-restricted affordable housing and affordable by design housing in the Low Development Alternative is projected to be less than the Proposed Plan." EIR at 542. But the EIR fails to provide supporting evidence for this projection. *Id.*
    - Why is the proportion of both income restricted affordable housing and affordable by design housing in the Low Development Alternative projected to be less than the Proposed Plan?
- The EIR makes the same unsupported projections with respect to the Reduced Development Alternative and the Historic Preservation Alternative. EIR at 559, 568.
    - Why is the proportion of both income restricted affordable housing and affordable by design housing in the Reduced Development Alternative and the Historic Preservation Alternative projected to be less than the Proposed Plan?
- Conversely, the EIR defines the No Project: High Development alternative by an increase in overall housing and job numbers. It then concludes that "[t]he proportion of both income-restricted affordable housing and affordable by design housing in the High Development Alternative is projected to be more than the Proposed Plan." EIR at 550. again, the EIR fails to provide supporting evidence for this projection. *Id.*
    - Why is the proportion of both income restricted affordable housing and affordable by design housing in the High Development Alternative projected to be more than the Proposed Plan?
- The EIR states that "[b]ased on prior alternatives modeling exercises completed for SDC in 2021, it is likely that the No Project: High Development Alternative would generate slightly more per capita VMT than the Proposed Project, though the difference would likely be negligible." But the EIR fails to identify, cite to, or provide copies of the analysis and results from those "prior alternatives modeling exercises." Without additional information, decisionmakers and the public cannot independently judge the strength of the EIR's analysis or the veracity of its conclusions.

- The alternatives analysis fails to discuss or analyze the impacts of any of the proposed alternatives to the Sonoma Valley Wildlife Corridor.
    - The EIR's analyses of the No Project: Low Development Alternative and the Reduced Development Alternative do not mention the wildlife corridor at all. EIR at 538 (discussing the No Project: Low Development Alternative's impact to biological resources but failing to mention or discuss the Wildlife Corridor); EIR

at 554 (same with respect to the Reduced Development Alternative). Because impacts to wildlife movement—and particularly to wildlife movement within the established Sonoma Valley Wildlife Corridor—are a major issue and threshold of significance for the Project's impacts to biological resources, this omission prevents readers from understanding fully the relative consequences of each alternative.

- How would the No Project: Low Development Alternative impact wildlife movement and connectivity through the Sonoma Valley Wildlife Corridor?

- How would those impacts differ from the impacts the Project would have on wildlife movement and connectivity through the Sonoma Valley Wildlife Corridor?

- How would the Reduced Development Alternative impact wildlife movement and connectivity through the Sonoma Valley Wildlife Corridor?

- How would those impacts differ from the impacts the Project would have on wildlife movement and connectivity through the Sonoma Valley Wildlife Corridor?

o Similarly, the EIR's analyses of the No Project: High Development Alternative and the Historic Preservation Alternative refer only to those wildlife corridors that lie (or would lie) within the Core Campus. EIR at 546 (noting that under the No Project High Development Alternative, "the area devoted to the expanded wildlife corridor may be reduced or eliminated," but not discussing impacts to the remainder of the Sonoma Valley Wildlife Corridor); EIR at 563 (same with respect to the Historic Preservation Alternative, noting "the creek corridors and the wildlife corridor will also not be expanded"). By failing to analyze the alternatives' impacts to the established Sonoma Valley Wildlife Corridor and their reliance on a new road connecting to Hwy. 12 that bisects the Corridor outside the Core Campus, the EIR obscures the true impacts of those alternatives and prevents readers from accurately comparing the alternatives. The EIR cannot reliably identify an environmentally superior alternative without first comparing the full environmental effects of each proposed alternative.

- How would the No Project: High Development Alternative impact wildlife movement and connectivity through the Sonoma Valley Wildlife Corridor?

- How would those impacts differ from the impacts the Project would have on wildlife movement and connectivity through the Sonoma Valley Wildlife Corridor?

- How would the Historic Preservation Alternative impact wildlife movement and connectivity through the Sonoma Valley Wildlife Corridor?

- How would those impacts differ from the impacts the Project would have on wildlife movement and connectivity through the Sonoma Valley Wildlife Corridor?

CUMULATIVE IMPACTS

B11-88

- The EIR states that a cumulative impact analysis "must analyze either a list of past, present, and probably future projects or a summary of projections contained in an adopted general plan or related planning document." EIR at 585. While the EIR claims that the "Proposed Project represents the cumulative development scenario for the reasonably foreseeable future in the Planning Area under the County's General Plan" and "incorporates the likely effects of surrounding regional growth," for many impacts, the EIR limits its analysis to the Plan Area rather than considering the combined effects of the Project together with the environmental impacts that are likely to occur outside the Project's Planning Area.

    - For example, the Planning Area is constrained to the SDC site. EIR at 54 (Figure 2.1-2: Planning Area Boundaries). But the Sonoma Valley Wildlife Corridor that runs through the Planning Area extends for a significant distance to the east and west, stretching from the top of Sonoma Mountain across Sonoma Creek and the valley floor to the Mayacamas Mountains to the east. Permeability of the Sonoma Valley Wildlife Corridor is important "for the movement of wildlife at a regional scale." EIR at 242. The cumulative impact boundary for impacts to the Wildlife Corridor must include the entire corridor and all projects capable of impacting the corridor if the true scope and magnitude of cumulative impacts are to be understood. Specifically, analysis of cumulative impacts on the Wildlife Corridor should encompass an area extending from the Russian River in the north to the San Pablo Bay to the south, and from the Petaluma River to the west to Napa Valley to the east. This impact boundary is necessary to capture the movements of local populations of the widest-ranging species present (i.e., mountain lions), as well as movement and dispersal among regional populations, allowing for genetic exchange, and range shifts in response to climate change over time. This boundary would include a portion of the Marin Coast-Blue Ridge Critical Wildlife Linkage identified by Penrod et al. (2013),[4] but analysis should include all land development in the region, not only within the mapped critical corridors.

[4] Penrod et al. 2013. Critical Linkages: Bay Area & Beyond. Produced by Science & Collaboration for Connected Wildlands, Fair Oaks, CA in collaboration with the Bay Area Open Space Council's Conservation Lands Network.

- The EIR's myopic focus on cumulative impacts caused by and felt within the Planning Area obscures impacts that may occur outside the Planning Area and that the Project may add to, or impacts that may occur within the Planning Area that could be cumulatively significant when impacts from projects outside the Planning Area are accounted for. The EIR must expand its cumulative impacts boundary.

- The EIR does not apply a consistent cumulative impact boundary. While the introduction to the cumulatively impacts analysis indicates that the impact boundary is the Planning Area (EIR at 585), the EIR elsewhere extends the impact boundary (e.g., EIR at 589 ("The cumulative geographic context for cultural, historic, and tribal cultural resources is the County of Sonoma.").

    - Where the EIR does use a wider impact boundary, it is not clear whether the EIR analyzes cumulative impacts based on a specific list of projects or on projected development under the General Plan. For example, at pages 589-590 the EIR states that "[i]f the Proposed Plan, in combination with other past, present, and reasonably foreseeable projects in Sonoma County, would result in the loss of or adverse changes to multiple historic or cultural resources a significant cumulative impact could result." Further muddying the waters, the EIR does not specify what other projects inform its analysis. EIR at 589-590. Instead, the EIR punts to project-level environmental review and discusses only projects to be completed within the Planning Area under the Specific Plan. *Id.* The EIR must choose an appropriate cumulative impacts boundary for each impact, justify its choice, and analyze cumulative impacts of the Project together with other past, present and future development. *See, e.g.,* Draft Environmental Impact Report for the Springs Specific Plan at 4.0-3 ("The cumulative setting for aesthetics is the Sonoma Valley Planning Area"), 4.0-7 ("The cumulative setting for biological resources includes the Plan area and the greater Sonoma County region."), 4.0-9 (The cumulative setting for … (climate change) comprises anthropogenic (i.e., human-made) GHG emissions sources across the globe.")

    - Use of the County's existing general plan for the cumulative impact analysis does not provide a meaningful analysis of cumulative impacts for the SDC Project. The County adopted its general plan more than 14 years ago in 2008, and is currently updating the general plan. The general plan's outdated cumulative impact analysis omits recent planned and approved projects and therefore does not provide a meaningful framework with which to gauge the Project's cumulative impacts.

- Specific Plan Policy 2-28 provides that prior to the commencement of the approval of any specific project in the Proposed Plan area, Project Sponsors shall contract a qualified biologist to conduct studies identifying the presence of special-status species and sensitive habitats at proposed development sites and ensure implementation of

appropriate mitigation measures to reduce impacts to sensitive habitat or habitat function to a less than significant level. This policy epitomizes improper piecemealing of environmental analysis. If development under the Specific Plan is only analyzed on a project-by-project basis, the cumulative impacts of those projects will be obscured and may not be adequately mitigated. The EIR must complete all required analysis now, at the plan-level stage, in order that decisionmakers and the public can understand the full picture of what a buildout of the draft Specific Plan would entail.

EXEMPTION AND TIERING

- Much of the EIR relies on future, project-level environmental review to identify and mitigate potentially significant environmental impacts. *See, e.g.*, EIR Chapter 3.4; *see also* EIR at 589-590 (finding that cumulative impacts to cultural, historic, and tribal cultural resources would not be cumulatively considerable due in significant part to future project-level environmental review). But the Specific Plan states that the County intends to avoid future project-level environmental review to the greatest possible extent. Draft Specific Plan at 7-3 ("When a public agency has prepared an EIR for a specific plan, State law provides that residential, commercial, or mixed-use projects undertaken inconformity to the specific plan are exempt from CEQA, subject to certain requirements. Pursuant to Section 15152 of the CEQA Guidelines, projects will also be eligible to "tier" from the EIR … The County intend to rely on these provisions for exemptions and tiering to the maximum extent feasible."). Furthermore, as a matter of law, residential projects consistent with a specific plan are statutorily exempt from CEQA and do not require additional environmental review. Gov't Code § 65457.

    - If the County's goal is to evade future project-level review, how can it justify relying on future project-level review to identify and mitigate the Project's impacts?

    - In light of the Draft Specific Plan's stated goal, how will the County ensure that all necessary environmental review is completed?

B11-89

ATTACHMENT B

PRUNUSKE CHATHAM, INC.

September 16, 2022

Brian Oh, Comprehensive Planning Manager
Permit Sonoma, County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403

Re: Comments on the Sonoma Developmental Draft Specific Plan and Draft Environmental Impact Report, Biological Resource Elements

Dear Mr. Oh:

Prunuske Chatham, Inc. (PCI)'s services were retained by the Sonoma Land Trust to provide our professional assessment of the Sonoma Developmental Center (SDC) Draft Specific Plan and Draft Environmental Impact Report. Our review and comments focus on biological resources aspects of the documents and identify inadequacies in the Draft EIR's evaluation of potential impacts on biological resources.

PCI Qualifications

PCI is an ecological consulting firm based in Sonoma County, founded in 1986. PCI provides a full spectrum of services including ecological assessment, planning, design, and restoration implementation. Our staff includes wildlife biologists, ecologists, botanists, geomorphologists, planners, civil engineers, landscape architects, and constructors. Our biological resources expertise includes natural resource management planning, park and preserve planning, botanical and wildlife assessments, wetland delineation, forestry and fuel load planning, and restoration planning and implementation. Our regulatory compliance staff provide environmental document preparation and have guided projects ranging from dam removals to park master plans to landscape-level efforts through the CEQA and permitting processes. Our design work has focused on park and trail planning, salmonid habitat enhancement, natural channel restoration, and native revegetation. Our clients range from individual landowners to non-profits, utilities, and government agencies.

PCI's qualifications to comment on these documents include our directly related prior work on the SDC site and a wide range of biological resources and CEQA planning across the North Bay for the past 30 years. In 2015, PCI prepared a Draft Resources Assessment for the Sonoma Developmental Center under contract to Sonoma County Agricultural Preservation and Open Space District. In 2018, PCI prepared the Natural and Recreational Resources element of the Sonoma Developmental Center Existing Conditions Assessment, as part of a consultant team led by Wallace Roberts Todd under contract to the State Department of General Services. PCI provides these comments based on the professional expertise and opinion of PCI's staff. These professional opinions and expertise are informed by decades of experience analyzing biological resources and impacts, application of established scientific principles, and a robust knowledge of the resources and environment at the SDC site.

Lead PCI staff on this document review include Joan Schwan, Principal Ecologist; Carrie Lukacic, Principal Environmental Planner; Erynn Rebol, Biologist; and Celia Chatham, Biologist. Resumes for each are provided as an attachment.

Comments on the Specific Plan and the Adequacy of the EIR for Biological Resources

The Sonoma Developmental Center property's regionally important natural resources are widely acknowledged. Its extensive undeveloped lands and native habitats; creeks, lakes and springs; and location at a narrow point in a regional wildlife corridor, are all central to the considerations in planning redevelopment. The Draft EIR notes that the majority of responses received on the Notice of Preparation related to protection of these resources, reflecting strong community and agency support. PCI appreciates the attention the County and the Specific Plan team have directed toward incorporating natural resource protection into planning, and the responsiveness of the Plan to some of the specific issues raised in comments on the NOP. In particular, PCI noted that the plan incorporates:

- A clearly stated goal to "maintain and enhance the size and permeability of the Sonoma Valley Wildlife Corridor…by ensuring a compact development footprint at the SDC site and by minimizing impacts to wildlife movement and safety from human activity and development at the campus" (Goal 2-D, Specific Plan).
- Removal of several buildings on the north side of the central campus, allowing for an expanded riparian buffer along Sonoma Creek and improving habitat for wildlife in an otherwise constrained portion of the corridor.
- Policies that help limit impacts to wildlife permeability from site development, including restricting development and recreation within the wildlife and creek corridors, meeting but not exceeding defensible space requirements, maintenance of road undercrossing structures, and measures to manage lighting, noise, fencing, and pesticide use.
- A commitment to avoid increases in withdrawals from the site's springs and streams, helping maintain critical water resources for fish, wildlife, and riparian vegetation.

However, some aspects of the project conflict substantially with natural resource protection, and the Draft EIR also fails to clearly or thoroughly address a number of important biological considerations. For example:

- The Draft EIR's analysis and discussion of potential biological impacts is limited and is insufficient to determine whether the Specific Plan's potential impacts will be significant. B11-90
- The Draft EIR fails to discuss how proposed new roads, and significant increases in traffic and human activity and development density on the site, may affect wildlife movement or cause other significant impacts. B11-91
- The Draft Specific Plan and Draft EIR would permit numerous uses in "Preserved Open Space" that conflict with open space preservation goals and could cause significant impacts. B11-92

These and other issues are addressed more fully in the table below. As detailed in the table, the Draft EIR's lack of analysis of key biological impacts prevents the EIR from identifying which impacts are likely to occur or how significant they will be. Because the EIR does not adequately analyze impacts, it cannot B11-93

fully develop or analyze effective mitigation measures. Further, what little de facto mitigation the EIR does propose (via Specific Plan policies and Conditions of Approval) is insufficient to reduce impacts to biological resources to less-than-significant levels. In addition to identifying analytical issues in the EIR, our comments below pose specific questions that must be answered to fill informational gaps in the EIR and facilitate complete, scientifically sound impact analysis.

B11-93

PCI also observed that the Specific Plan focuses on avoiding negative impacts on natural resources and, aside from the elimination of two buildings mentioned above, does not take advantage of this key site planning opportunity to call for positive habitat improvements or restoration of impaired ecological values. In addition, the Biological Resources sections contain a number of errors and omissions in describing the basic ecological setting of the site.

PCI's full comments and questions on biological resource aspects of the Draft Specific Plan and adequacy of the Draft EIR are provided below.

Specific Plan

Chapter 1 – Vision, Guiding Principles, and Context

B11-94

Page	*Comment*
1-19 Figure 1.6-2	Is this map meant to show only known occurrences or all likely habitats? Please clarify. Multiple special-status species previously documented as occurring or likely to occur on the site are not shown. Are these excluded intentionally, and if so, why? For other species, only a portion of their known or likely distribution is shown. See PCI (2018) [1] for detailed review of potential habitat on site for these species. Species not shown, or not showing full distribution, in Figure 1.6-2, but previously documented as occurring or likely to occur are: - Freshwater shrimp – documented on Sonoma Creek and has potential to occur on Asbury and Hill Creeks. - Steelhead – documented in Hill Creek and potentially present in Asbury Creek, in addition to presence in Sonoma Creek. - Species of Special Concern documented on or adjacent to the site but not shown (see PCI 2018 for location information): o California giant salamander o Foothill yellow-legged frog o Pallid and Townsends big-eared bats o Northern western pond turtle Species of Special Concern American badger has been reported on Sonoma Mountain and also has potential to occur. Mountain lions are a "specially protected mammal in California" and of high local conservation concern; radio tracking by local researchers shows extensive use of the SDC site.

[1] Prunuske Chatham, Inc. (PCI). 2018. Sonoma Developmental Center - Existing Conditions Report: Natural and Recreational Resources. Appendix to: Sonoma Developmental Center Existing Conditions Assessment, prepared by WRT. https://transformsdc.files.wordpress.com/2020/01/2-cnaturallandrecreationalresourcesv3.pdf. August 2018.

	Note also that northern spotted owl is federally listed as threatened but not shown as such on map.	
1-20 Figure 1.6-3	This map conflicts with known data. What is the data source? It doesn't match PCI (2018) or Sonoma Veg Map data. The large wetland on east side is labeled a "vernal pool" but this wetland is not considered a vernal pool by prior work (e.g., PCI 2018). Please adjust text or explain why the feature is considered a vernal pool, given the high conservation concern for vernal pools. This figure also omits non-native forest on core campus though it is "existing vegetation" (i.e., relevant to the map), is mapped by the Sonoma Veg Map data, and is included in Figure 2.2-1, Open Space Framework. The non-native forest should be included on this map because these trees provide habitat values, including nesting, cover, and foraging resources for birds and potential roosting habitat for bats. The potential for impacts on birds, wildlife movement, and special-status bats should be addressed in the EIR if removal of this vegetation is proposed.	B11-95 B11-96
1-21 First Sentence	First sentence states that "the natural landscape and the site's location in the Sonoma Valley also brings fire hazards." Similar wording is used on 2-1. That statement should be omitted or clarified to explain that human infrastructure and human activity pose the most significant risks for wildfire ignition in this area (as stated on page 500), and that weather patterns of the region in combination with local topography lead to high potential for the spread of wildfire throughout both natural lands and developed environments.	B11-97
Chapter 2 – Open Space and Resources and Hazards		
Page	*Comment*	
2-4 Figure 2.2-1	This figure shows "Managed Landscape/Fire Buffers" and an "Expanded Wildlife Fire Buffer." The Managed Landscape/Fire Buffers extend into what is currently open space. How will fuel reduction practices in this zone be tailored to prevent any significant impact on wildlife movement or other habitat values? What is the proposed maximum width of this buffer? All fire buffers should be no wider than necessary to meet public safety needs in order to reduce impacts on natural resources. Potential impacts include reduced permeability for wildlife movement (due to loss of cover and foraging resources, and increased exposure to human activity), damage to sensitive plant communities (i.e., within Oregon oak woodland on the west side of campus, with potential direct removal of oaks as well as potential loss of native understory diversity, reduced oak regeneration and increased potential for weedy species establishment) and within riparian forest along Hill Creek (with potential direct removal of riparian trees as well as loss of native understory diversity, potential reduced native tree regeneration, and increases in weedy species). [See, for example, Kerns et al. (2020), Perchemlides et al. (2008), and Seavy et al. (2008).] Biological Resources significance Criteria 1 through 4 indicate that these types of impact could constitute significant impacts to biological resources. These impacts must therefore be addressed in the EIR.	B11-98
2-5 Figure 2.2-2	This figure showing "Preserved Open Space" does not show the two new potential Highway 12 connector roads that could be developed within or across open space, resulting in an incomplete illustration of the nature of the proposed open space.	B11-99

	Project impacts to open space cannot be fully analyzed unless this figure shows these proposed new roads and calls out locations for any of the anticipated uses, such as intensive agriculture or utility development, noted in Table 4-3, that are not compatible with common understanding of the term "Preserved Open Space," which is land that is primarily undeveloped and left in a natural state, such as grasslands and open rangeland, forests, and woodlands. Locations planned for utility development or intensive agriculture (e.g. indoor crop cultivation, confined farm animal operations, row crops, vineyards, etc.) should be designated as such; otherwise, project impacts to natural resources cannot be analyzed. The Plan does include a Utilities land use type; all proposed utility developments should be shown with that label. The potential impacts of the allowable uses within the "Preserved Open Space" are not analyzed in the EIR. Until the potential impacts are analyzed, it is impossible to determine whether those impacts would be significant or whether certain Specific Plan policies could avoid or mitigate those impacts.	B11-100
2-6 second paragraph	Second paragraph emphasizes vegetation management as a means to reduce wildfire hazard. The prime importance of designing buildings to be fire-resistant, and of use policies that limit the likelihood of ignition, should be emphasized here along with vegetation management. Vegetation removal from the natural landscape should not be the primary approach to fire risk reduction on the site, especially given its importance to wildlife habitat and wildlife movement through the site. See comment above on page 2-4 for further discussion of potential impacts of vegetation removal on biological resources.	B11-101
2-9	To reduce impacts of trails and recreational use on biological resources, Policy 2-4 should include the decommissioning of trails that are duplicative or causing erosion or other resource damage. The current trail system includes trails that occur close together and lead to essentially the same destinations. Since each trail and its use has a cumulative impact on natural vegetation (i.e. by direct removal and often, the facilitation of invasive plant species) and on wildlife use (by the increase in human and dog presence), decommissioning duplicative or highly erosive trails will reduce the project's recreational impacts. Some of the trails on the site are also contributing to substantial erosion, resulting in soil and vegetation loss and potential impacts to water quality downstream. The site's trail system should be reviewed for such locations to decommission or realign as well. Policy 2-5 calls for setting aside a location for water recreation for people and dogs at Suttonfield Lake. Facilitating intensive dog use of the site could have significant impacts on wildlife use of the area. Dogs can affect wildlife through direct predation, harassment, scent marking resulting in wildlife avoidance, and spread of disease. Dog presence has been found to be associated with reduced habitat use by species including mountain lion, mule deer, bobcats, and small mammals such as squirrels and rabbits (Reilly et al 2017, George and Crooks 2006, Length et al. 2008); with disease transmission to gray foxes (Riley et al. 2004); and with reduced bird presence and species richness (Banks et al 2007). The potential impacts of dog use must therefore be evaluated in the EIR. Until the potential impacts analyzed, it is impossible to determine whether those impacts would be significant or whether certain Specific Plan policies could avoid or mitigate those impacts.	B11-102 B11-103

2-10	Goal 2-D seems to be mixing the goal of conservation of habitat on site with resource conservation more globally. Please clarify. For instance, how is "sustainable food production" a means to conserving habitat on the site? Policy 2-6 – This policy should also include and address the northwest corner. Figure 2.2-1 indicates a building will be removed in this location and the wildlife buffer expanded.	B11-104 B11-105
2-11	Policy 2-11 – This policy should incorporate the most recent guidance from the Dark Sky Association, which is that all outdoor lights have a color temperature of no more than 2200 Kelvins. [See A Values-Centered Approach to Nighttime Conservation - International Dark-Sky Association; darksky.org)] Dark Sky Standards also provide that: • All lights will use the lowest light level required minimum levels recommended by widely recognized professional standards bodies. • All residential and business outdoor lighting should be actively controlled through means such as timers and motion-sensing switches to ensure that light is available when it is needed, dimmed when possible, and turned off when not needed. Lighting can disrupt wildlife by altering night-time cover and hunting conditions, reducing an area's value and permeability to wildlife. For instance, lighting has been found to reduce use of movement corridors for mountain lions (Beier 1995), deer and mice (Bliss-Ketchum et al. 2016), and bats (Bhardwaj et al. 2020), reducing habitat connectivity for these species. This policy should incorporate the most recent Dark Sky Association guidance and standards in order to reduce impacts to wildlife corridor use and movement. Policy 2-16 – These are valuable requirements to help address impacts of fencing on wildlife movement, but to allow for passage of wildlife above and below fencing, the Specific Plan should also require that the maximum height of the upper strand be no more than 48" (42" preferred). Since Table 4-3 permits agricultural uses within the "Preserved Open Space," this policy must make clear that these fencing standards apply throughout areas shown as Preserved Open Space in Figure 2.2-2, regardless of whether it may be also used for agricultural uses. See also comment on p. 4-14. Policy 2-17 – The wording of this residential nighttime noise reduction policy suggests that it is optional or will not necessarily be enforced. It is therefore insufficient to reduce noise impacts on wildlife to less-than-significant levels. Noise has been shown to impact wildlife usage of habitat, resulting, for example, in reduced foraging time and efficacy, and reduced nesting use, in birds (Burger and Gochfeld 2002, Stone 2000, Aubrey and Hunsaker 1997, Shannon et al. 2016). Potential noise impacts on wildlife must therefore be analyzed in the EIR.	B11-106 B11-107 B11-108
2-12	Policy 2-19 – The planting palette for habitat restoration or general plantings within the open space areas should be entirely composed of locally native species; the County should delete "and/or low-water plant species." The planting palette for general planting within the campus should also be composed of locally native species	B11-109

	where feasible, but in ornamental landscape settings, other low-water-use plants would also be acceptable. Policy 2-21 - To ensure the proposed enhancements do not have a significant impact on wildlife movement and sensitive wetland habitat, this policy should require that development "Ensure that enhancements protect or improve wildlife habitat values." Policy 2-24 – Additional bird-friendly design measures should be incorporated in order to avoid impacts to birds. Relevant additional measures include: – Minimize the overall amount of glass on building exteriors facing water features. – Avoid transparent glass skyways, walkways, or entryways, free-standing glass walls, and transparent building corners – Utilize glass/window treatments that create a visual signal or barrier to help alert birds to presence of glass. – Avoid funneling open space to a building façade. – Strategically place landscaping to reduce reflection and views of foliage inside or through glass. – Avoid or minimize up-lighting and spotlights; and turn non-emergency lighting off (such as by automatic shutoff) at night to minimize light from buildings that is visible to birds. (See also comments on Policy 2-11 regarding lighting.) See: Resource-Guide-for-Bird-safe-Building-Design.pdf (audubonportland.org) 2-25 – Asbury Creek should be included as one of the streams requiring a setback of at least 50'. Because 50' is a minimum setback that will only protect some of the processes listed, larger buffers should be retained where they currently exist, and opportunities to expand buffers to 100' – 300' should be considered. These larger buffers will provide greater mitigation of impacts from development and human uses on wildlife movement and water quality. For example, setbacks of 100'-300' will be more effective as wildlife corridors, allow for greater natural regeneration of native trees, and provide greater water quality protection through sediment and nutrient filtration (see, for example, Hilty and Merenlender 2004, Castelle et al. 1994, and Lee et al. 2004).	B11-109 B11-110 B11-111 B11-112
2-13	2-F – In order to reduce potential wildfire impacts to wildlife and habitat, the Specific Plan needs to include managing human activities and limiting ignition potential as one of its key strategies. Measures to limit human-caused ignition should be central to residential and recreational site regulations and agricultural use policies. Policy 2-31 Fire buffers appear to encompass areas of sensitive habitat including Oregon oak woodland, valley oak woodland, and riparian forest. How will fire buffer development affect the health and quality of these sensitive vegetation types (e.g., understory diversity, natural regeneration potential, potential incursion of weeds, increased solar exposure, etc.)? How will those impacts be mitigated? These	B11-113 B11-114

	potential impacts need to be evaluated fully in the EIR to ensure they will be less than significant. Policy 2-32 – There seem to be some missing words in the second sentence between "Loose surface litter…shall be permitted…in order to ensure" and "the removal of trees, bushes, shrubs…". Please clarify. Retaining some surface litter is necessary to protect soil health, prevent erosion, allow for natural regeneration of native plants, and support reptiles, amphibians, and other wildlife.	B11-115
2-14	Policy 2-34 – The Fuel Separation standard provides only *minimum* clearance distances. Based on this guideline, all native vegetation in this zone could potentially be removed, having a significant impact on biological resources. In order to ensure that the impact of fuel management is less than significant, the Specific Plan must identify an upper limit to the amount of clearing of native vegetation, so that as much native vegetation may be retained as possible while meeting specific fuel reduction objectives. The EIR must also evaluate the impacts from the implementation of these standards to ensure they will actually be less than significant or will be mitigated to less-than-significant levels. How will the likelihood of ignition from human causes be managed? No policies currently address this essential topic.	B11-116 B11-117
Chapter 4 – Land Use		
Page	*Comment*	
4-8	The Parks and Recreation land use type description includes dog parks as one use type. Limiting dog presence on the site will be necessary to avoid impacts to wildlife permeability of the site. Policy 6-4 indicates that a dog park will be provided within Core Campus, at least 200' from any creeks or wildlife corridors. This 200' limitation will be valuable in reducing impacts to wildlife. Based on the Land Use diagram (Figure 4.1-2), the Ballfields, Central Green, and one area east of the creek are the only "Park" areas more than 200' from creeks. The Park area east of the creek appears to be within existing riparian habitat along Sonoma Creek, which would not be suitable for a dog park (or any other highly developed park type). Areas within the Ballfields zone, or elsewhere within the Residential or Flex Zones on the west side of Arnold Drive, would be most suitable for a small dog park.	B11-118
4-14 – 4-16 Table 4-3: Permitted Uses	The table indicates that agricultural crop production and agricultural processing, as well as keeping farm animals, is permitted in both "Buffer Open Space" and "Preserved Open Space." Keeping confined farm animals, mushroom farming, and timberland conversion are also permitted in "Preserved Open Space." In PCI's experience, these types of activities are often incompatible with open space preservation because they often eliminate most or all natural vegetation, often involve construction of built facilities, and frequently exclude or reduce wildlife with fencing, trapping and other measures. How does the County envision these activities occurring in a manner compatible with open space preservation? How will needs to restrict cattle or other farm animal movement, within open space areas, be aligned with maintaining wildlife permeability?	B11-119

	The table further indicates that an array of other intensive agricultural uses, including farm retail sales, indoor crop cultivation, wholesale nursery, and tasting rooms are all permitted in "Preserved Open Space." These uses are not compatible with open space preservation because they entail built facilities and removal of natural vegetation. These uses should not be permitted in Preserved Open Space. How will the potential impacts of these permitted uses be evaluated in the future? Similarly, outdoor recreation facilities and "rural sports and recreation" facilities are potentially permittable in Preserved Open Space. What types of facilities will these include? A clear explanation of this use type is needed to allow determination of potentially significant impacts to wildlife. Uses such as Frisbee golf, zip lines, and off-road vehicle use all have potential to reduce wildlife usage via habitat damage and increased human activity levels, and must be analyzed by the EIR. The table indicates that geothermal resource development, parking facilities, and public utility facilities may all also be located within Preserved Open Space. These are potentially extensive facilities that may also be incompatible with meaningful open space preservation because they entail removal of natural vegetation, construction of new buildings and other infrastructure, and a potentially heightened level of human presence and activity. They should not be permitted within Preserved Open Space unless greater detail can be provided in this Specific Plan, showing where they could be located, how extensive they are, allowing for analysis of impacts to wildlife and other biological resources in the EIR.
Chapter 5 – Community Design	
Page	*Comment*
5-4	The last paragraph indicates that sycamores will line principal axes, and other primarily deciduous canopy trees will be used on other streets. The Specific Plan should prioritize the use of native trees and other native plants for landscaping where they align with the ornamental setting, because they are well-adapted to local climate, require less water and chemical inputs to thrive, and provide habitat benefits (food resources, cover, and nesting opportunities) for the greatest variety of native animal species . Valley oaks, which form an important part of the core campus landscape already in the southwestern section, as well as coast live oak, should be incorporated where space allows to sustain oaks as a long-term element of the campus, help ameliorate historic losses of sensitive valley oak habitat, and support the many species of native birds, mammals, amphibians and invertebrates that rely on native oaks. This will also help meet Policy 5-1, establishing tree-lined avenues "..that complement the surrounding hills and open space landscape."
5-15	This section should include a statement specific to lighting meeting Dark Sky standards; this is mentioned only in passing in Policy 5-13 and should be made its own policy, to ensure cross-referencing with Policy 2-7. See comments on page 2-11, above, for further discussion.
6-9	Policy 6-4 regarding a dog park: see comment on page 4-8, above.

B11-120

B11-121

B11-122

B11-123

B11-124

B11-125

Adequacy of Environmental Impact Report Biological Resources Evaluation		
Introduction		
Page	*Comment*	
p. 45 NOP and Baseline	The baseline appears to vary between sections in the EIR. For example, it appears the Transportation section may use 2019 as baseline and the Biology Section uses a different baseline. Without a proper baseline, impact analyses cannot be evaluated. Identifying an appropriate baseline is particularly important for impacts relating to intensity of human uses and presence on the site, since the population of SDC has declined so dramatically in recent years as SDC ceased operations and closed. What is the specific baseline condition used for each section of the EIR?	B11-126
Section 3.4 – Biological Resources		
Page	*Comment*	
p. 203, paragraph 1, last sentence	"The section describes biological resources in the Planning Area (which includes the project area for the SDC), including habitats, wetlands, critical habitat, and special-status species, as well as relevant federal, State, and local regulations and programs." This section does *not* actually address potential impacts and proposed mitigation measures needed to reduce potential impacts to less–than-significant levels. In order to fully address and mitigate potential impacts on biological resources, the EIR needs to evaluate potential construction-related and operational impacts from implementation of the Specific Plan on individual species, habitats for those species across the SDC area, natural vegetation communities, movement corridors, wetland disturbance and loss, and compliance with applicable policies use.	B11-127
p. 209 Sonoma County Code, Riparian and Creek Standards	This section does not mention the 50' minimum setback from streams designated by the Riparian Corridor zoning for this site. Instead, smaller setbacks are described in the first paragraph. Is the 50' minimum setback not being applied in the Plan? Reducing the width of riparian and creek setbacks could disrupt animal movement by reducing the width of animal dispersal corridors and disrupting movement through the loss of habitat, increased noise and light disturbance within the corridor, and from human or domestic animal intrusion. The EIR must evaluate the potential impacts on biological resources from a reduction in the riparian and creek setback widths and mitigate the impacts of whatever setbacks it employs to ensure that those impacts are less than significant.	B11-128
p. 210 Valley Oak Habitat Combining District.	This states that measures shall be taken to "protect and enhance valley oaks on the project site" and such measures shall include, but not be limited to, a requirement that valley oaks shall comprise a minimum of fifty percent of the required landscape trees for the development project. But the Proposed Plan contains no such requirement. The EIR states that the Proposed Plan would have a significant impact on biological resources if, among other things, "Implementation of the Proposed Plan would … conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance" (EIR, page 257, Impact 3.4-5). In order to ensure that impacts on valley oak habitat are less than significant, the Specific Plan must include a policy implementing the requirements of the Valley Oak Habitat Combining District. The policy must be added to ensure development does	B11-129

	not conflict with the zoning requirements for the protection of valley oak habitat. The EIR must then analyze fully the impacts of that policy.	B11-129
p. 211 Habitat Types, second paragraph.	Here and on p. 221, PCI's work on the Existing Conditions Report is cited as PCI (2015). PCI's work and the report as a whole (prepared by WRT) was completed in 2018. The document is available here: https://transformsdc.files.wordpress.com/2020/01/2-cnaturallandrecreationalresourcesv3.pdf Second paragraph also indicates that habitat types described are from the California Wildlife Habitat Relationships System. That is incorrect. PCI (2018) and all mapping associated with it use the Manual of California Vegetation-based classification refined by the Sonoma Veg Map project, which provides the more detailed and more precise classification needed to identify potential impacts on sensitive habitat types as required by CEQA. Please correct here and on relevant maps.	B11-130 B11-131
p. 212 Figure 3.4-1, Habitat Types map.	The large wetland on the east side of the habitat map is incorrectly labeled as vernal pool. This should be labeled seasonal wetland or wet meadow.	B11-132
p. 214, Coast Redwood Forest	The first line notes that redwood forest is not considered sensitive in Holland (1986); Holland (1986) is not considered a current reference for sensitive habitat designations and therefore does not constitute substantial evidence of sensitive habitat designations. In order to accurately determine sensitive habitat designations and analyze impacts to those habitats, the EIR must use current rankings by CDFW for sensitive alliances and provide that information for each of the plant communities listed. Note that rankings of G3 or S3 or lower are considered sensitive. Because the EIR failed to rely on up-to-date evidence, the EIR failed to acknowledge that redwood forest is considered a sensitive habitat. In fact, based on PCI (2018), CDFW-ranked sensitive alliances on the site include redwood forest, madrone forest, Oregon oak woodland, valley oak woodland, bigleaf maple forest, cottonwood forest, riparian deciduous forest, native grasslands, and wetlands. The EIR needs to include a map showing all sensitive vegetation types for use in analyzing impacts in the EIR so that decision-makers and the public can fully understand the scope and location of sensitive habitat types and the Project's impacts on sensitive habitat types. Valley oak woodland is of particular concern since it occurs within and adjacent to the core campus, and protections will be needed to reduce impacts to less-than-significant levels.	B11-133
p. 219 Wetlands and Vernal Pools section, paragraph 2.	Vernal pools are mentioned in the title and third sentence, and on map 3.4-1. Vernal pools are highly sensitive, specialized wetland types that, if present, would need to be included in the discussion of impacts in the EIR. Mitigation measures specific to vernal pools would also be required. It should be noted that no vernal pools have been identified in prior work (PCI 2018, Sonoma Veg Map). What substantial evidence does the County have with respect to the presence of vernal pools? Please clarify. The EIR also fails to analyze the potential impacts on the wetlands in the area from the proposed Highway 12 connector or any other proposed Plan elements. The	B11-134 B11-135

	impacts analysis needs to address the direct and indirect impacts of the development on wetlands within the Specific Plan area before the EIR can conclude that any impacts would be less than significant.	B11-135
p. 220 Line 1	The EIR identifies *Lindera benzoin* as present on the site but this species is not known to occur in California. If the EIR intended to reference *Calycanthus occidentalis*, please correct.	B11-136
p. 221-225, Special-status Animal Species.	The list includes 28 species with moderate to high potential to occur. However, the EIR fails to provide a map showing the location of the habitat necessary for the species; therefore, decision-makers and the public cannot determine what specific elements of the project may impact habitat that could support the various species listed. The EIR needs to address the potential impacts to each species on a species-by-species basis. Without a species-by-species analysis, it is impossible to determine whether and to what degree development associated with the Proposed Plan would result in potential impacts within the habitat areas presented in Table 3.4-2: Potential Special-status Wildlife. And without full analysis, it is impossible to determine what mitigation is required to reduce those impacts to less-than-significant levels. How will impacts to habitat impact the listed species and what mitigation measures are proposed to reduce the potential impact?	B11-137
	The EIR also omits data about known occurrences of special status species on the Project site. For example, the entry for northern western pond turtle does not indicate that the species has been documented to occur on the site (see PCI 2018 for detail). The EIR's failure to survey the site for special status species or to include data regarding known occurrences prevents the EIR from fully identifying or mitigating possible impacts to special status species.	B11-138
	The EIR fails to address the mountain lion, which is designated as a "Specially Protected Mammal" by CDFW, is a species of high local conservation concern, and is known to use the SDC site extensively. Central Coast and Southern California populations are currently under review for listing under the California Endangered Species Act. Some of the same pressures threatening mountain lions in those areas – including habitat fragmentation – are highly relevant to the population in the SDC region as well, especially in long-range planning for increased land development. Development of the types proposed in the Draft Specific Plan may have the potential to significantly impact mountain lion habitat and movement. It is, therefore, foreseeable that the Specific Plan could have a significant impact on mountain lions under significance Criterion 1 ("Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service") or significance Criterion 4 ("Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites"). The EIR must specifically analyze and mitigate for impacts to mountain lions to ensure any such impacts would be less than significant.	B11-139

p. 228, Table 3.4-3. Potential Special-status Plants.	The table identifies the potential habitat for special-status plants in the planning area, but it fails to disclose where potential impacts might overlap with areas within the Specific Plan. For example, there is no way to tell based on the EIR where the areas of potential development (including uses permitted within "Preserve Open Space" such as indoor crop cultivation and utility development) would occur in relation to the habitat for special-status plants. Nor is it possible to discern what the potential impacts to special status plants and their habitat might be, or what specific mitigation would reduce those impacts. As drafted, substantial evidence and analysis do not support the EIR's conclusion that impacts to special status plants would be less than significant.
p. 234, Sensitive Habitats.	The EIR fails to clearly evaluate sensitive plant communities other than wetlands. The scientific community considers several other habitat types that are present at SDC to be sensitive. See PCI (2018); see also comment on p. 214 and following, above. The EIR cannot justify its conclusion that impacts on sensitive habitats will be less than significant without clearly analyzing and mitigating impacts to all relevant sensitive plant communities.
p. 235, Wildlife Corridors, last sentence, and Impact 3.4-4 p. 254-255	Riparian corridors serve as important movement routes for many species other than steelhead, including many mammals, birds, amphibians, and reptiles. Please adjust wording. Mill and Asbury Creek serve as important corridors as well. The EIR must fully identify and analyze the impacts to all wildlife corridors on the SDC site, including Mill and Asbury Creeks. This section fails to provide a map of all wildlife movement corridors showing where all proposed plan development may be located in relation to the corridors and the EIR fails to identify what, specifically, the direct and indirect impacts on wildlife use of the existing corridors might be under Impact 3.4-4 starting on page 254. What are the potential impacts from habitat loss or alteration, noise, light, human presence, dog presence, and fragmentation by roads that may impact wildlife use of the corridor and what mitigation measures are proposed to reduce the specific impacts? Without identifying, analyzing, and mitigating specific impacts to wildlife corridors, the EIR lacks substantial evidence or explanation to justify its conclusion that those impacts would be less than significant. How will the proposed Class I pathway indicated on Figure 3.2-1, shown leading toward Sonoma Creek from Walnut Street, affect the wildlife corridor and sensitive riparian habitat? What measures will be in place to limit or mitigate for these impacts? Without identifying, analyzing, and mitigating specific impacts of the Class I pathway, the EIR lacks substantial evidence or explanation to justify its conclusion that those impacts would be less than significant. Two options for connector roads are shown in Specific Plan Figure 3.1-1, and three types of facilities (a direct connection to Highway 12, an emergency access connection, and a pedestrian/bike connection) are all alluded to in accompanying text. In addition, Policy 3-44 calls for development of the Sonoma Valley Trail (multi-use path) parallel to Highway 12. However, the EIR does not disclose or analyze the specific impacts of each of those proposed options. What will be the direct, indirect,

B11-140

B11-141

B11-142

B11-143

B11-144

B11-145

	and cumulative impacts of all these elements on biological resources, including wetlands, drainages, Butler Canyon Creek, and wildlife movement through existing undercrossings? Without identifying, analyzing, and mitigating specific impacts of the connector road(s), the EIR lacks substantial evidence or explanation to justify its conclusion that those impacts would be less than significant.	B11-146
p. 236 Evaluation Criteria	The EIR's chosen thresholds of significance are not sufficiently specific to enable decision-makers or the public to understand, in practical terms, what it means for the Specific Plan to have a significant or less-than-significant impact on biological resources. Further, the EIR fails to explain how the County chose or developed its significance criteria, or to justify why these specific criteria were selected while others were omitted. The EIR cannot fulfill its role as an informational document unless it provides additional information regarding its significance thresholds. For example: Criterion 1. How does the EIR define substantial adverse effect for *each* candidate, sensitive, or special-status species present or potentially present in the Specific Plan area? What was the process used to determine if implementation of the proposed Plan will substantially affect specific species? How does this criterion address a potential change in species diversity and abundance that could occur from the implementation of the Specific Plan? How is a potential change in the quantity and quality of native habitat used by the biological resources addressed under this criterion and what is the significance threshold to evaluate impacts of a change? Criterion 2. What does the EIR evaluation consider a substantial adverse effect on riparian habitat or other sensitive natural communities? This is not articulated, and therefore, how can impacts be determined? What are the sensitive natural communities present in the planning area and within the development area, including the Highway 12 connector? Criterion 5. How is a potential conflict with policies and ordinances evaluated in terms of protected biological resources? What would constitute a significant impact and how would the impacts be mitigated to less-than-significant levels?	B11-147 B11-148 B11-149 B11-150
p. 236. Methodology and Assumptions, first sentence.	Why was the analysis of impacts limited to a comparison against Figure 3.4-1 when there are additional resources presented in the EIR? Figures 3.2-1 through 3.2-4 provide significantly more information for use in the analysis of impacts in the Biological Resources section. These figures illustrate locations within the planning area that support riparian forest types, evergreen and redwood forest types, and oak woodlands at a scale far more useful for impact evaluation. Portions of 3.4-1 also to be incorrect (see comment above on p. 212).	B11-151
p. 236. Methodology and Assumptions, third sentence.	This section states that the plans' land use designations would not directly, adversely affect areas of natural vegetation. This conclusion is inappropriate for the "Methodology and Assumptions" section. Where is the analysis of how land use designations would relate to natural vegetation? For instance, how will land use types such as managed landscape and fire buffer affect natural vegetation? How will permitted uses in "Preserved Open Space" such as crop production, keeping of confined farm animals, and wine tasting facilities (as stated in Table 4.3-1) affect	B11-152

	natural vegetation? Without first answering these and other questions, the EIR cannot support its conclusion with analysis and substantial evidence.	B11-152
	The impacts of the proposed Plan's land use designations are the only aspect of the Plan evaluated in the Biological Resources Section. This approach is inconsistent with other sections of the EIR that evaluate potential impacts from construction of projects within the Specific Plan area. For instance, construction emissions are evaluated in the Air Quality section addressing potential construction emissions from a new road connection to Highway 12. The fact that the proposed Plan is programmatic and does not include any specific development projects does not excuse the EIR from including an evaluation of any specific potential construction/development on biological resources. The potential locations of specific development types are shown on figures included in the EIR and the Specific Plan. The draft Specific Plan is, therefore, sufficiently detailed to allow analysis of at least some of these specific impacts at the programmatic stage. The EIR needs include potential impacts from construction and use of a connector to Highway 12 so that decision-makers and the public can determine now—when the County is proposing to lock in these uses—whether these uses will have significant impacts to biological resources and how those impacts could be mitigated.	B11-153
p. 236. Section 3.4.3.2, fourth sentence.	How can the EIR make the conclusion that the proposed Highway 12 connector and the upgraded wastewater treatment plant would not adversely affect areas of natural vegetation? There is no analysis or substantial presented to support the conclusion. In addition, how can potential conditions of approval reduce impacts? Please articulate why BIO 1 through 14 are not considered mitigations. What are the potential impacts should the County not include the conditions of approval as proposed, and what mitigation measures would be needed to reduce impacts to less-than significant-levels?	B11-154
p. 237 Goal 2-D.	While the methods of "intentional water and energy conservation, sustainable food productions, top-tier sustainable building practices, and aggressive waste reduction" seem like valuable strategies for general sustainability of site operations, it is not clear whether or how these methods would "promote conservation of existing habitat" on the site. Further, the EIR does not clearly evaluate the details or efficacy of any of these methods with respect to whether or how they could reduce impacts to biological resources. Please clarify and address.	B11-155
p. 238 Policy 2-9	The policy states that the defensible space requirements of the County Fire Department should be met but not exceeded in the wildlife corridor. What are the County standards for defensible space and what are the impacts on biological resources from implementation of the defensible space requirements? The impacts should be evaluated under Impact 3.4-4 and 3.4-2 at a minimum but may also require evaluation for potential impacts on special-status plants. What mitigation measures would be needed to reduce impacts on biological resources from implementation of defensible space requirements? What could be the impact is defensible space standards must be exceeded and what mitigation would be needed if the impacts are significant?	B11-156
p. 238 Policy 2-11	Policy 2-11. Dark skies standards need to apply to the private realm as well as public setting, and should apply all new lighting, not just for new buildings. See comments	B11-157

	on Specific Plan p. 2-11, above. The impacts of lighting on wildlife need to be addressed in the EIR. The EIR must evaluate how wildlife species modify their behavior as a result of increased nighttime light within wildlife corridors and other habitat and how increased light may alter nocturnal ecology within the Specific Plan area. Studies indicate increased light can disrupt foraging behavior and increase the risk of predation, increase roadkill of mammals, and disrupt dispersal movements and corridor use (Rich & Longcore eds. 2006). Nighttime light may prevent wildlife from fully using habitat available to them and light can prevent mammals from moving along wildlife corridors. Nighttime light can attract animals and result in altered wildlife movement patterns; these changes can expose prey to predators and make them more vulnerable to capture, thereby reducing species abundance and diversity in the area. See comment on Specific Plan, p. 2-11, above. This comment provides a partial list of potential wildlife impacts from increased light; many other potential impacts may occur. The EIR must evaluate potential impacts and evaluate what level of light pollution might trigger impacts to sensitive species or species movement. How are the potential changes evaluated for the potentially affected species? Habitat modifications must be evaluated in Biology Criteria 1 and 4 to determine how the project may affect wildlife species and how changes may affect the use of movement corridors. The analysis must identify how these potential impacts were evaluated and what mitigation measures are needed to reduce impacts to less-than-significant levels.	B11-157 B11-158
p. 238. Policy 2-16.	This fencing standard will be very important in reducing impacts to wildlife. Will this be required for all agricultural uses within the "Preserved Open Space" as well? Please state if so. If not, impacts on wildlife movement should be re-evaluated to ensure that fencing-related impacts will remain less than significant. Are there locations where fencing will not be allowed because potential impact on wildlife movement cannot be reduced to less-than-significant levels? These areas must be identified in the EIR as a means to reduce impacts to less-than-significant levels.	B11-159
p. 239 Policy 2-17,	This noise standard is vague and unenforceable. It does not include a specific commitment to lower noise levels. Requirements to meet residential noise standards, during both day and night, need be addressed and the impacts of not meeting such standards needs to be evaluated. Biology Criterion 1 says a significant impact would occur if the Project would have a substantial adverse effect on any special-status species; therefore, the EIR must address the biological impacts resulting from noise and specifically address the impacts of non-attainment of noise standards. How will increased noise impact species that communicate acoustically such birds and bats that use habitat at SDC? How will noise affect animal physiology and behavior, and how would those changes impact special-status species? These impacts must be addressed in Biology Criterion 1 to understand how noise may impact special-status species, what noise levels would cause the impact, and what mitigation measures would be used to reduce the impacts to less-than-significant levels. Noise impacts on potential changes in wildlife use of corridors must be addressed under Biology Criterion 4 to provide an understanding of how noise may affect movement, and what mitigation measures are proposed to reduce the potential impacts to less-than-significant levels. How will the County determine if	B11-160

	noise impacts occur? Without this critical information, the EIR does not have sufficient evidence to conclude that impacts to special status species would be less than significant.	B11-160
p. 239 Policy 2-24 Policy 2-25.	Why is Asbury Creek not included as protected with a 50' buffer? What are the potential impacts to Asbury Creek from the lack of an adequate buffer? This stream provides significant habitat values and merits protection. It needs to be protected. If it will not be included within a buffer, the EIR must analyze and mitigate impacts to Asbury Creek to ensure those impacts remain less than significant.	B11-161
p. 240, Section 3.4.3.4 Impacts Summary of Proposed Plan.	The EIR's summary of impacts in the Biology Section does not permit the level of granular analysis that is required to fully understand the impacts of the draft Specific Plan, particularly in light of the Specific Plan's level of detail and specificity. As such, the analysis of impacts on biological resources risks is missing key impacts that may not be analyzed fully in later environmental review.	B11-162
p. 241. First full sentence	The first full sentence on this page states that "development is not proposed to occur within Preserved Open Space." However, this conflicts with the Specific Plan (p. 4-14 and following), which permits certain uses in that zone including tasting rooms, mushroom farms, utility development, and parking. Which is correct? If the Specific Plan is correct, the EIR must analyze the biological impacts from those permitted uses and mitigate any impacts to less-than-significant levels. Similarly, the EIR fails to explain how the Conditions of Approval would mitigate the negative impact of the Highway 12 connector on wildlife movement. Nor does the EIR disclose the potential impacts of the wastewater treatment plant, or what types of mitigation would be appropriate to reduce those impacts. Without an analysis and supporting evidence, decision-makers and the public cannot independently judge the EIR's unsupported conclusion that these impacts would be less than significant.	B11-163
p. 241. Impact 3.4-1. Paragraph 1 last sentence.	This sentence states that future development under the Proposed Plan could have a significant direct or indirect impact on any special-status species if it would result in removal or degradation of a species or potentially suitable habitat. But the EIR does not contain any performance standards by which one could judge whether removal or degradation of a species or potentially suitable habitat has occurred. Please define what is meant by removal and what is meant by degradation. Does removal mean loss of one individual special-status plant or animal? Would a significant impact occur should a special-status species no longer utilize habitat following increased human-animal interactions following site development? This is only an example of how impacts may be defined and how the undefined terms of removal or degradation are problematic as used in the EIR context.	B11-164
p. 241. Impact 3.4-1, Construction third sentence.	The EIR states that potentially significant impacts could occur if *significant* amounts of habitat loss occurs. But what constitutes "significant" amounts of habitat loss varies by species? What does the EIR consider to be significant habitat loss for the special-status species present and potentially present at the site? How will the County determine whether a significant amount of habitat loss has occurred for each species? Without this critical information, the EIR does not have sufficient evidence to conclude that impacts to special status species would be less than significant. Why are all species lumped into a single evaluation paragraph and not discussed individually? The impacts to special-status species will vary on a species-by-species	B11-165 B11-166

	basis and need to be analyzed individually. Without species-by-species analysis, the EIR cannot disclose what the specific impacts to each species might be or determine how those impacts should be mitigated.	B11-166
	Where will grading, excavation, and construction activities likely occur and what species may be affected in these locations? The Specific Plan clearly identifies where development should be sited. The EIR needs to be at least as detailed as the Specific Plan in order to capture the known foreseeable impacts of the project.	B11-167
	What specific species could be impacted with construction of the Highway 12 connector? How can the species be impacted from this activity and what are the mitigation measures needed to reduce the potential impacts to less-than-significant levels? Once mitigation measures are identified, the EIR must address how the mitigation measures reduce the impact on a measure-by-measure basis.	B11-168
p. 241. Construction.	How does the EIR evaluate the potential biological resource impacts of the alternatives in relation to the potential construction impacts from the proposed plan?	B11-169
p. 241. Operations.	What specifically are the potential increased risks to special-status species from the operation of individual parts of the Proposed Plan? Individual special-status species occur in different locations around the SDC site. Some will necessarily be more affected by particular aspects of the Specific Plan depending on where the Specific Plan locates particular uses. The location of proposed uses is known based on the current draft Specific Plan. The EIR therefore needs to analyze the operational impacts of specific proposed uses on the special-status species in their vicinity before it can draw any conclusions about the significance of those impacts.	B11-170
	What are the potential impacts from increased vehicular traffic and recreational use and to which species may these impact occur? What mitigation measures are needed to reduce these impacts? Multiple studies have found that increased vehicle traffic, increased density of human uses, and increased human activity levels, including trail development and use and dog presence, can reduce or alter habitat use by key wildlife species on SDC including mountain lions and bobcats (see for example Wilmers et al. 2021, Serieys et al. 2021, Smith et al. 2019, and Nickel et al. 2020).	B11-171
	Increased visitor use along trails across SDC may alter behaviors and cause some species to avoid those areas. Mitigation measures may include visitor education and requiring all visitors stay on established trails, minimize excessive noise, and keeping dogs on leash at all times. The County must identify areas where mitigation measures may not reduce impacts to less-than-significant levels and consider other means to reduce impacts, such as prohibiting dogs in areas that cannot accommodate their presence. Identification of areas where trail densities might already impact wildlife and identifying redundant trails to eliminate must be explored and analyzed in the EIR.	B11-172
	What proposed plan elements have the potential to directly impact streams and the surrounding habitats and how might this impact individual species that depend on	B11-173

	the habitat impacted? How do the policies presented protect these resources and what are the remaining impacts following implementation of the policies? What are the mitigation measures proposed to reduce the potential impacts and how will the mitigation measure reduce the impact?	B11-173
p. 242. Operations.	What elements of the proposed plan might result in a significant reduction in forest extent and quality and how will these potential impacts be reduced to less–than-significant levels? How does the County define a "significant" reduction in extent and quality? Do these potential impacts vary by alternatives to the proposed plan?	B11-174
p. 242. Operations.	What proposed plan elements in open grasslands might impact American badger and burrowing owls? Development and increased human use in open grassland that support habitat for these species may result in the loss of nesting and foraging habitat, and direct mortality. BIO-3 identifies means to avoid American badger dens during development to avoid direct mortality; however, it does not address the impacts associated with loss of habitat. BIO-5 includes relocation measures for burrowing owl; however, the EIR does not address potential impacts from loss of habitat, such as reduced population numbers and the potential for burrowing owls to avoid use of potential nesting and foraging habitat located adjacent to developed areas. The EIR must evaluate impacts that result from human presence, such as loss of habitat and potential abandonment of nests resulting from human presence. How will the County determine if these impacts occur following development and how will the County protect the species? What are the mitigation measures needed to reduce the potential impacts on American badger and burrowing owl habitat loss?	B11-175
p. 242. Operations, second paragraph.	The EIR states that "Outside of the developed areas, the Proposed Plan establishes dedicated open space areas. Managed open space in these areas would preserve and, in some cases, enhance the quality of sensitive habitats such as wetlands, native grasslands and oak woodlands. Several special-status wildlife and some plant species would be positively impacted by the preservation of these habitats. The open space would preserve the Sonoma Valley Wildlife Corridor and maintain its permeability for the movement of wildlife at a regional scale." .	B11-176
p. 242, third paragraph.	How do policies reduce impacts on special-status species? The EIR makes statements without providing supporting discussion or explaining the methods used. As a result, decision-makers and the public cannot independently evaluate the adequacy of the EIR's analysis or the veracity of its conclusions. What are the impacts from development that the policies address and what impacts remain after the policies are all implemented? What mitigation measures are proposed to address impacts remaining after implementation of policies? How will the County measure the efficacy of the policies and any mitigation measures?	B11-177 B11-178
p. 242. Last paragraph.	Why are the requirements listed as conditions of approval and not as necessary mitigation measures and how does each condition of approval reduce specific impacts? The EIR effectively admits that these requirements are needed to reduce impacts to less-than-significant levels. The EIR needs to analyze the project's unmitigated impacts and then identify impact-reducing policies as mitigation measures. It must also include those mitigation measures in a mitigation monitoring and reporting program to ensure they are effective and enforced. The approach used	B11-179

	in the Biological Resources section failed to do this and is inexplicably inconsistent with the methodology used in other sections of the EIR.	B11-179
p. 242	Conditions of Approval policies appear to relate only to the construction phase. Where is the analysis of impacts on special-status species associated with operations? How will the effects of ongoing site use and facility operation be reduced to less than significant? Without clearly defined and enforceable mitigation, the EIR provides no assurance that the operational impacts of the Specific Plan would be reduced to less-than-significant levels. The EIR fails to identify potential impacts on special-status species from dog use at Suttonfield Lake. As such, the EIR cannot determine what mitigation measures are necessary to reduce those impacts to less-than-significant levels.	B11-180 B11-181
p. 245. Standard Conditions of Approval BIO-2.	The EIR fails to identify which proposed plan elements could impact special-status bats and their habitat. What happens if the survey indicates that bats inhabit a building that is scheduled for demolition? How will the bats be evacuated from the building and how will they be prevented from reoccupying the site? How will the proposed mitigation prevent impacts?	B11-182
p. 245. Standard Conditions of Approval BIO-3.	The EIR fails to identify which proposed plan elements could impact American badger. What are the potential impacts in open grassland? How will this mitigation prevent impacts and how will the County evaluate the efficacy of the measure?	B11-183
p. 246. Standard Conditions of Approval BIO-4.	Is BIO-4 only needed during construction? Are there any potential impacts on nesting raptors from project operations? How will the proposed mitigation prevent impacts and how will the County determine the efficacy of the measure? BIO 4 does not specify that pre-construction survey work needs to be completed by a qualified biologist. All construction-related wildlife surveys needs to be completed by a biologist. The measure defines an “active nest” as having eggs or nestlings present. Some interpretations of the Fish and Game Code include nest building as active nesting. The definition of “active nest” here needs to incorporate nest building.	B11-184
p. 246. Standard Conditions of Approval BIO-5.	The EIR fails to identify the specific potential impacts to burrowing owls. What are the potential impacts in owl habitat and what habitat do they use in the proposed plan area? How will the proposed mitigation prevent impacts? BIO 5 does not specify that pre-construction survey work needs to be completed by a qualified biologist. All construction-related wildlife surveys need to be completed by a biologist. The measure defines an “active nest” as having eggs or nestlings present. Some interpretations of the Fish and Game Code include nest building as active nesting. The definition of “active nest” here needs to incorporate nest building.	B11-185
p. 247. Standard Conditions of Approval BIO-6.	The EIR fails to identify proposed plan activities that might impact northern spotted owls. What activities might occur within riparian, evergreen and/or oak forests where owls may nest? Please explain how the acquisition of a permit reduces the impact on owls to less-than-significant levels.	B11-186
p. 247. Standard Conditions of	What is the proposed work that might occur near Fern Lake and Suttonfield Lake that might impact tricolored blackbird? How will the mitigation measure prevent impacts?	B11-187

Approval BIO-7.		
p. 247. Standard Conditions of Approval BIO-8.	The measure defines an "active nest" as having eggs or nestlings present. Some interpretations of the Fish and Game Code include nest building as active nesting. The definition of "active nest" here needs to incorporate nest building.	B11-188
p. 248 – 249. Standard Conditions of Approval BIO-9 through BIO 11.	The EIR fails to identify which proposed plan elements could result in direct impacts to aquatic features and result in the loss of habitat or cause harm to individuals. What will those direct impacts be and how will the mitigation prevent these impacts?	B11-189
p. 249. Standard Conditions of Approval BIO-11.	Why are the measures limited to potential work within 300 feet of a channel when USFWS mandates measures to protect California red-legged frogs across CRLF habitat, not only within 300 feet of an aquatic feature? The EIR needs to identify protection measures for CRLF habitat outside 300 feet.	B11-190
p. 250. Standard Conditions of Approval BIO-9 through BIO 12.	The EIR fails to identify which proposed plan elements could result in direct impacts to freshwater shrimp and salmonids and result in the loss of habitat or cause harm to individuals. How will the mitigation prevent these impacts? Why are the requirements listed not considered mitigation? What is necessary to prevent the loss of freshwater shrimp habitat and what compensatory mitigation may be necessary in the event a proposed planned element results in loss of habitat?	B11-191
p. 250-251. Standard Conditions of Approval BIO-13.	What process will be required if a special-status plant cannot be avoided? What specific mitigation is necessary and how will that mitigation reduce the potential impact? How will the County monitor the efficacy of the mitigation?	B11-192
p. 251. Impact 3.4-2. Construction. Sentence 1.	The EIR notes development would take place in previously developed portions and concludes that will limit potential for disruption to undeveloped habitats. Where within the SDC property will riparian habitat and other sensitive natural communities be directly or indirectly impacted by implementation of the proposed plan? The EIR must support its conclusions with substantial evidence and thorough analysis.	B11-193
p. 252 Construction	The first full sentence states that no new building development is proposed to occur within open space areas. However, this conflicts with the Specific Plan (p. 4-14 and following), which permits uses in that zone including tasting rooms, mushroom farms, utility development, and parking. Which is correct? This section must analyze the specific impacts from all uses permitted under the Specific Plan. The first paragraph states that "implementation of the Proposed Plan may result in the degradation or removal of riparian habitat" and that such projects will require measures to reduce, avoid, or compensate for impacts. The EIR needs to identify these impacts as potentially significant, and must design and analyze appropriate mitigation measures. At present, the EIR does nothing to ensure that these impacts would actually be mitigated to less-than-significant levels.	B11-194 B11-195

p. 252. Paragraph 2.	BIO-1 though BIO-14 address special-status wildlife species. It is not clear from the EIR whether or how these policies would reduce the impact on riparian habitat or other sensitive natural communities to less-than-significant levels. The EIR needs to explain how individual species protection measures protect riparian or sensitive natural communities in general? What are the mitigations necessary for the loss of riparian habitat? How will development impact sensitive valley oak habitat? What will the impacts from the increased presence of people and pets be on wildlife in valley oak habitat? The EIR needs to discuss these impacts and analyze in sufficient detail how these impacts will be mitigated to less-than-significant levels.	B11-196 B11-197
p. 252. Paragraph 3.	The EIR fails to identify the specific impacts on riparian and sensitive natural communities from the two public infrastructure projects? What specifically could be impacted and which sensitive natural communities could be present in the construction area? How would BIO-1 through BIO-14, which address special-status species, reduce these impacts? What are the specific mitigations needed in the event the project results in the loss of riparian habitat or sensitive natural communities? How specifically do the policies listed reduce the impacts?	B11-198
p. 252. Operations.	Is there new trail construction included as part of the project? If so, the potential impacts on riparian and sensitive natural vegetation must be analyzed and mitigated.	B11-199
p. 252. Operations.	The EIR fails to disclose the potential impact of increased vehicle trips be on individual wildlife species. This impact must be analyzed fully. At present, there is not sufficient evidence or analysis to indicate whether or how this impact would be mitigated to a less-than-significant level.	B11-200
p. 253. BIO-14.	BIO-14 is deferred mitigation. The EIR must expand on what might be included in an aquatic resources mitigation plan and describe how development of this plan will reduce impacts to less-than-significant levels. The EIR must provide clear performance standards that any future mitigation plan must meet.	B11-201
p. 253. Impact 3.4.3, Construction, paragraph 1.	The analysis indicates a potentially significant impact could occur if construction impacts federally protected wetlands. This analysis improperly excludes wetlands that fall under State jurisdiction without justification. Figure 3.4-1 serves as the basis for the location of known wetlands and vernal pools (but see comments on potential errors in that figure, above). What are the proposed plan elements that could potentially cause the impact and why was this analysis not provided? It further appears the Highway 12 connectors could impact a large mapped wetland (incorrectly shown as vernal pool). These potential impacts are not analyzed in the EIR. The EIR must analyze and mitigate all foreseeable potentially significant impacts, including impacts related to the Highway 12 connector(s).	B11-202
p. 253. Construction, paragraph 2.	The EIR fails to identify performance standards for its de factor proposed mitigation. What are the requirements in the permits that would mitigate impacts? Why are these measures not included as mitigation(s) in the EIR? How, specifically, will these measures mitigate the impact?	B11-203
p. 254	Operation. The first sentence states that no new building development is proposed to occur within open space areas. However, this conflicts with the Specific Plan (p. 4-14 and following), which permits uses in that zone including tasting rooms, mushroom farms, utility development, and parking. Which is correct? The EIR must	B11-204

	analyze the specific impacts from all uses permitted under the Specific Plan before it can determine whether those impacts will be significant.	B11-204
p. 254-255. Impact 3.4-4	The introductory paragraph does not discuss the Sonoma Valley Wildlife Corridor. The paragraph also notes there will be a significant impact on migratory species, corridors, and nursery sites; however, the impact analysis does not support this statement. The EIR states that implementation of the Proposed Plan would have a significant impact on migratory species, corridors, or nursery sites if the siting, construction, or operation of develop allowed under the Proposed Plan would impede on or remove migratory corridors or nursery sites. The EIR must define what is considered impede on and what might trigger an individual species to not fully use or stop using habitat for migration. The Proposed Plan would impact species differently. The EIR must evaluate how the potential impacts on individual species resulting from development identified in the Specific Plan and addressed under Impact 3.4-1 potentially alter wildlife movement and migration patterns across the property and across the larger corridor. How would the introduction of light sources, noise, human activity, domestic animals, trails, new roadways and increased use of existing roadways directly and indirectly impact permeability of the wildlife corridor and alter use pattern? The EIR must identify mitigation measures for any significant impacts on migratory species, use of migration corridors, or nursery sites to less-than-significant levels?	B11-205 B11-206
p. 255. Construction, paragraph 1.	It is an error to assume trails and use of trails would not impact wildlife movement simply because the use is consistent with open space management. Trails and trail use, especially increased use, can directly impact individual species. The EIR must analyze the specific impacts of the proposed trail and explain how those impacts will relate to wildlife movement through the SDC property. How will new trails be designed to minimize impacts to wildlife movement and prevent habitat fragmentation? What mitigation measures are needed to reduce the impacts to less-than-significant levels?	B11-207
p. 255. Construction, paragraph 2.	The EIR does not explain why the requirements of a 401 or 404 permit or CDFW authorization would fully protect fish and wildlife resources in terms of wildlife movement and wildlife corridors. The EIR must support its conclusions with analysis and substantial evidence, and the current EIR does not do so.	B11-208
p. 255. Construction, paragraph 3.	The EIR fails to identify what specific policies would minimize impacts on wildlife migration or explain how implementation of each individual policy listed in the analysis would mitigate those impacts. The EIR states that the proposed plan preserves a majority of the site within the Sonoma Valley Wildlife Corridor. What is the impact caused on the portions of the migration corridor that are not preserved? Will access be limited and how will access impact wildlife use? What other impacts could occur and how will these impacts be mitigated? The EIR must specifically identify impacts and analyze their potential for mitigation in order to comply with CEQA.	B11-209
p. 255. Operations.	The EIR fails to analyze the potential wildlife migration issues associated with the increased daily vehicle trips for each length of roadway and for each scenario presented in Table 3.14-3: Projected Traffic Volumes in Plan Area (page 440). It	B11-210

	appears the proposed plan would result in 13 percent more vehicular traffic than historic uses. What effect could this increase have on biological resources?	B11-210
p. 256. Operations, 2-11.	The EIR fails to explain what specific impact(s) the implementation of the "dark skies" standards would address in terms of wildlife movement. The potential impact from increased light is not addressed in the wildlife impacts analysis. The EIR must analyze unmitigated impacts before defining mitigation measures. The EIR fails to analyze light impacts on wildlife movement or explain why, based on substantial evidence, it believes that dark sky standards would reduce those impacts to less-than-significant levels. What are the potential impacts on biological resources from residential housing, buildings and other facilities in terms of nighttime lighting?	B11-211
p. 256. Operations, 2-12 and 2-13.	The EIR fails to explain how these general policies apply specifically to the Sonoma Valley Wildlife Corridor and what potentially significant impacts these policies address. What proposed plan elements could encroach on the wildlife corridor and into existing open space, and what are the potential impacts on wildlife?	B11-212
p. 256	Operation. The addition of 1,000+ housing units and 900 jobs will substantially increase the number of recreational users. The EIR fails to quantify or analyze the effect of this increase. What is the anticipated increase in recreational use? Will this increase have a significant impact on wildlife usage? How will the impacts of this greater human and pet presence on trails be mitigated?	B11-213
	Similarly, the increase in housing and jobs will increase vehicle traffic. The EIR fails to analyze the effect of this increase on wildlife corridor permeability. How will the increase in vehicle traffic generated by 1000 new homes and 900 jobs affect wildlife corridor permeability? How will these impacts be mitigated? Research has found a strong negative correlation between wildlife corridor use and traffic quantity and development intensity (see, for example, Charry and Jones 2009, and Smith 2019).	B11-214
p. 257. Operations, 2-17.	The EIR provides no justification for limiting restrictions on nighttime noise based on feasibility. Nor does the EIR analyze or disclose how frequently adherence to residential nighttime noise standards would be infeasible or discuss what additional impacts would occur and mitigation would be required in that case. What are the potential impacts on wildlife migration should adherence not be feasible and what are the proposed mitigation measures to reduce the impact?	B11-215
p. 258. Paragraph 1.	The EIR fails to identify what plans were evaluated to determine the proposed plan would not conflict with any local, regional, or state habitat conservation plan. The EIR must document its analysis and support its conclusions with substantial evidence.	B11-216
p. 524, Section 4.1 Alternatives, paragraph 4.	The proposed plan would result in significant and unavoidable impacts related to transportation (Impact 3.14-2) and historic resources (Impact 3.5-2). The biological resources impact evaluation does not address potential wildlife impacts resulting from the increased traffic; therefore, the alternatives may not adequately address potentially significant and unavoidable impacts on biological resources. Traffic volume and density of development are key factors that must be addressed in evaluating impacts to wildlife movement.	B11-217
p. 524, Alternatives: No Project	It is unclear what the no project alternative is and how the EIR evaluates it. It appears the no project alternative is development without a Specific Plan but following the County General Plan. Does the EIR evaluate a true no action alternative (no development)? If not, why not? It appears the EIR concludes that State law	B11-218

Alternative paragraph 2.	requires development of the site, and this is not adequately explained in the text. Discussion of a no project alternative does not provide a complete picture without a true "no development" alternative.	B11-218
p. 524, Alternatives.	The EIR does not adequately explain how the impact of increased vehicle trips on individual special status species and wildlife corridor permeability would differ between the proposed buildout and its project alternatives. Different types and magnitudes of uses in different locations would likely have different impacts on individual special-status species, since special-status species are not uniformly distributed throughout the SDC site. So it is foreseeable that a given alternative could improve impacts on one special-status species while worsening impacts on another. These distinctions and impacts must be analyzed and fleshed out in the EIR in order for decision-makers and the public to fully understand the merits of each of the alternatives presented.	B11-219
p. 589, Cumulative Impacts, Section 5.2.4, Biological Resources.	The assessment for cumulative impacts on biological resources is simply a summary of the project impacts and fails to identify other projects or impacts to which the Specific Plan will add or compound impacts. What other projects in the geographical context of biological resources could have similar impacts as the proposed plan? Is there an existing cumulative impact on biological resources throughout the County and does the proposed plan have a considerable contribution to a cumulative impact on biological resources? These questions are particularly relevant to the EIR's analysis of the Sonoma Valley Wildlife Corridor, which spans a significant east-west divide and is subjected to impacts from a broad range of projects across its geographic range. The EIR must consider the Project's cumulative impacts to the wildlife corridor in light of the corridor's full geographic range.	B11-220

PCI appreciates this opportunity to provide input on the planning process for this ecologically important site.

Sincerely,

Carrie Lukacic, Principal Environmental Planner

Joan Schwan, Principal Ecologist

REFERENCES

Banks, P. and J. Bryant. 2007. Four-legged friend or foe? Dog walking displaces native birds from natural areas. Biology Letters 3(6): 611-613. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2391219/?fbclid=IwAR3XNhuPvMpsGdS15BdERdFKqbNgxsMh5KvR9WYjI8_W2egStqCFpd0ivcY

Beier, P. Dispersal of juvenile cougars in fragmented habitat. 1995. The Journal of Wildlife Management. 59(2): 228-237.

Bhardwaj, M., K. Soanes, J.J. Lahoz-Monfort, L. Lumsden, and R. van der Ree. 2020. Artificial lighting reduces the effectiveness of wildlife-crossing structures for insectivorous bats. Journal of Environmental Management. https://pubmed.ncbi.nlm.nih.gov/32250796/

Bliss-Ketchum, L., C. de Rivera, B. Turner, and D. Weisbaum. 2016. The effect of artificial light on wildlife use of a passage structure. Biological Conservation 199: 25-28. https://www.sciencedirect.com/science/article/abs/pii/S0006320716301628?via%3Dihub

Burger, J. and M. Gochfeld. 2002. Effects of ecotourists on bird behavior at Loxahatchee National Wildlife Refuge, Florida. Environmental Conservation 25(1).

Castelle, A.J., A. Johnson, and C. Connolly. 1994. Wetland and stream buffer size requirements: a review. Journal of Environmental Quality 23: 878-882.

Charry, Barbara, and Jody Jones. 2009. Traffic volume as a primary road characteristic impacting wildlife: a tool for land use and transportation planning. In Technical Tools for Integrating Ecological Considerations in Planning and Construction, Session 142, International Conference on Ecology and Transportation. https://escholarship.org/content/qt4fx6c79t/qt4fx6c79t.pdf

George, S. and K. Crooks. Recreation and large mammal activity in an urban nature reserve. Biological Conservation 133(1): 107-117. https://www.sciencedirect.com/science/article/abs/pii/S000632070600231X

Hilty, J. and A. Merenlender. 2004. Use of riparian corridors and vineyards by mammalian predators in northern California. Conservation Biology 18(1):126-135.

Kerns, B., C. Tortorelli, M. Day, T. Nietupski, A. Barros, J. Kim, and M. Krawchuk. 2020. Invasive grasses: A new perfect storm for forested ecosystems? Forest Ecology and Management 463. https://www.fs.usda.gov/pnw/pubs/journals/pnw_2020_kerns001.pdf

Lee, P., C. Smyth, and S. Boutina. 2004. Quantitative review of riparian buffer width guidelines from Canada and the United States. Journal of Environmental Management 70: 165–180.

Length B., M. Brennan, and R.L. Knight. 2008. The effects of dogs on wildlife communities. Natural Areas Journal 28:218-227. https://bioone.org/journals/Natural-Areas-Journal/volume-28/issue-3/0885-8608(2008)28[218:TEODOW]2.0.CO;2/The-Effects-of-Dogs-on-Wildlife-Communities/10.3375/0885-8608(2008)28[218:TEODOW]2.0.CO;2.short

Perchemlides, K., P. Muir, and P. Hosten. 2008. Responses of chaparral and oak woodland plant communities to fuel-reduction thinning in southwestern Oregon. Rangeland Ecological Management 61:98-109. https://repository.arizona.edu/bitstream/handle/10150/642930/19825-34230-1-PB.pdf?sequence=1

Reilly, M., M. Tobler, D. Sonderegger, and P. Beier. 2017. Spatial and temporal response of wildlife to recreational activities in the San Francisco Bay ecoregion. Biological Conservation 207:117-126. https://www.sciencedirect.com/science/article/abs/pii/S0006320716307327

Rich, C. & Longcore, T (eds). 2006. Ecological Consequences of Artificial Night Lighting. Catherine & Travis Longcore 2006. Island Press. Covelo, California. Pages 15-42.

Riley, S., J. Foley, and B. Chomel. Exposure to feline and canine pathogens in bobcats and gray foxes in urban and rural zones of a national park in California. Journal of Wildlife Diseases 40(1): 11-22. https://bioone.org/journals/Journal-of-Wildlife-Diseases/volume-40/issue-1/0090-3558-40.1.11/EXPOSURE-TO-FELINE-AND-CANINE-PATHOGENS-IN-BOBCATS-AND-GRAY/10.7589/0090-3558-40.1.11.pdf

Seavy, N., J. Alexander, and P. Hosten. 2008. Bird community composition after mechanical mastication fuel treatments in southwest Oregon oak woodland and chaparral. Forest Ecology and Management 256:774-778.

Serieys, Laurel EK, et al. 2021. Road-crossings, vegetative cover, land use and poisons interact to influence corridor effectiveness. Biological Conservation 253 (2021): 108930.

Shannon, G. et al. 2016. A synthesis of two decades of research documenting the effects of noise on wildlife. Biological Reviews 91:982-1005. https://sites.warnercnr.colostate.edu/wp-content/uploads/sites/146/2020/11/biologicalreviews2015.pdf

Smith, Justine A., Timothy P. Duane, and Christopher C. Wilmers. 2019. Moving through the matrix: promoting permeability for large carnivores in a human-dominated landscape. Landscape and Urban Planning 183: 50-58

Stone, E. 2000. Separating the noise from the noise: A finding in support of the “Niche Hypothesis,” that birds are influenced by human-induced noise in natural habitats. Anthrozoos: 225-231.

Wilmers et al. (2021). COVID-19 suppression of human mobility releases mountain lions from a landscape of fear. Current Biology 31:3952–3955. September 13, 2021. https://doi.org/10.1016/j.cub.2021.06.050

PRUNUSKE CHATHAM, INC.

Carrie Lukacic
Principal Environmental Planner

Carrie Lukacic has worked in the environmental planning field for over 30 years in the public and private sectors. Her work focuses on Master Planning, landscape analysis, CEQA/NEPA compliance, and environmental permitting for a wide range of land management projects including recreation and public access, both large- and small-scale infrastructure projects, and water quality improvement and watershed restoration projects. She specializes in the evaluation of environmental impacts in sensitive resource areas and is known for working with stakeholders, project designers, engineers, and resource agency staff to develop creative solutions to avoid impacts and meet stringent regulatory requirements. Carrie maintains a strong working relationship with staff from the regulatory community, which translates into successful authorization and implementation of even the most complex projects. She is also skilled at the development of reasonable and feasible mitigation measures to protect resources while meeting project goals and agency standards.

Selected Professional Experience

Principal Environmental Planner, *Prunuske Chatham, Inc., February 2015 – present*

- The Nature Conservancy South Fork Ten Mile Habitat Restoration Project. Lead planner responsible for development and implementation of a regulatory compliance strategy to construct the first four of the 20 identified projects in the SF watershed. Coordinated with and secured permits for TNC from federal and state agencies including US Army Corps of Engineers, NOAA Fisheries, California Coastal Commission, California Department of Fish and Wildlife, North Coast Regional Water Quality Control Board, and the State Historic Preservation Officer. 2017 to 2018.
- Sonoma Land Trust, Lakeville Creek Restoration Planning. Lead environmental planner for grant-funded effort to restore Stage 0 stream restoration project, linking uplands and baylands in southern Sonoma County. Goals include restoration of channel complexity and hydrologic function. 2020-ongoing.
- The Nature Conservancy, Garcia River Estuary Restoration Project. Lead planner responsible for all elements of regulatory compliance including NEPA, CEQA, and permitting for the large-scale estuary enhancement project. The project is in the BLM-managed California Coastal National Monument; designs include floodplain reconnection and large wood habitat structures. 2020-present.
- Sonoma County Regional Parks, North Sonoma Mountain Regional Park and Open Space Preserve Master Plan. Lead environmental planner for development of public access alternatives, assisting SCRP in preparing a Master Plan, and preparing natural resource management plans for an 800-acre landmark property. 2019-ongoing.
- Trout Unlimited Mill Creek Dam Removal Project. Lead planner responsible for applying for and securing permits from the US Army Corps of Engineers and California Department of Fish and Wildlife.
- City of Healdsburg Fitch Mountain Park and Open Space Preserve Management Plan and CEQA Compliance for City of Healdsburg. CEQA compliance and permitting lead for the development and evaluation of the management plan elements including public access improvements. Included public meeting participation to address resource and access issues. 2016 to 2018.
- Sonoma County Agricultural Preservation and Open Space District Wright Hill Ranch Open Space Preserve Management Plan and CEQA compliance Document. Responsible for development of the CEQA Initial Study/Mitigated Negative Declaration preserve, protect, and enhance the property's biological, ecological, and cultural and historical resources while allowing public access and continued grazing. 2016 to 2017.

Senior Environmental Planner, *GHD, Inc., Santa Rosa, CA, 2004 to 2015*
Carrie managed numerous multi-disciplinary teams performing technical studies, CEQA/NEPA evaluations and securing State, federal, and local authorizations for large- and small-scale infrastructure projects.

Education, Professional Development and Affiliations

- Bachelor of Science in Natural Resources Planning & Interpretation, Humboldt State University, 1987
- California Association of Environmental Professionals, North Bay CEQA and NEPA training coordinator
- American Planning Association
- Facilitation Skills for Scientists and Resource Managers, 2016
- Burn Area Emergency Response (BAER) Fire Assessment Team Leader

PRUNUSKE CHATHAM, INC.

Joan Schwan
Principal Ecologist

Joan Schwan has over 25 years of experience in ecological research, conservation, restoration, and monitoring programs. Her work focuses on natural resource assessment and planning for parks and preserves, and planning and implementation of habitat restoration projects. Joan leads the science team at PCI, providing project oversight and guidance for other staff members. She has worked in settings ranging from the dunes of the Sonoma County coast to vernal pools, oak woodlands, redwood forests and riparian habitats of the greater Bay Area, Central Valley riparian habitats and forests of the lower Sierra. Joan brings a broad ecological perspective to her work, and a commitment to helping people enjoy and engage with the natural world while sustaining natural systems and functions.

Selected Professional Experience

Ecologist, *Prunuske Chatham Inc., 2008 to present***,** *Principal, 2016 to present*

- Mill Bend Conservation Plan, Redwood Coast Land Conservancy. Lead ecologist and project manager for assessing natural and cultural resources of 113-acre property on the Gualala River estuary, planning public access, and developing restoration plans and long-term stewardship guidance. (2020-ongoing)
- Lakeville Creek Restoration Planning, Sonoma Land Trust. Lead ecologist and project manager for grant-funded effort to restore Stage 0 stream, linking uplands and baylands in southern Sonoma County. Goals include restoration of channel complexity and hydrologic function. (2020-ongoing)
- Garcia River Estuary Restoration Design Project, The Nature Conservancy. Lead vegetation ecologist for botanical assessment of project site, development of rare plant protection and mitigation plan, and advisor on revegetation design and implementation. Project is in the BLM-managed California Coastal National Monument; designs include floodplain reconnection and large wood habitat structures. (2020-ongoing)
- North Sonoma Mountain Regional Park and Open Space Preserve Master Plan, Sonoma County Regional Parks. Lead ecologist and project manager for development of public access alternatives, assisting SCRP in preparing Master Plan, and preparing natural resource management plans for 800-acre landmark property. (2019-ongoing)
- Sonoma Developmental Center Existing Conditions Assessment – Natural and Recreational Resources, WRT. Lead ecologist on team of consultants, led by WRT, to California Department of General Services for analysis of sensitive resources, protection needs and enhancement opportunities on 945-acre property planned for redevelopment in the Sonoma Valley. (2017-2018)
- Revegetation planning and implementation:
  - PG&E Riparian Mitigation – Sonoma, Fresno, and San Benito counties, multiple sites. Project manager and lead ecologist for revegetation of riparian sites; work includes design, implementation, community engagement, monitoring, adaptive management. (2016-ongoing)
  - PG&E Crane Valley Dam retrofit project, including planning and coordination of restoration of pine forest habitat to 40 acres of quarry and other impacted areas on USFS lands. (2012-2018)
  - PG&E Pit River hydroelectric facility relicensing, including project management of spoils piles revegetation effort and development of seed collection plan, monitoring plans, and roadside revegetation plan for coniferous forest, riparian, and oak woodland settings. (2010-2018)

Botanical and Ecological Consulting, *1992-2008*

- Range-wide Endangered Species Survey Program. Developed a program to engage expert volunteers in collecting data on endangered plants of the Santa Rosa Plain, for the Laguna de Santa Rosa Foundation.
- Vernal pool vegetation monitoring. Monitored hydrology and vegetation, including listed species, of vernal pools undergoing restoration.
- Oak woodland restoration. Managed oak and native grassland restoration on Stanford University open space lands, including community education and volunteer management components.

Education

- M.S. Biology, Sonoma State University, 2006. Thesis: Effects of Livestock Grazing on Native and Exotic Vegetation in Vernal Pools.
- B.A. Human Biology, Stanford University, 1992

PRUNUSKE CHATHAM, INC.

Celia Chatham
Biologist/Ecologist II

Celia Chatham has nine years of experience working as an ecologist in a range of habitats including the Sonoran desert, estuaries along the Gulf of California, and northern California settings from the coast to the Sierra. Her expertise spans both plant and wildlife realms. Before she came to PCI, Celia monitored seabird and estuarine bird populations and behavior in northern Mexico. Her work at PCI focuses on surveys for fish and wildlife, monitoring of wildland habitat restoration, vegetation mapping, biological resource assessment, wetland delineation, construction monitoring and assistance with aquatic species rescue.

Selected Professional Experience

Ecologist, *Prunuske Chatham, Inc., 2013 to present*

- Fish, amphibian, and other aquatic species surveys, dewatering, relocations, and construction monitoring, including:
  - Matanzas Creek Dam Watershed Rehabilitation Project, Sonoma Water and AECOM. Conduct protocol-level California red-legged frog amphibian night and day surveys. 2022.
  - Oken Conservation Easement stream restoration, Sonoma Ag + Open Space. Conduct construction oversight for California tiger salamander protection. 2021.
  - Taylor Mountain Regional Park and Open Space Preserve Trail Construction Project, Sonoma County Regional Parks. Conduct biological resources training and pre-construction surveys for special-status wildlife including breeding birds and California red-legged frog. 2022.
  - Mainstem Ten Mile River Habitat Enhancement Project, The Nature Conservancy. Assist TNC biologist team in relocation of juvenile coho salmon, steelhead, northern red-legged frogs, and other aquatic species for river dewatering prior to construction. 2018.
  - Furlong Culvert Replacement Project, private owner. Assist lead qualified biologist with relocation of California freshwater shrimp and other aquatic species. 2018.
  - Pine Gulch Creek Watershed Enhancement Project, Marin Resource Conservation District. Assist senior wildlife biologist with construction oversight and relocations of California red-legged frog, northwestern pond turtles and other aquatic species. 2015-2018.
  - Mill Creek Fish Passage Restoration Project. Assist lead qualified biologist with aquatic species relocations and construction monitoring. Species relocation included capturing and handling of steelhead, coho salmon, and other wildlife species working closely with CDFW. 2015-2016.
  - Stuart Creek Fish Passage Project, Sonoma Land Trust. Assist senior wildlife biologist with relocation of aquatic species prior to fish passage construction. 2014.
- Breeding bird, bat, and other surveys, including:
  - Sonoma Ag + Open Space. American badger, nesting bird, bat roost, and botanical surveys for mowing and shaded fuel break projects. 2016-present.
  - Sonoma County Regional Parks breeding bird surveys for fuel reduction projects. 2021-present.
- Revegetation monitoring and reporting, including:
  - PG&E native vegetation restoration projects. Plant layout, monitoring, data analysis, and reporting for projects in Sonoma, San Benito, Fresno, and Shasta counties. Assessing plant health and maintenance or remedial needs. Settings include oak woodland, riparian, and coniferous forest. 2013-present.
  - URJ Camp Newman Dam Removal and Stream Reconstruction. Development of vegetation monitoring plan and vegetation monitoring and reporting of reconstructed riparian upland habitat. 2015-2018.
  - Bambury Riparian Restoration Project, project manager; revegetation monitoring and reporting of reconstructed riparian habitat in Sonoma. 2018-present.
- Biological resources assessments and wetland delineation, including:
  - Wetland delineation and biological resources assessment, Petaluma River Park. 2022.
  - Biological resources assessment, Dinner Property, Sonoma Land Trust. 2022.

  - Baseline and current conditions assessment and reporting for Sonoma Ag + Open Space easements and properties. Conduct field surveys, mapping and report preparation for conservation properties. 2018- present.
- Vegetation mapping, Sonoma County Vegetation Mapping Program, Sonoma Ag + Open Space. Ecologist and GIS technician for team led by Tukman Geospatial to develop county-wide vegetation classification and detailed vegetation mapping. 2015-2016.

Conservation Fellow, *Prescott College Kino Bay Center for Cultural and Ecological Studies, 2013-2014*

- Waterbird Monitoring Program. Conducted bird field surveys, data analysis and reporting for four negative estuaries and one island as part of an ongoing waterbird, seabird and shorebird monitoring effort in the region. Bahia de Kino, Sonora, Mexico.

Education

- B.S., Natural History and Ecology, Prescott College, 2013
- B.F.A., Studio Art, Prescott College, 2013

Selected Professional Training

- California Tiger Salamander Workshop. Elkhorn Slough Coastal Training Program. April 2015. Included in-classroom handling of adults and seine sampling larvae in nearby ponds with permitted instructors.
- California Red-legged Frog Workshop. Elkhorn Slough Coastal Training Program. May 2015. Included in-classroom handling of adults and positive night-time eye shine observations.
- Wildlife Biologist Construction Awareness Training (WildC.A.T.). The Wildlife Society Western Section Annual Meeting. February 2018
- Wetland Delineation Training. Wetland Science and Coastal Training Program, SF Bay National Estuarine Research Reserve. March 2018.
- Identifying and Appreciating the Native and Naturalized Grasses of California. California Native Grassland Association. May 2018.
- California Rapid Assessment Method (CRAM) for Wetlands Practitioner Level Training. San Francisco Estuary Institute. April-May 2022.

PRUNUSKE CHATHAM, INC.

Erynn Rebol
Biologist II

Erynn Rebol has 10 years of experience in biological research. Her work has included assisting with, designing, and leading field research and working on habitat restoration projects. She has experience in settings ranging from California to the Arctic to the Amazon with numerous organisms including venomous snakes, small mammals, birds, and plants. Erynn brings a broad biological perspective to the science team at PCI where she assists with natural resource assessment, monitoring, and planning and implementation of habitat restoration projects. She is committed to protecting wildlife, land, and ecological processes so people can responsibly enjoy them for generations to come.

Selected Professional Experience

***Biologist**, Prunuske Chatham Inc., 2022 to present*

- McCormick Ranch Acquisition, Sonoma County Regional Parks. Assisting with a wildlife resources assessment of potential trail alignments and providing recommendations for best management practices for designing a wildlife-friendly trail within a 242-acre property connecting Sugarloaf Ridge State Park and Hood Mountain Regional Park. (2022-ongoing)
- North Sonoma Mountain Regional Park and Open Space Preserve Master Plan, Sonoma County Regional Parks. Assisting with preparation of Master Plan for 800-acre landmark property. (2022-ongoing)
- Mill Bend Conservation Plan, Redwood Coast Land Conservancy. Assisting in development of conservation plan for 113-acre property on the Gualala River estuary. (2022-ongoing)
- Petaluma River Park Biological Resources Assessment, Petaluma River Park Foundation. Prepare wildlife elements of biological assessment to support park development on the McNear Peninsula. (2022-ongoing)
- PG&E Riparian Mitigation Monitoring – Monitoring and reporting on restoration success on multiple riparian revegetation projects. (2022-ongoing)

***Research Assistant**, California State University Long Beach* – Cocha Cashu, Peru *July 2019*

- Collected live insect samples, trained & supervised two field technicians, designed and constructed herbivore exclosures, and collected data on native plant herbivory.

***Project Volunteer**, U.S. Fish & Wildlife Service* – Alaska, USA *Sep-Oct 2017*

- Collected data on polar bear-viewing, took island-wide bear surveys, performed public outreach with educational lectures for tourists, and collaborated with local native schoolteachers to create lesson plans.

***Research Intern**, Wake Forest University* – Galápagos, Ecuador *Oct 2014-Jan 2015 | Mar-May 2015*

- Collected behavioral, survival, positional, and reproductive data; banded and gathered diet samples from multiple seabird species; completed colony-wide species surveys. Installed and monitored camera traps and deployed GPS tags on seabirds.

***Volunteer**, U.S. Fish & Wildlife Service* – Alaska, USA *May-Sep 2014*

- Collected survival and reproductive data for Kittlitz's murrelet, completed annual MAPS passerine mist-netting/ banding sessions, completed avian offshore surveys, and wrote sections of USFWS reports.

***Field Technician**, San Diego State University* – California and Nevada, USA *May-Aug 2012*

- Completed behavioral experiments and took tissue and blood samples from small mammals and venomous snakes, took GPS points, and tracked snakes using telemetry.

Education

- M.S. Biology, Wake Forest University, 2020. Thesis: Sex-specific aging in bite force in a wild vertebrate.
- B.A. Biology, Willamette University, 2013

Publications

Rebol, EJ and Anderson, DJ. 2022. Sex-specific aging in bite force in a wild vertebrate. *Experimental Gerontology*, *159*, 111661.

ATTACHMENT C

Tanya Diamond, Co-Principal & Wildlife Ecologist. MS in Conservation Biology and Ecology.

Contact info: tanya@pfwildlife.com

Phone: (408) 891-9833.

Letter of Regarding: Sonoma Development Center DEIR comments

Date: September 1, 2022

To: Brian Oh, Comprehensive Planning, Permit Sonoma, 2550 Ventura Avenue, Santa Rosa, CA 95403

From: Tanya Diamond

Dear Mr. Oh,

Pathways for Wildlife was asked by Sonoma Land Trust to review the Draft Environmental Impact Report ("EIR") and Draft Specific Plan for the Sonoma Development Center ("Specific Plan" or "Project"). Our review and comments focus on the Project's impacts on wildlife connectivity in the proposed Project area and the impacts of the proposed Project within the Sonoma Valley Wildlife Corridor. Our comments identify inadequacies in the EIR's treatment of wildlife connectivity impacts as well as deficiencies in the Specific Plan.

FIRM OVERVIEW AND QUALIFICATIONS

Pathways for Wildlife is a research organization developed by Wildlife Ecologist Tanya Diamond and Wildlife Researcher Ahíga Snyder in 2013. Pathways for Wildlife works with land trusts, conservation organizations, and transportation agencies to help identify important wildlife and habitat linkages for land conservation efforts by conducting wildlife connectivity surveys and implementing connectivity designs for wildlife movement within a landscape. Data collection used to develop wildlife connectivity plans include data from field cameras, roadkill surveys, tracking data, GIS habitat suitability modeling, and linkage analyses.

Several Pathways for Wildlife projects have resulted in significant funding for land conservation to protect wildlife linkages that animals have been documented using to travel through in various landscapes. Pathways also work with Caltrans and local transportation authorities to implement connectivity designs along highways, such as installing culverts as wildlife crossing structures.

Pathways for Wildlife provides these comments on the Draft EIR and Draft Specific Plan based on the professional expertise and opinion of its Co-Principal and wildlife ecologist, Tanya Diamond. These professional opinions and expertise are informed by over ten years of experience analyzing wildlife connectivity and impacts thereto, application of established scientific principles, and a robust knowledge of the resources and environment at the SDC site.

A resume for Tanya Diamond and Pathways for Wildlife is included herewith as Attachment 1.

COMMENTS ON THE SPECIFIC PLAN AND DRAFT EIR

The Draft EIR and Specific Plan fail to clearly or thoroughly address a number of important considerations related to wildlife movement and the Sonoma Valley Wildlife Corridor. As a result, some aspects of the Specific Plan conflict or potentially conflict with wildlife movement and thus conflict with the Project's stated goal to preserve and protect wildlife mobility through the Sonoma Valley Wildlife Corridor and the SDC site more broadly.

As detailed below, the Draft EIR's lack of analysis of key impacts to wildlife mobility prevents the EIR from identifying which impacts are likely to occur, where such impacts are likely to occur, what species those impacts are likely to affect, or how significant those impacts will be. Further, because the EIR does not clearly identify or analyze relevant impacts, it cannot fully develop or analyze effective mitigation measures. The EIR does not propose clear, tailored, and enforceable mitigation measures to ensure that the SDC site will remain permeable to the specific species that move through it. Further, to the extent the EIR proposes to mitigate potentially significant impacts through Specific Plan policies and conditions of approval, the EIR provides no supporting data or analysis to indicate whether or how its proposed mitigation would actually reduce impacts to wildlife mobility. Without complete analysis and enforceable mitigation supported by substantial evidence, the EIR cannot support its conclusion that impacts to wildlife mobility would be less than significant, and the Specific Plan cannot reliably achieve its goals to "protect[] natural resources, foster[] environmental stewardship, and maintain[] and enhance[] the permeability of the Sonoma Valley Wildlife Corridor for safe wildlife movement throughout the site." Draft Specific Plan at 1-9.

B11-221

Comment: The DIER states that the project will not interfere substantially with the movement of any wildlife species with an established native resident or migratory wildlife corridors (Figure 1; EIR at 19). This conclusion is not supported by substantial evidence and is likely incorrect. For example, there has been documented mountain lion movement through the Sonoma Development Center property (Figure 2). Two mountain lions in particular, P1 and P5, have been recorded traveling through the SDC property routinely throughout the study period and the property is part of these two mountain lions' home

range (Figure 2). Mountain lions are also of particular concern when designing new development because they are uniquely threatened by human activity and encroachment into their habitat. Mountain lions are known to be sensitive to human disturbance, light, and noise (Suraci, Justin P., et al 2019, Wilmers et al. 2013). Largely as a result of increasing development pressures, local mountain lion populations in California are increasingly under threat, and some—including populations within the Bay Area—are currently under review by CA Dept. of Fish and Wildlife to be a listed species for special protection under State law (Yap, TA, JP Rose, and B Cummings. 2019). It is therefore foreseeable that the Project, which would site more than 1,000 residential units and additional commercial and recreational uses immediately adjacent to a bottleneck in the Sonoma Valley Wildlife Corridor—will impede mountain lion movement through this corridor and negatively impact the resident mountain lion population (Wilmers et al. 2013). Impeding mountain lion movement would constitute significant impacts under Biological Resources significance Criteria 1 and 4. B11-221

Notwithstanding this foreseeable impact, however, the EIR fails to identify or analyze the Project's impacts to mountain lions. It does not discuss how the Project's uses and associated impacts, including light and noise, would carry into the corridor and influence mountain lion behavior or other species. Nor does the EIR discuss movements of particular species, including mountain lions, through the corridor. As a result, decisionmakers and the public neither know where and how frequently mountain lions or other wildlife species occur on the SDC site or whether and to what degree the development proposed under the Specific Plan would impact their behavior. The Project's impacts to mountain lion and other species mobility could thus be significant, but decisionmakers and the public have no way to know because the EIR failed to include necessary data and studies.

In fact, there have been no wildlife connectivity studies conducted to document what wildlife species are traveling through or residing on the SDC property. *See* EIR at 236 ("No new field studies were conducted for the preparation of this EIR."). This type of study must be conducted to be able to analyze what the project's impacts will be to wildlife movement and resident wildlife populations, and therefore to determine whether the project's impacts would be significant or could be mitigated. *See* EIR at 236 (Criterion 4, providing that impacts would be significant if the project would "[i]nterfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors"). How will the FEIR resolve this issue? B11-222

The EIR also does not include any specific mitigation measures that would reduce impacts to mountain lion and other species mobility to less-than-significant levels. For example, while the EIR acknowledges that wildlife and their habitat may be sensitive to noise impacts (EIR at 337-338), and while mountain lions in particular are known to be sensitive B11-223

to noise, the EIR does not include any mitigation measures that are designed to or capable of mitigating noise impacts to mountain lions to less-than-significant levels. Instead, the EIR relies on Specific Plan policies that regulate noise and vibration-based thresholds for humans and buildings. EIR at 347-349. This approach does not and cannot ensure that noise impacts to mountain lions would be sufficiently mitigated.

B11-223

Similarly, the de facto mitigation included in the Biological Resources section of the EIR fails to address mountain lions. For example, Conditions of Approval BIO 1 through BIO 14 ostensibly address construction impacts to special-status plants and wildlife. As discussed in the letter prepared by Prunuske Chatham, Inc., which comments are incorporated herein by reference, these conditions are not sufficiently detailed or enforceable to ensure that impacts would actually be reduced to less-than-significant levels. But even if they were sufficient for the species identified, Conditions of Approval BIO 1 through BIO 14 do not require mitigation specific to mountain lions or mountain lion activity. *See* EIR at 243-251. The EIR thus cannot conclude that the Project's impacts to mountain lion mobility would be less than significant because those impacts have neither been studied nor mitigated.

Comment: The SDC project will further constrain Sonoma Valley Wildlife Corridor. The landscape is already fragmented for wildlife movement Because of the existing infrastructure and roads, the wildlife corridor within the project area already constrains the corridor, resulting in a bottleneck of the linkage. Any further development or increase in people, cars, or intensity of land use would further constrain the linkage. The proposed project could ultimately sever this critical linkage and result in isolating wildlife populations, their ability to find resources like food and water, the ability to find mates, or juveniles dispersing out of their parental home range to establish their own. **How does the County propose to avoid or mitigate the foreseeable constricting effects of increased human activity on the wildlife corridor?**

B11-224

The proposed project will further constrict the wildlife corridor by significantly increasing the amount and intensity of human activity in and immediately adjacent to the corridor. The Specific Plan proposes more than 1,000 units of residential development in addition to commercial and visitor-serving development. By contrast, in recent years, the human activity at SDC has been considerably reduced. Even before facility closure, the site only supported approximately 415 clients living there, 470,000 sf of client housing, 49,000 sf staff housing, and 643,400 sf offices, shops, etc. California Department of Developmental Services. (2012). Sonoma Developmental Center Building Use Survey. Department of Developmental Services. October 2012. The increase in activity from new construction and occupation of the SDC site would therefore represent a sizeable increase in human activity encroaching on the Wildlife Corridor. Loss of habitat, increased noise and light disturbance

B11-225

within the Corridor, and human or domestic animal intrusion could reduce the width of animal dispersal corridors and disrupt movement through the Wildlife Corridor. B11-225

The EIR's failure to describe the already fragmented nature of the landscape results in an incomplete picture of the environmental setting of the Project and prevents decisionmakers and the public from understanding fully the consequences of the Project's impacts. Without a complete understanding of how development will further constrict the Wildlife Corridor, the EIR cannot develop adequate mitigation to reduce the Project's constricting impacts. And without targeted and enforceable mitigation, the Wildlife Corridor would predictably see an increase in potentially significant impacts from noise, light, habitat loss, and other consequences of development. B11-226

That analytical and informational gap is apparent on the face of the EIR. For example, as discussed above, the EIR admits that wildlife and their habitat may be sensitive to noise impacts. EIR at 337-338. But the EIR fails to quantify or otherwise describe how construction and operational noise might impact wildlife, including the use of the Wildlife Corridor by relevant species. The species that populate the Wildlife Corridor may respond to noise and other impacts in unique ways. For example, noise has been shown to impact wildlife usage of habitat, resulting, for example, in reduced foraging time and efficacy, and reduced nesting use, in birds (Burger and Gochfeld 2002, Stone 2000, Aubrey and Hunsaker 1997, Shannon et al. 2016). Other species may respond differently. The EIR must therefore analyze noise impacts on the Wildlife Corridor on a species-by-species basis if it is to provide a full understanding of the Project's potentially significant impacts to wildlife and wildlife mobility. The EIR does not provide that analysis. Nor does the EIR mitigate for effects to the wildlife corridor. For example, as discussed above, noise impacts are addressed based on thresholds for human and building exposure; the EIR does not contain performance standards relevant to wildlife or explain why thresholds for human and building exposure are applicable to wildlife. *See* EIR at 347-349. B11-227

The EIR's remaining analysis and mitigation similarly fails to ensure that the Project's impacts on the wildlife corridor will be less than significant. For example, Conditions of Approval BIO 1 through BIO 14 require future mitigation for construction-related impacts to specific special-status species. EIR at 243-251. But none of those conditions specify what "impacts" to those special-status species might entail. EIR at 243-251. Nor do any of the conditions establish performance standards related to wildlife movement within the corridor. EIR at 243-251. B11-228

The fourth significance criteria chosen by the EIR requires the EIR to demonstrate that "Implementation of the Proposed Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established B11-229

native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites." EIR at 254-255. But the EIR does not specify what species constitute "native resident or migratory fish and wildlife species" that could be impacted. The EIR also does not explain how much interference with species' movement would constitute "substantial" interference or how the County would determine whether "substantial" interference has occurred. The EIR cannot treat the Wildlife Corridor or the species that use it as a monolith. Different species use the wildlife corridor in different ways. Different species are also differentially impacted by various elements of human development and activity. An impact that is insignificant for one species may be extremely significant for another. Thus, before the EIR can claim that impacts to the wildlife corridor are less than significant, the EIR must first identify the species that use the corridor and identify the specific impacts of the Project that are likely to affect those species. Vague and generalized mitigation, such as the policies referenced on pages 255 to 256 of the EIR, are not sufficient to ensure that impacts to wildlife movement in the wildlife corridor will categorically be less than significant. For example:

B11-229

2-12 Restrict development in the wildlife corridor and creek corridor to limited trails/paths and informational signage, and design trail networks to minimize travel through wildlife and creek corridors.

B11-230

The EIR cannot assume that limiting development in the wildlife corridor to trails and paths would not significantly impact wildlife movement. Wildlife is known to respond to human activity, even when that activity is restricted to trails. For example, mountain lions are known to avoid trails where domestic dogs are present. Since the corridor is going to be significantly impacted and restricted by the proposed developments, the only habitat left will be the creeks and rivers for wildlife to travel along. Trails should be set back from creeks and the EIR must analyze the impacts of trails and trail use on surrounding wildlife. **Allowing limited development could have impacts on the wildlife corridor, and the EIR must analyze the significance of those impacts.**

2-13 Restrict access to the wildlife corridor and creek corridor to designated pedestrian paths marked with clear signage and delineated by strategic wildlife-permeable fencing.

B11-231

The same principles apply here. **Allowing limited access could have impacts on the wildlife corridor, and the EIR must analyze the significance of those impacts.**

2-14 Prohibit all unleashed outdoor cats, and restrict off-leash dogs and other domestic animals to private fenced yards and designated areas.

B11-232

How will this policy be enforced? Prohibiting off-leash pets is important to do but can be difficult to enforce. The EIR and Specific Plan must include an enforcement mechanism to ensure that this policy would actually reduce impacts to wildlife. B11-232

2-15 Collaborate with local wildlife protection groups to create and distribute educational information and regulations for residents and employees to guide safe interactions with wildlife onsite. Materials should be accessible to all ages and abilities and could include posted signs, disclosures, fliers, or informational sessions, among other things. B11-233

This policy does not clearly mitigate for any of the project's impacts and habitat loss of the wildlife corridor. What specific regulations would be developed? Until the County knows what regulations will be imposed, it cannot analyze whether those regulations would be sufficient to avoid negative interactions between people and wildlife. Further, this policy fails to specify how regulations would be enforced. Major national parks such as Yellowstone struggle with enforcement of regulations regarding interactions with wildlife despite having a full-time staff of rangers patrolling and enforcing those regulations. The EIR cannot conclude that information and regulations would reduce impacts to wildlife without providing clear standards and a mechanism for enforcement.

2-16 All fencing within the open space must be wildlife permeable, with at least 18 inches of clearance between the ground and the bottom of the fence, and shall not cross or bisect streams or otherwise discourage wildlife movement. For any barbed wire fences, a smooth bottom wire at least 18 inches above the ground must be used. B11-234

The EIR and Specific Plan fail to explain how this policy would be enforced. In my professional experience, these types of guidelines are often ignored. For example, ranchers often do not adhere to fencing guidelines because of the risk that calves or smaller farm animals might get out onto the roads, which is dangerous both for the animals and for drivers. How will the County enforce these critical fencing requirements? Further, because the Specific Plan permits agricultural uses within the "Preserved Open Space," this policy must make clear that these fencing standards apply throughout areas shown as Preserved Open Space in Figure 2.2-2.

2-17 Adhere to residential nighttime noise standards to the extent feasible. B11-235

This policy is vague and unenforceable. It states that occupants of the SDC site must adhere to residential nighttime noise standards only to the extent feasible. It does not specify who determines whether compliance is feasible or indicate how frequently compliance may not be feasible. Further, this policy does not provide for any additional mitigation that may be required if and when adhering to residential nighttime noise standards is not feasible.

There is simply no basis on which the EIR can conclude that this policy would reduce noise impacts to wildlife. B11-236

Why did the DEIR fail to analyze specific impacts to the wildlife corridor? B11-237

Why is there no formal mitigation set up for the impacts to the wildlife corridor? Even if the mitigating policies are baked into the Specific Plan, mitigation measures need to be included in a mitigation monitoring and reporting program to ensure they are effectively followed. B11-238

Why was there no study developed to determine impacts to wildlife movement within the wildlife corridor? B11-239

Without a detailed analysis, how will the FEIR evaluate and set up mitigation for impacts to the wildlife corridor? B11-240

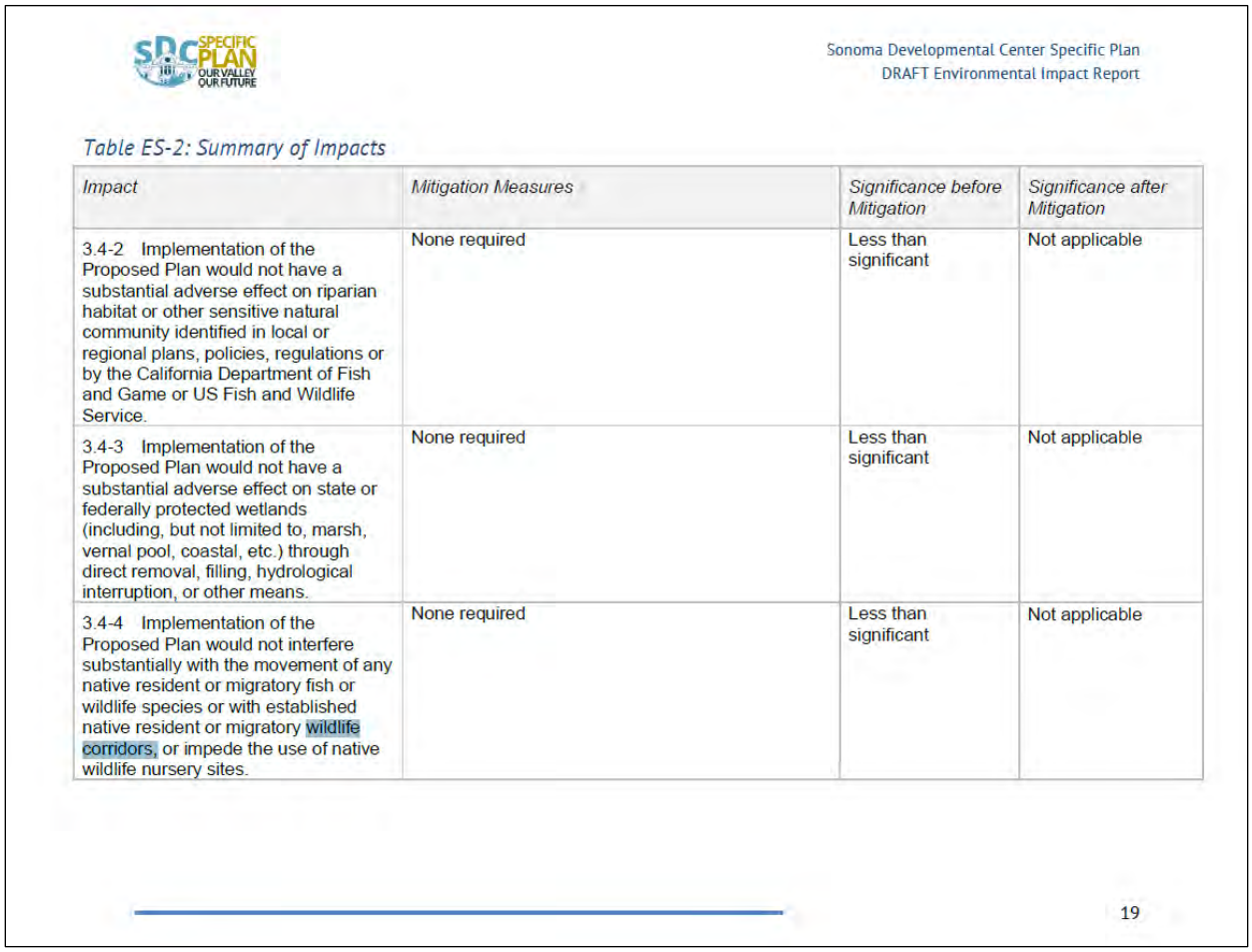


Table ES-2: Summary of Impacts

Impact	*Mitigation Measures*	*Significance before Mitigation*	*Significance after Mitigation*
3.4-2 Implementation of the Proposed Plan would not have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.	None required	Less than significant	Not applicable
3.4-3 Implementation of the Proposed Plan would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	None required	Less than significant	Not applicable
3.4-4 Implementation of the Proposed Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	None required	Less than significant	Not applicable

Figure 1. SDC EIR Summary of Impacts, 3.4-4.

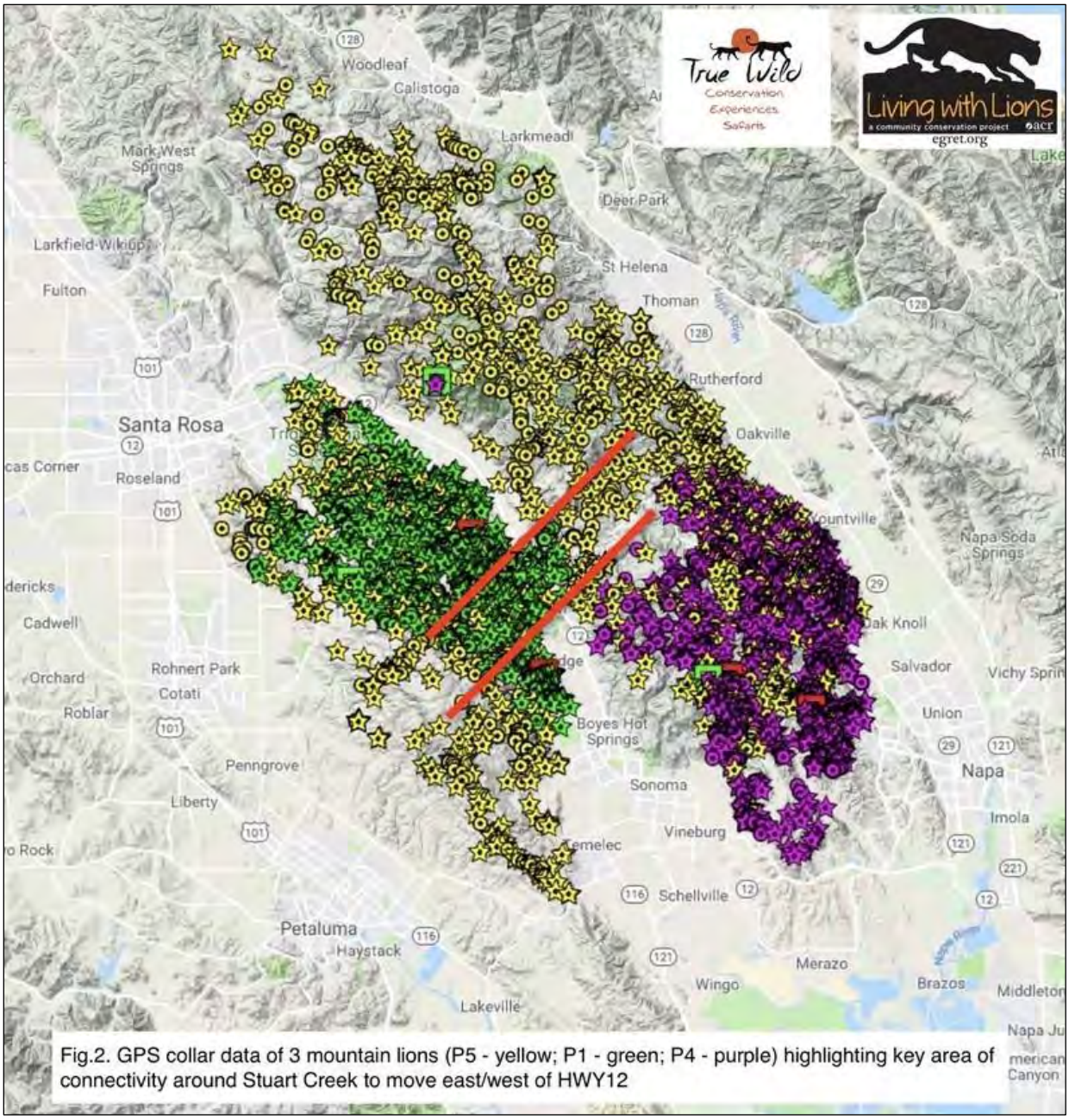


Figure 2. Mountain lion GPS collar data of 3 mountain lions recorded by ACR, Living with Mountain Lions. Two mountain lions, P1 and P5, were recorded traveling through the SDC property.

Comment: During a site visit, Pathways for Wildlife observed tracks and scat from multiple species, including deer, bobcat, coyote, and gray fox, throughout the main sections of the proposed development site. Yet the EIR does not disclose whether these species or others are present at the site because the County has not conducted the necessary surveys to document the site's biological resources. A site survey is a simple and necessary tool to confirm the presence of special-status species and other plants and wildlife at the Project

B11-241

site. A survey would allow the County to identify not only whether species are present on the site, but also where those species are documented to occur. B11-241

A spatial understanding of species distribution at the SDC site is key to understanding the full scope and intensity of impacts to plants and wildlife, because the impacts of development will vary based on what types of development the Specific Plan permits at different locations around SDC. While a specific development proposal has not yet been selected by the State, the Draft Specific Plan is sufficiently detailed and development plans are sufficiently congealed to know where certain types of development would be permitted under the Specific Plan. *See, e.g.,* Draft Specific Plan Figs. 1.6-1, 3.1-1, 3.1-2, 4.1-1, and 4.1-2. Therefore, a major roadblock standing in the way of a complete understanding of the Project's impacts to biological resources is the EIR's failure to collect relevant data about the occurrence and distribution of species at the SDC site. Until those data are collected, the EIR cannot fully analyze the Specific Plan's impacts to biological resources or intelligently mitigate for the effects. B11-242

Why were simple data like these not collected and analyzed by the authors of the DEIR? Comments on the Notice of Preparation, including those by Sonoma Land Trust, identified the need for this type of data collection to support any analysis or mitigation in the EIR. In addition, prior comments identified the need for an in-depth wildlife linkage assessment to fully characterize the scope, use, and impacts to the Sonoma Valley Wildlife Corridor. The Sonoma Valley Wildlife Corridor broadly recognized as a critical and regional linkage. An analysis of the impacts of the proposed development needs to be conducted so that the EIR can identify linkage-level impacts and develop appropriate mitigation measures to reduce those impacts to less-than-significant levels. CDFW expects all DEIRs for projects that impact that impact documented wildlife corridors to include this analysis. The EIR must include surveys of biological resources so that it can fully analyze and mitigate impacts to less-than-significant levels.

Comment: Pathways for Wildlife also conducted a wildlife connectivity study along Hwy 12, adjacent to the prosed development (Sonoma Valley Wildlife Corridor Road Underpass Use Report 2013-2014). We recorded multiple species' movements under the highway on a consistent basis throughout the study period. These species included bobcat, coyote, deer, gray fox, mountain lion, raccoon, skunk, and opossum. This study illustrated the importance of the wildlife movement with the Sonoma Valley Floor and documented that the highway is currently permeable for wildlife movement. However, no equivalent study was prepared for or included the DEIR. There is no actual analysis of wildlife movement in the DEIR, and therefore there is no evidence on which to base the EIR's so-called "analysis" of impacts. *See* EIR at 254-257 (concluding that impacts to wildlife movement would be less than significant without studying or fully describing how wildlife actually moves B11-243

through or around the SDC site). In order to understand how the Project will impact wildlife movement, the DEIR first needs to study and analyze how wildlife actually use the SDC property. Only after comparing actual wildlife movement against the Specific Plan's development proposal can the EIR begin to determine what the specific impacts and magnitude of impacts to wildlife movement will occur as a result of that development. A thorough study is therefore a predicate to impact analysis or mitigation. The final EIR must incorporate all relevant studies and data.

B11-243

The EIR's conclusion that the proposed project will not impact wildlife movement is completely unsupported and false as there is no data or documentation to support an assumption of that magnitude. An adequate wildlife connectivity study needs to be conducted to mitigate the project's impacts and to ensure that they are less than significant. The study proposal that Pathways for Wildlife prepared for Sonoma Land Trust, which was included in Sonoma Land Trust's comments on the Notice of Preparation and which is reproduced as Attachment 2 to this letter, is representative of the vetted and scientifically proven methodology for conducting wildlife connectivity studies to be able to analyze any types of development impacts on a wildlife corridor. This type of study is necessary to be able to determine and analyze the impacts to wildlife corridor by the proposed project (Safe Passages, Beier, P. & Loe. S. 1992, Forman, R. T. 2012).

B11-244

Finally, the DEIR is clear that important riparian corridors run through the SDC project area. Why was there no study or analysis of wildlife movement within these important riparian corridors? How will the FEIR avoid or mitigate impacts to these key riparian corridors in light of the current absence of data about wildlife movement in those corridors?

B11-245

Wildlife Corridors

The northern portion of the SDC property is identified as a regionally important wildlife corridor. This corridor is approximately ¾ of a mile wide and its southern edge slightly infringes into the northern portion of the Core Campus on the site. In total, the SDC property extends across about the southern half of the width of the corridor, which is generally oriented in an east-west direction, linking large habitat blocks to the west, with large habitat blocks to the east. In addition to this regionally significant corridor, the riparian corridors along the streams that run through the SDC, in particular Sonoma Creek, serve as wildlife corridors for several species that use streams to transit from one habitat to another (e.g. steelhead).

3.4.3 Impact Analysis

Sincerely,

Tanya Diamond

Tanya Diamond

Attachments

Attachment 1: Pathways for Wildlife Resume

Attachment 2: Sonoma Developmental Center Wildlife Connectivity Proposal. originally submitted as Attachment C to Sonoma Land Trust's comments on the Notice of Preparation

Literature Cited

Beier, P., & Loe, S. (1992). In my experience: a checklist for evaluating impacts to wildlife movement corridors. *Wildlife Society Bulletin (1973-2006)*, *20*(4), 434-440.

Craighead, L., Craighead, A., & Roberts, E. A. (2001). Bozeman Pass wildlife linkage and highway safety study.

Cushman, Samuel A., Erin L. Landguth, and Curtis H. Flather. "Evaluating the sufficiency of protected lands for maintaining wildlife population connectivity in the US northern Rocky Mountains." *Diversity and Distributions* 18.9 (2012): 873-884.

Forman, R. T. (2012). *Safe passages: highways, wildlife, and habitat connectivity*. Island Press.

Hilty, J. A., Keeley, A. T., Merenlender, A. M., & Lidicker Jr, W. Z. (2019). *Corridor ecology: linking landscapes for biodiversity conservation and climate adaptation*. Island Press.

Larson, C. L., Reed, S. E., Merenlender, A. M., & Crooks, K. R. (2016). Effects of recreation on animals revealed as widespread through a global systematic review. *PloS one*, *11*(12), e0167259.

Lay, Chris. "The status of the American badger in the San Francisco Bay area." (2008).

Nogeire, T. M., Davis, F. W., Duggan, J. M., Crooks, K. R., & Boydston, E. E. (2013). Carnivore use of avocado orchards across an agricultural-wildland gradient. *PLoS One*, *8*(7), e68025.

Pathways for Wildlife, Coyote Valley Linkage Assessment Study 2015-2016.

Pathways for Wildlife and Sonoma Land Trust, Sonoma Valley Wildlife Corridor Road Underpass Use Report, 2013-2014.

Penrod, K., P. E. Garding, C. Paulman, P. Beier, S. Weiss, N. Schaefer, R. Branciforte, and K. Gaffney. "Critical linkages: Bay area & beyond. "*Produced by Science & Collaboration for Connected Wildlands, Fair Oaks, CA [www. scwildlands. org], in collaboration with the Bay Area Open Space Council's Conservation Lands Network [www. BayAreaLands. org]* (2013).

Quinn, J., Diamond T. 2008. Mammalian Species of Special Concern in California, American Badger. Prepare for the California Department of Fish and Game.

Singleton, P. H. (2002). *Landscape permeability for large carnivores in Washington: a geographic information system weighted-distance and least-cost corridor assessment* (Vol. 549). US Department of Agriculture, Forest Service, Pacific Northwest Research Station.

Washington Connected Landscape Project. Washington Wildlife Habitat Connectivity Working Group. (December 2010).

Suraci, Justin P., et al. "Fear of humans as apex predators has landscape-scale impacts from mountain lions to mice." *Ecology Letters* 22.10 (2019): 1578-1586.

Wilmers, Christopher C., Yiwei Wang, Barry Nickel, Paul Houghtaling, Yasaman Shakeri, Maximilian L. Allen, Joe Kermish-Wells, Veronica Yovovich, and Terrie Williams. "Scale dependent behavioral responses to human development by a large predator, the puma." *PloS one* 8, no. 4 (2013): e60590.

Yap, TA, JP Rose, and B Cummings. 2019. A petition to list the southern California/central coast evolutionarily significant unit (ESU) of mountain lions as threatened under the California Endangered Species Act (CESA). Center for Biological Diversity, Tucson, AZ and the Mountain Lion Foundation, Sacramento, CA.

1559609.4

ATTACHMENT 1

Pathways for Wildlife Resume

Firm Overview for Pathways for Wildlife

Pathways for Wildlife is a research organization developed by Wildlife Ecologist Tanya Diamond, and Wildlife Researcher Ahíga Snyder in 2013. Pathways for Wildlife works with land trusts, conservation organizations, and transportation agencies, to help identify important wildlife and habitat linkages for land conservation efforts by conducting wildlife connectivity surveys and implementing connectivity designs for wildlife movement within a landscape. Data collection used to develop wildlife connectivity plans include; data from field cameras, roadkill surveys, tracking data, GIS habitat suitability modeling and linkage analyses.

Several projects have resulted in significant funding for land conservation to protect wildlife linkages that animals have been documented using to travel through in various landscapes. Pathways also work with Caltrans and local transportation authorities to implement connectivity designs along highways, such as installing culverts as wildlife crossing structures.

Pathways Team

1. **Co-Principal, Wildlife Ecologist & GIS Analyst:** Tanya Diamond: Wildlife Ecologist, MS Conservation Biology & Ecology and GIS Analyst, Co-Principal: of Pathways for Wildlife, and Certified Wildlife Tracker.
2. **Co-Principal, Field Researcher & Field Operations Manager :** Ahiga Roger Snyder: Wildlife Researcher, Co-Principal of Pathways for Wildlife.

Professional Experience and Demonstrated Knowledge:

1. American Badger and Burrowing Owl Habitat Suitability Study conducted for Midpeninsula Regional Open Space District (2019-present).

2. Highway 17 Wildlife Connectivity Study conducted for Midpeninsula Regional Open Space District and the Land Trust of Santa Cruz County (2014-present).

3. SR-152 Pacheco Pass and Pacheco Creek Wildlife Connectivity Study for the Santa Clara Valley Habitat Agency (2020-present).

4. The Southern Santa Cruz Mountains Wildlife Connectivity Study conducted for POST, the Santa Clara Valley Habitat Agency, and Caltrans (2018-present).

5. SR 68 Monterey-Salinas Scenic Highway Plan: Wildlife Connectivity Analysis conducted for Caltrans and the Transportation Agency of Monterey County (2016-2017).

6. Coyote Valley Linkage Assessment Study conducted for POST and Santa Clara Valley Open Space Authority (2015-2016).

7. Sonoma Land Trust Hwy 12, 116 & 101 Wildlife Connectivity Study for Sonoma Land Trust (2013-2014).

8. CA Central Coast Wildlife Connectivity Study conducted for the Big Sur Land Trust (2013-2014).

9. The Pajaro Wildlife Connectivity Study conducted for The Nature Conservancy (2012-2013).

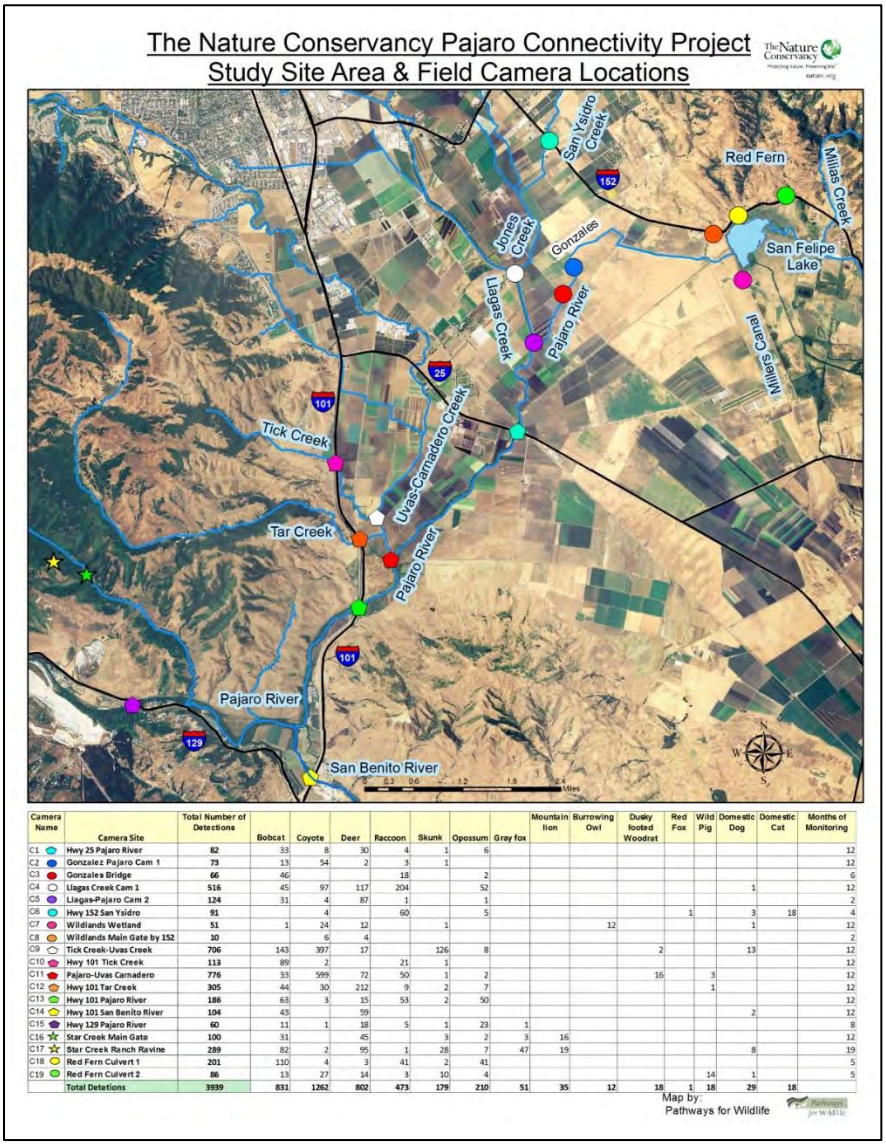
Selected Project Descriptions

1.The Nature Conservancy's Pajaro Wildlife Connectivity Study (2012-2013).

The objective of this study was to identify wildlife movement and presence along riparian systems and underneath roads through wildlife surveys using digital infrared (no flash) field cameras in partnership with Caltrans District 5. The goals of this project was to increase our understanding of wildlife movement through the entire Pajaro Valley floor which is a primary connection, habitat linkage, between the Diablo and Santa Cruz ranges (Figure 1). Road kill data was also collected to identify hot spot locations in which animals were routinely being hit at.

This data was used by Santa Clara Valley Transportation Authority for a potential US-101 and SR-152 widening project. Mitigation measures would include installing directional fencing to known bridges and culverts that animals were documented using

during the study, along with increased culvert sizes in which animals were using to cross underneath the highway.



Camera Name	Camera Site	Total Number of Detections	Bobcat	Coyote	Deer	Raccoon	Skunk	Opossum	Gray fox	Mountain lion	Burrowing Owl	Dusky footed Woodrat	Red Fox	Wild Pig	Domestic Dog	Domestic Cat	Months of Monitoring
C1	Hwy 25 Pajaro River	82	33	8	30	4	1	6									12
C2	Gonzalez Pajaro Cam 1	73	13	54	2	3	1										12
C3	Gonzales Bridge	66	46			18		2									6
C4	Llagas Creek Cam 1	516	45	97	117	204		52							1		12
C5	Llagas-Pajaro Cam 2	124	31	4	87	1		1									2
C6	Hwy 152 San Ysidro	91		4		60		5					1		3	18	4
C7	Wildlands Wetland	51	1	24	12		1				12				1		12
C8	Wildlands Main Gate by 152	10		6	4												2
C9	Tick Creek-Uvas Creek	706	143	397	17		126	8				2			13		12
C10	Hwy 101 Tick Creek	113	89	2		21	1										12
C11	Pajaro-Uvas Carnadero	776	33	599	72	50	1	2				16		3			12
C12	Hwy 101 Tar Creek	305	44	30	212	9	2	7						1			12
C13	Hwy 101 Pajaro River	186	63	3	15	53	2	50									12
C14	Hwy 101 San Benito River	104	43		59										2		12
C15	Hwy 129 Pajaro River	60	11	1	18	5	1	23	1								8
C16	Star Creek Main Gate	100	31		45		3	2	3	16							12
C17	Star Creek Ranch Ravine	289	82	2	95	1	28	7	47	19					8		19
C18	Red Fern Culvert 1	201	110	4	3	41	2	41									5
C19	Red Fern Culvert 2	86	13	27	14	3	10	4						14	1		5
	Total Detetions	3939	831	1262	802	473	179	210	51	35	12	18	1	18	29	18	

Figure 1. Field Camera Data Results from the TNC Pajaro Connectivity Study.

2. Highway 17 Wildlife Connectivity Study (2013-present).

In September 2013, Midpeninsula Regional Open Space District, Peninsula Open Space Trust, Land Trust of Santa Cruz County and Pathways for Wildlife joined as project partners to work with Caltrans District 5, Santa Clara Valley Transportation Authority ,the UC Santa Cruz Puma Project, the Department of Fish and Wildlife, and Santa Clara County Parks to identify the best locations for wildlife crossing structures on Highway 17.

Pathways for Wildlife was hired as the Project Manager to conduct the wildlife connectivity analysis and to develop the connectivity design to submit to Caltrans. Field camera, roadkill data, and mountain lion radio collar data were overlaid with GIS wildlife connectivity modeling to determine the optimum locations to install wildlife crossing structures for animals to travel underneath Highway 17 (Figure 2).

Caltrans District 5 has integrated the connectivity design into a project design, that is currently in the process for installing a wildlife crossing structure at Hwy 17 at the Laurel Curve Study site, which includes the installation of a 10'h by 20'w open span bridge with directional fencing to guide animals to the crossing structure.

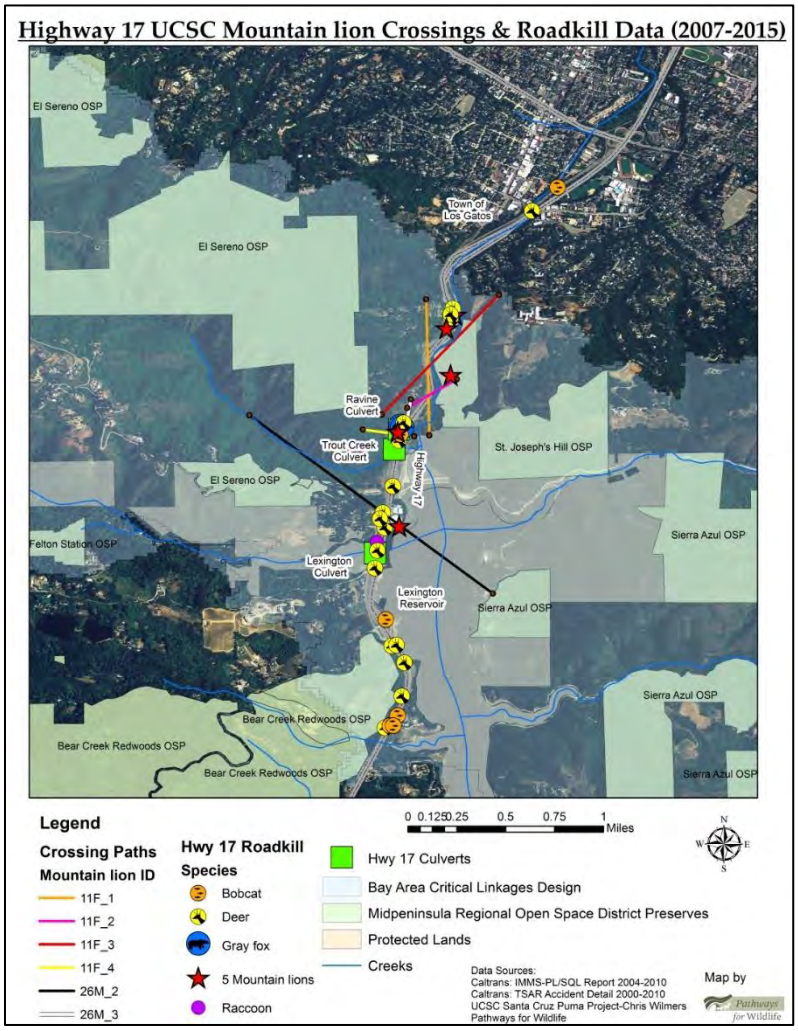


Figure 2. Hwy 17 Lexington Study Site: Roadkill and UCSC Mountain lion Radio Collar Data.

3.CA Central Coast Wildlife Connectivity Project: Northern Monterey-Sierra de Salinas (2007-2009, 2013-2014).

Wildlife Ecologist, Big Sur Land Trust: Principal Investigator for the California Central Coast Connectivity Project. Project Manager, Rachel Saunders (BSLT). Research involved performing a multiple species connectivity analyses in Northern Monterey County. Through wildlife surveys which include, data collected by field camera stations, wildlife track and sign surveys, and documented road-kill incidents combined with Geographic Information System (GIS) mapping. Field data was then integrated into focal species habitat suitability maps, which include areas wildlife are moving through and also barriers to wildlife movement (Figures 3 and 4). The reports and data produced from this project were integrated into Caltrans's District 5 Regional Wildlife Corridor and Habitat Connectivity Plan and Scenic Plan. 3/07-3/2014.

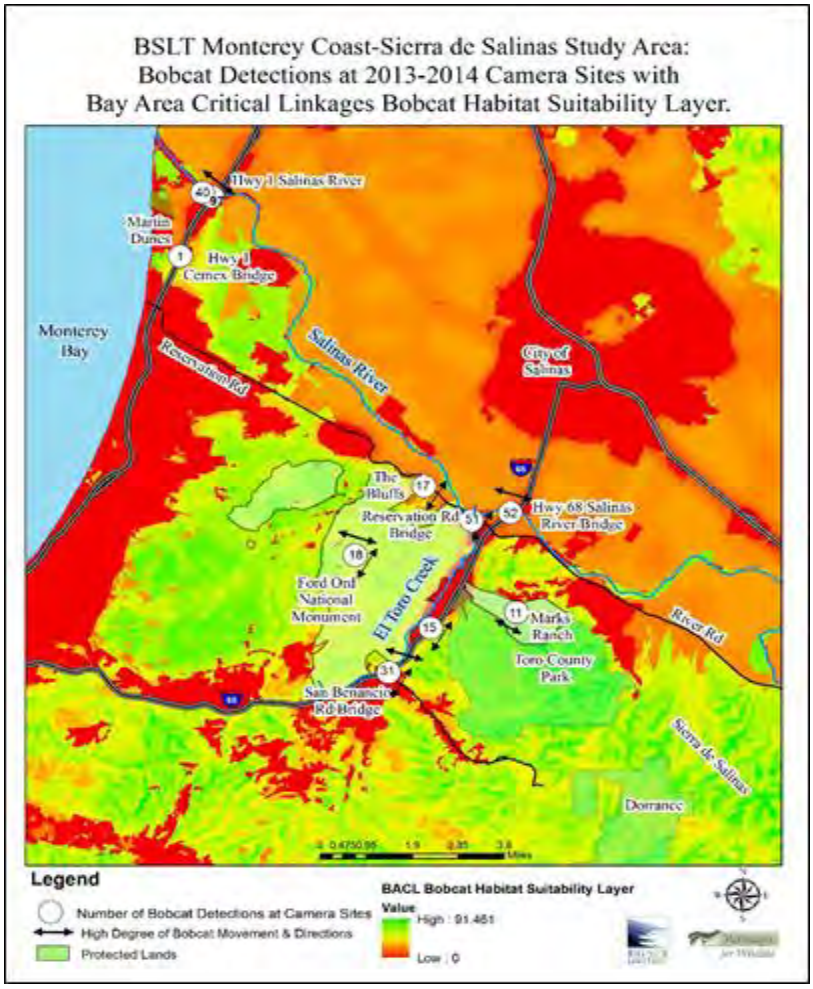


Figure 3. Bobcat Habitat Suitability Layer & Number of Bobcat Recorded at Camera Stations.



Figure 4. Examples of Highway 68 Wildlife Crossing Data collected from BSLT 2008-2009 & 2013-2014 Studies.

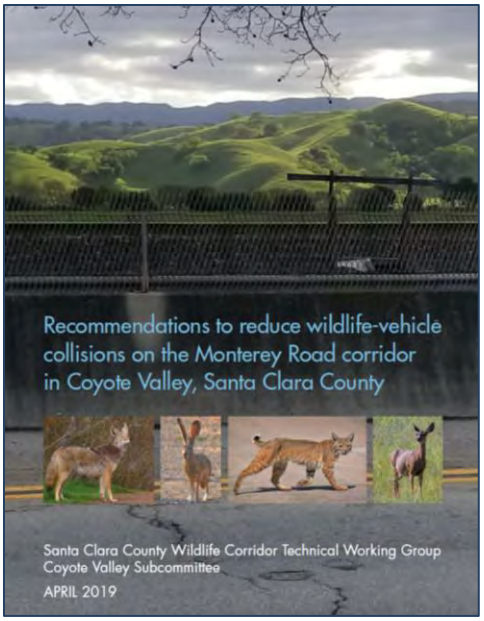
4. Coyote Valley Road Ecology Study and Long-Term Wildlife Vehicle Collision Monitoring Strategy (CV Road Ecology Study)

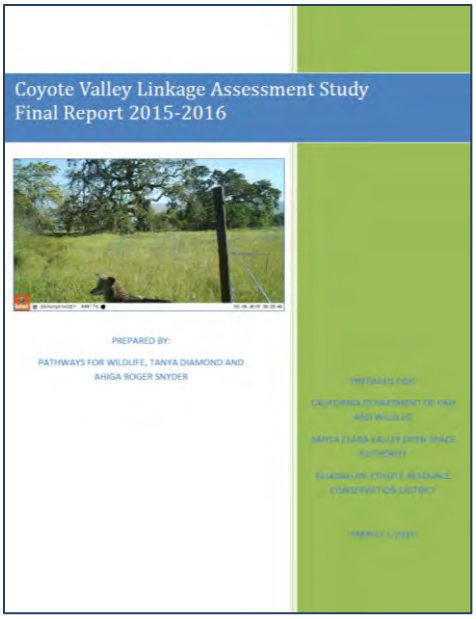
Pathways for Wildlife are currently conducting the new Coyote Valley Road Ecology study with POST, OSA, and the Santa Clara Valley Habitat Agency to help inform future planning efforts to enhance wildlife movement between the newly protected properties. This project will explore and characterize the interactions between wildlife and roadways in Coyote Valley, with a particular focus on the North Coyote Valley Conservation Area (NCVCA) properties. The resulting findings and recommendations are intended to inform the Coyote Valley Master Planning process and ongoing land conservation work including land acquisition, habitat restoration, land management, and wildlife crossing infrastructure. We will monitor and characterize wildlife use of undercrossing features (e.g. culverts and bridges) as well as successful and unsuccessful crossings at-grade. Based on the findings of the analysis, we will provide data-driven recommendations to reduce wildlife-vehicle collisions and maintain or increase permeability of the landscape for wildlife, as appropriate.

The project scope will include roadkill surveys and the development of a long-term wildlife-vehicle collision monitoring strategy for the greater Coyote Valley to inform ongoing efforts to preserve and/or enhance the permeability of the landscape for wildlife use. Protocols for conducting roadkill surveys will be developed with the intention for sharing with agency staff and/or qualified volunteers.

This study will build upon previous studies that explored the relationships between wildlife movement and various roads that intersect with the Coyote Valley wildlife linkage area.

Pathways for Wildlife are co-authors on the Coyote Valley Linkage Assessment Report and Recommendations to reduce wildlife-vehicle collisions on the Monterey Road corridor in Coyote Valley. Data from their Coyote Valley Linkage Assessment study with OSA and DFW helped inform the wildlife connectivity strategies outlined in the reports.





5. Sonoma Land Trust Hwy 12, 116 & 101 Wildlife Connectivity Study for Sonoma Land Trust (2013-2014).

The Sonoma Valley Wildlife Corridor (SVWC) connects the Sonoma Mountains and the Mayacamas Mountains through the Sonoma Valley floor (Figure 5). In 2013 Sonoma Land Trust (SLT) began a multi-year study, to determine whether mobile wild animals are able to move freely through the designated corridor. The study includes a remote camera grid across the corridor landscape, cameras at bridges and culverts along Highway 12, and roadkill surveys. The objective in placing cameras at underpasses is to determine if these structures are facilitating wildlife movement under Highway 12 and Arnold Drive within and adjacent to the SVWC.

Pathways for Wildlife was hired to set up the cameras along Highway 12, enter camera data, analysis the results, and write the final project report, Sonoma Valley Wildlife Corridor Road Underpass Use Report 2013-2014. This report describes and summarizes data and findings from the first year of data collected at several underpasses within and adjacent to the SVWC.

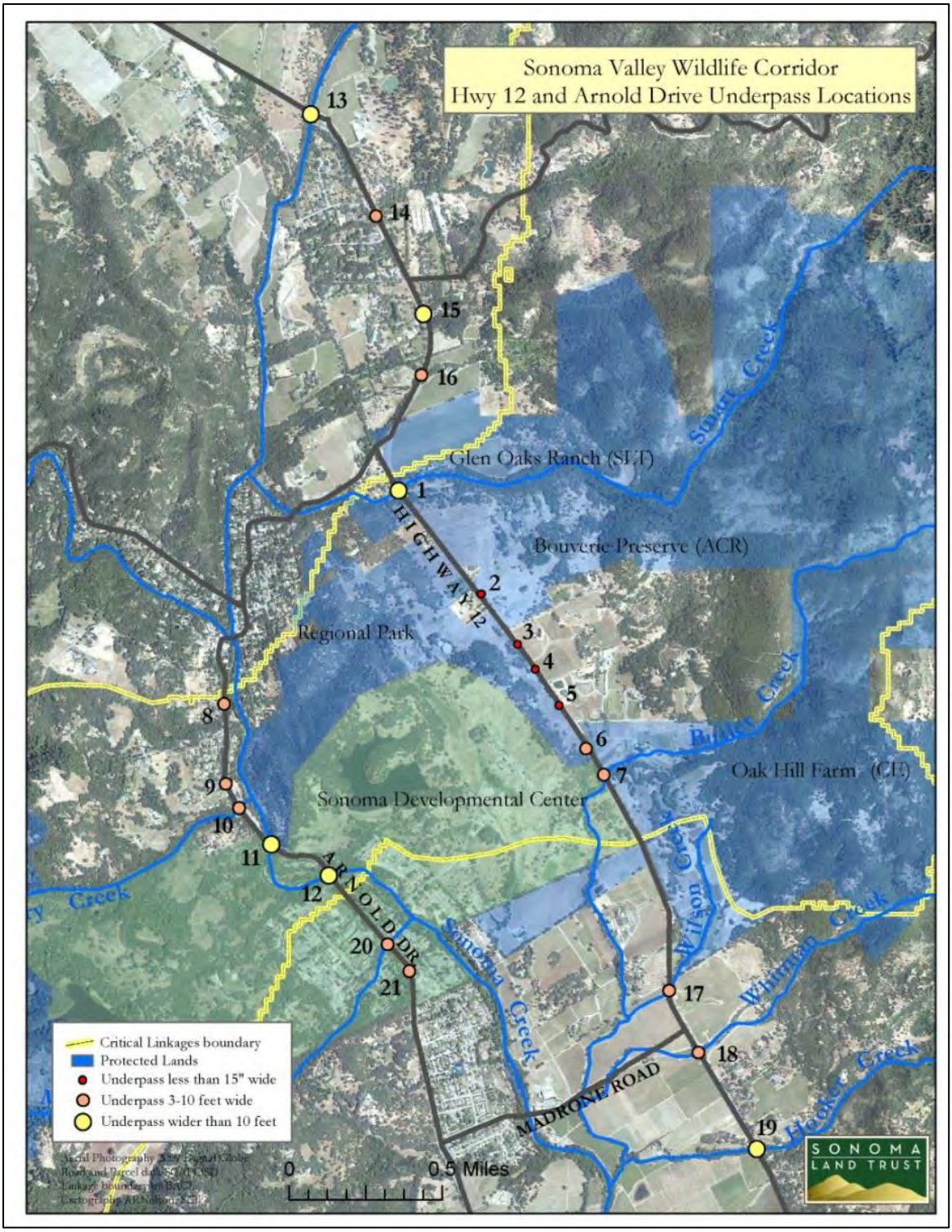


Figure 5. Roadkill Data Results from the TNC Pajaro Connectivity Study.

ATTACHMENT 2

Sonoma Development Center

Wildlife Connectivity Study Proposal

By Pathways for Wildlife

1.0 Introduction: Purpose and Need

To evaluate and implement science-based management, the development of a DEIR for the Sonoma Development Center needs to understand and document where species occur within the property and how wildlife are traveling throughout the property to be able to evaluate the impacts of the proposed development within this critical wildlife linkage. Additional data necessary for evaluating the proposed impacts include the habitat characteristics that are facilitating wildlife movement throughout the property and information about the existing populations of each species. The information obtained through this study can then inform how best to minimize the biological impacts of development at SDC.

The Sonoma Land Trust would like to hire consulting experts in this field, Pathways for Wildlife and Prunuske Chatham, Inc. (PCI) to construct a Habitat Suitability and Wildlife Linkage (Corridor) model for several focal species to create maps depicting levels of habitat suitability for each species. These models will then be used to run fine scale linkage analysis to create a multiple species linkage design for the property. Field-based surveys for each species would then be conducted in areas with high probability of occurrence and control areas (low probability of occurrence) to ground-truth the linkage design.

Pathways for Wildlife developed the following project approach based on our team's understanding of the project area and twelve years of wildlife connectivity experience which includes identifying wildlife linkages and the development of wildlife connectivity enhancement recommendations throughout the Bay Area. The proposed wildlife connectivity study includes robust monitoring and analyses methods that are well-vetted in previous research and publications.

2.0 Connectivity Modeling

2.1 Introduction

Connectivity models are used for identifying important habitat linkages and areas for highway mitigation. Recent attention has focused on the use of habitat suitability and linkage models to guide highway mitigation efforts (Landguth et al. 2012). These types of connectivity models are particularly well-suited for identifying important landscape linkages as they model large, landscape scale processes (i.e., wildlife movement and dispersal patterns).

We propose to create several GIS habitat suitability and cost surface models for the Sonoma Development Center (SDC) property. The models will produce a habitat linkage analyses for a set of four

focal species. These models will then be ground-truthed using field survey methods such as wildlife camera monitoring and wildlife tracking transects.

2.2 Model Comparisons

In 2013, the Bay Area Critical Linkages (BACL) created several species habitat suitability maps, however these maps resulted in coarse-scale, low-resolution maps that do not reflect the current level of available wildlife presence, habitat use, and land use layers (Penrod, K et al. 2013). The proposed study will use a much more detailed and current land use layer to produce fine scale species suitability maps that includes rankings for various types of human land use. This analysis will use a map resolution of 10m versus the BACL maps that used 30m resolution GIS layers.

Other improvements will include using a much finer scale habitat types GIS layer, which will include ranking habitat suitability for wildlife movement in agricultural lands based on documented wildlife movement through agricultural lands from previous studies (Nogeire et al. 2013). The BACL ranked agricultural lands as poor habitat for wildlife movement. Pathways for Wildlife has found through several different wildlife connectivity studies in Coyote Valley and the Pajaro Valley that landscapes featuring agricultural uses provide suitable habitat for certain wildlife to both reside in and travel through (Pathways for Wildlife, Coyote Valley Linkage Assessment Study 2016).

This study will also highlight sensitive species and bottleneck areas that could be negatively affected by an increase in human recreational effects (Larson, C. L. et al. 2016).

3.0 Methods

3.1 Habitat suitability and Cost Surface Development

Habitat suitability and cost surface models will be developed for four focal species and include an analysis of habitat variables. These habitat variables include; vegetation, habitat types, hydrology, land use, and roads. Each habitat variable will be reclassified to reflect the suitability of a habitat feature for focal species presence and movement using ArcMap 10.2. The resulting models will reflect a range of habitats from highly suitable (low cost for movement) to poor habitat (high movement costs).
A cost surface layer is a raster grid in which the value in each cell is the cost of movement through the landscape for a given species. The cost for each cell is developed by the cell's characteristics, such as land cover or housing density, combined with species-specific landscape resistance models. For example, a cell that has high use roads or high-density housing will have a higher cost for movement for the animal to travel through that cell within the grid. A cell that contains highly suitable habitat and open space for a particular focal species will have a lower cost of movement for traveling through that cell.

As animals move away from specific core areas, a cost-weighted distance analyses produces a map of total movement cost accumulated. Core areas are defined as habitat that is most preferred by a species and consists of habitat that provides resources such as food and water, breeding and dispersal habitat for that particular species (Corridor Ecology 2019). This analysis will result in a model which reflects a range of highly suitable habitat with low cost for movement for focal species to poor habitat with high movement costs within the study area. The process for developing a habitat suitability and cost surface model in outlined in Figure 1.

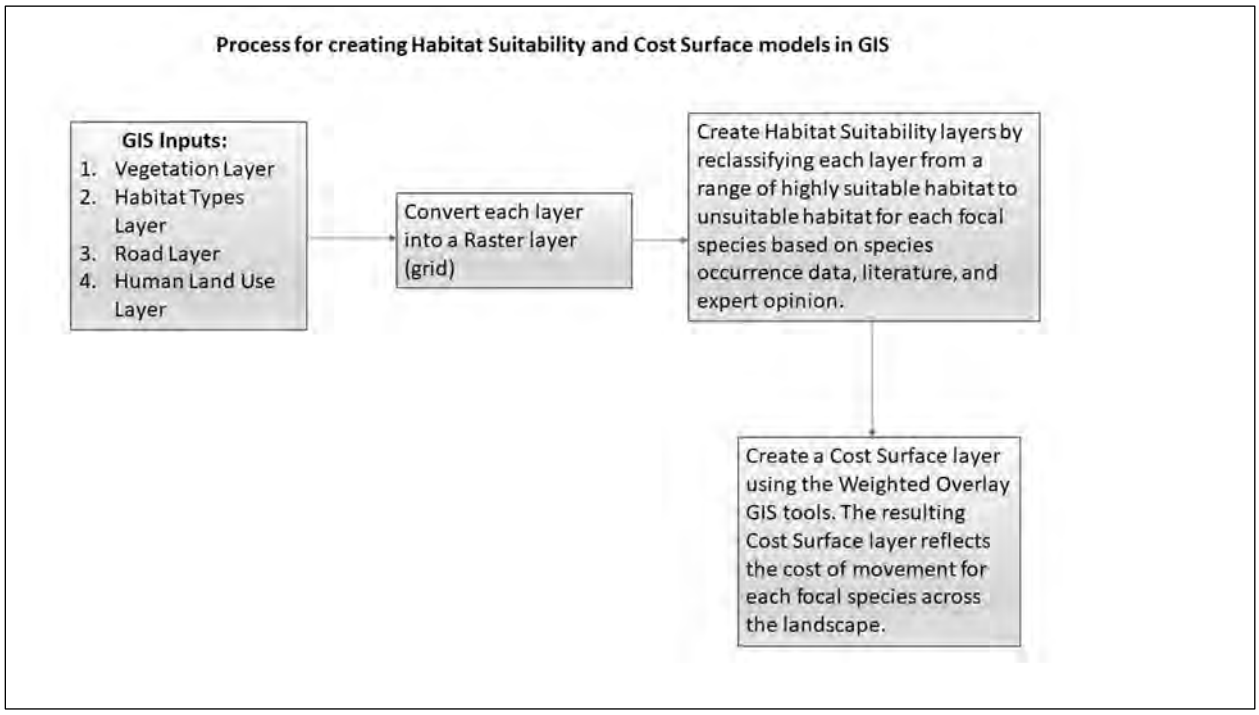


Figure 1. Habitat suitability and cost surface model development.

3.2 Linkage Model Development

The study will then run the Linkage Pathways program, for each focal species cost surface layers to identify and map least-cost linkages between core areas (Washington Connected Landscape Project 2010). Each cell in a resistance map (cost-surface layer) is attributed with a value reflecting the energetic cost, difficulty, or mortality risk of moving across that cell. An example of the steps involved in the Linkage Pathways analysis is illustrated in Figure 2 below. The Linkage Pathways program is an advanced version of least-cost path analysis and uses Circuitscape programming, which runs a fine scale linkage analysis between a network on core areas.

The resulting focal species linkage designs will then be overlaid together to identify linkages that may be facilitating multiple species movement through the landscape.

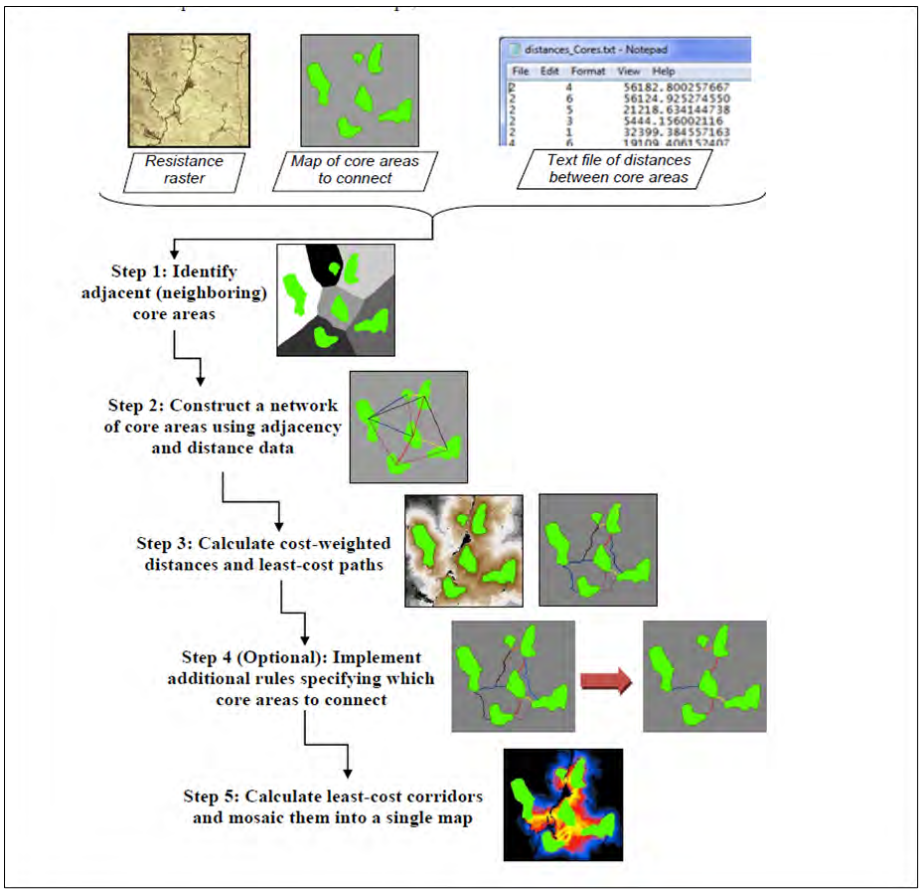


Figure 2. Linkage Pathways analysis steps.

3.3 Focal Species Selection

Landscape permeability analysis is a GIS method that models the relative cost for a species to move between core areas based on how each species is affected by habitat characteristics, such as slope, elevation, vegetation composition, land use, and road density. This type of analysis identifies the best potential movement corridors for each species between core areas and across highways in our study area (Craighead et al. 2001, Singleton et al. 2002). The purpose of the analysis is to identify critical habitat linkages within the SDC property.

Focal species will be selected based on the following: 1. habitat preference for both residing in and traveling through the study area; 2. sensitivity regarding human presence and land use; and 3. keystone and/or umbrella species.

Our goal will be to include a large range of habitat preferences and habitats wildlife travel through to identify important core locations and linkages that connect these sites. The focal species approach recognizes that species move through and utilize habitat in a wide variety of ways (Beier and Loe 1992). Species used in landscape permeability analysis must be carefully chosen, and will be included in this analysis only if:

- Sufficient data is available about the movement of the species to reasonably estimate the cost-weighted distance using the data layers available for our analysis.

- Data layers in the analysis reflect the species' ability to move.
- The focal species could potentially move between cores, at least over multiple generations.

i. Selected Focal Species Selection Criteria

We define focal species as a set of terrestrial mammal, amphibian, and bird species that collectively serve as an umbrella for all native species and ecological processes of interest in our study area. Our use and selection of focal species intended to capture the ecological attributes we list below.

Area-Sensitive: Species that need connectivity for dispersal, seasonal migration and or home range connectivity, which include many carnivore species.
Barrier-Sensitive: Species most reluctant to traverse roads, canals, urban areas or other barriers, such as tule elk.
Corridor-Dwellers: Species with limited dispersal, may take days or generations to move between target areas, such as California tiger salamander.
Habitat Specialists: Species strongly associated with specific habitat types or topographical elements, such as some songbirds, raptor species, and American badgers.
Ecological Indicator: Species tied to important ecological process whose presence indicates the health of the system, such as mountain lions.

3.3 Modeling Summary

A habitat suitability and cost surface model are created as inputs for the Linkage Mapper analysis. The steps of the overall process are illustrated below in Figure 3. Our models will also include land use and hydrology layers.

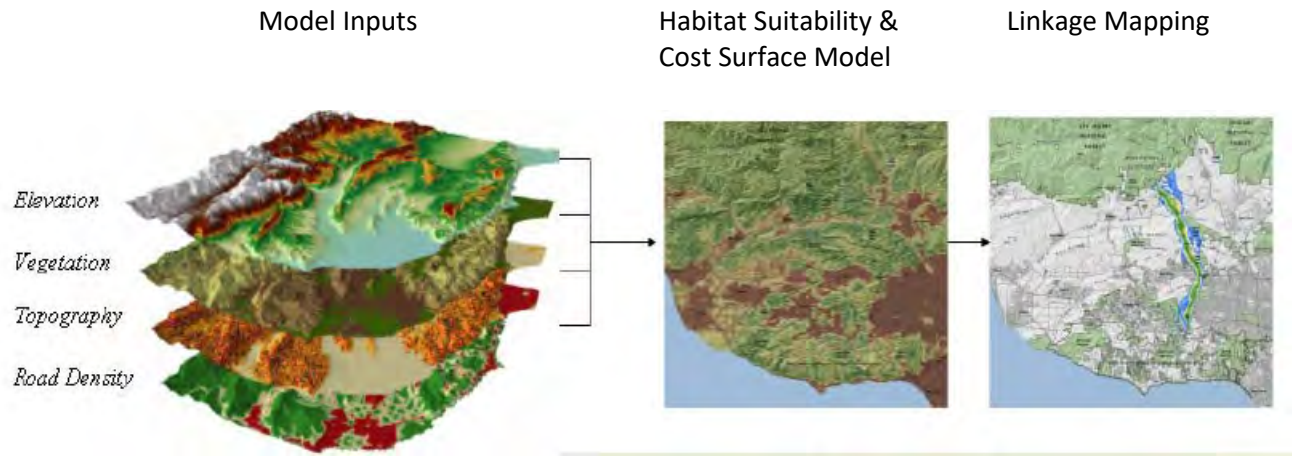


Figure 3: Cost surface modeling Summary

4.0 Model Validation: Ground-truthing with Data Collection

Linkages will then be ground-truthed by overlaying data collected from field surveys. To validate the focal species habitat suitability models and linkage design, we will employ two types of surveys—wildlife tracking transect surveys and camera trapping.

i. Transect Surveys

Systematic searches along established transects have been used in other studies to establish species presence in an area (Lay 2008, Quinn 2008). Surveys will be conducted by having at least two qualified wildlife trackers to walk the transects to record, GPS and photograph wildlife track and sign. The transects will be set up in a range of highly suitable habitat to poor habitat for each focal species to test the habitat suitability models along with the linkage design.

ii. Camera Trapping

Camera monitoring stations will be set up within both the habitat suitability models and linkage design to test the models. Camera arrays will be set by qualified biologists and with permission and permits pending approval of the project. Camera data will be entered into a master database. Data results will then be mapped out in GIS, as a data layer to overlay with the habitat suitability models and linkage design for model validation. This study will build on the data collection from the Sonoma Valley Wildlife Corridor Road Underpass study conducted by Pathways for Wildlife and the Sonoma Land Trust from 2013-2014 (Figure 4). This study proposes to expand this wildlife connectivity study beyond Hwy 12 to incorporate a critical part of the linkage to understand and document wildlife movement within it.

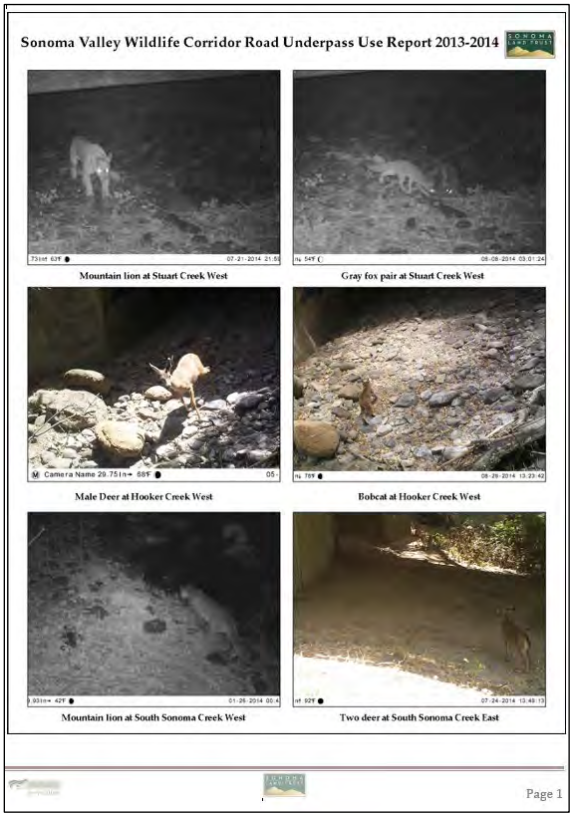


Figure 4. Sonoma Valley Wildlife Corridor Road Underpass Use report cover.

5.0 Analysis and Interpretation

The model will provide gradients of habitat suitability for a species for the entire property from the types of habitats a species prefers to habitat they typically do not use and travel through. The linkage analysis will then analyze how the highly suitable (preferred) habitats are connected.

The field component of the project will then document sites where the species are traveling through to validate if the model accurately depicts suitable habitats and if species are in fact traveling through the linkage design.

Linkages that have documented wildlife use will then be assigned appropriate buffers to ensure the linkage will not be negatively impacted by human development that would impede wildlife movement through the linkages. **Validated linkages and highly suitable habitat will inform the proposed development plan to identify important locations that should not be impacted by development and be designated as open space.**

The ground-truthed data will also result in developing wildlife connectivity enhancement recommendations such as fencing improvements that would be beneficial as wildlife friendly fencing designs, directional fencing to culverts and bridges we record wildlife using to travel underneath roads, culvert retrofits to facilitate wildlife passage, or new locations for wildlife crossings structures, along with removal of buildings that create bottlenecks and pinch-points within the linkage design, and modifications of proposed developments and roads to include safe passage for wildlife movement through the linkage design.

Figures 5 and 6 includes examples of models developed and then ground-truthed by Pathways for Wildlife.

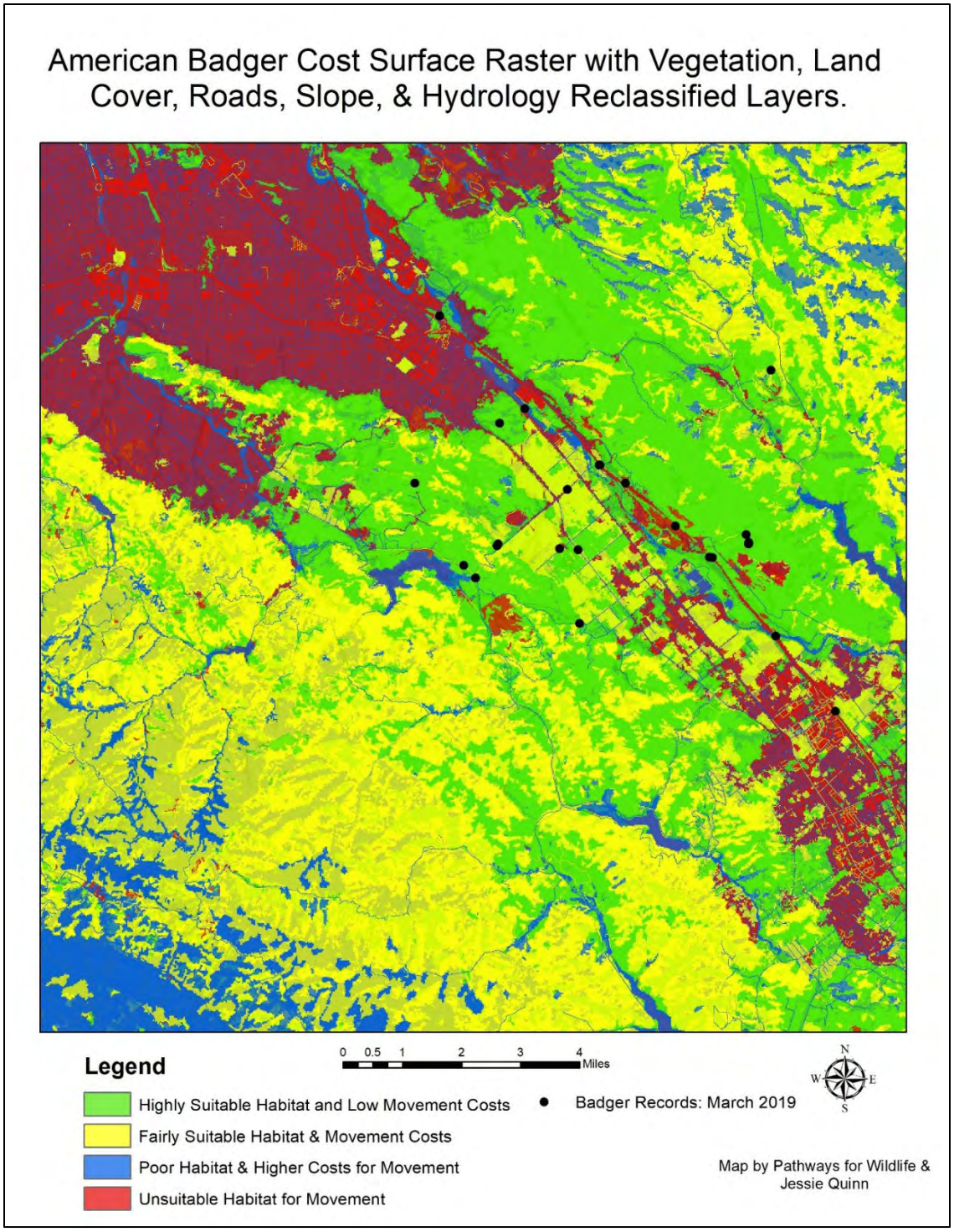


Figure 5. American badger habitat suitability & cost surface model for Coyote Valley. Collected badger records were then overlaid to ground-truth the model. Data records include badgers that were hit by cars on US-101. Developed by Pathways for Wildlife.

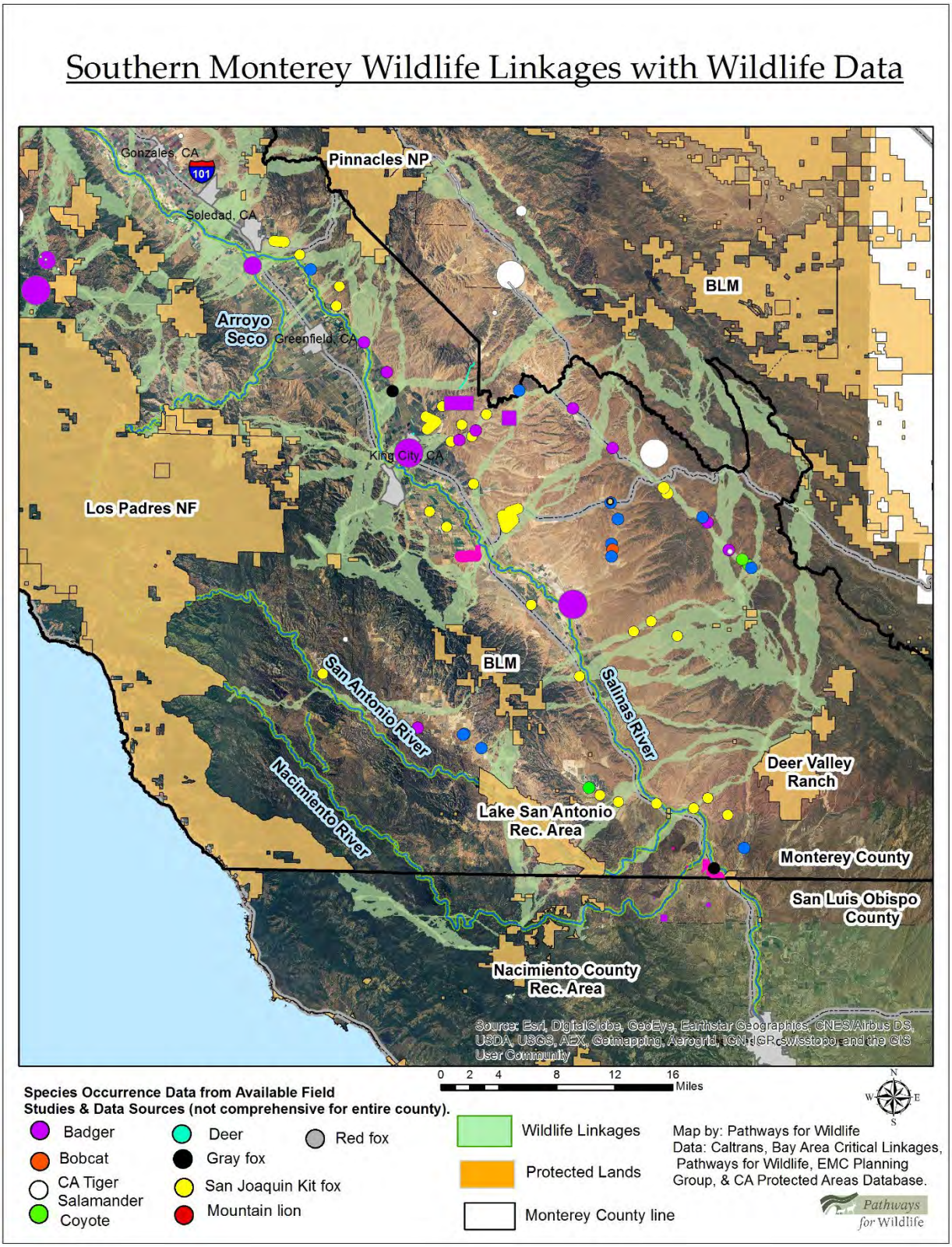


Figure 6. Multiple species linkage model for Monterey County developed by Pathways for Wildlife for the Monterey County Planning Department. Collected wildlife records were then overlaid to ground-truth the model.

5.0 Literature Cited

Beier, P., & Loe, S. (1992). In my experience: a checklist for evaluating impacts to wildlife movement corridors. *Wildlife Society Bulletin (1973-2006)*, *20*(4), 434-440.

Craighead, L., Craighead, A., & Roberts, E. A. (2001). Bozeman Pass wildlife linkage and highway safety study.

Cushman, Samuel A., Erin L. Landguth, and Curtis H. Flather. "Evaluating the sufficiency of protected lands for maintaining wildlife population connectivity in the US northern Rocky Mountains." *Diversity and Distributions* 18.9 (2012): 873-884.

Hilty, J. A., Keeley, A. T., Merenlender, A. M., & Lidicker Jr, W. Z. (2019). *Corridor ecology: linking landscapes for biodiversity conservation and climate adaptation*. Island Press.

Larson, C. L., Reed, S. E., Merenlender, A. M., & Crooks, K. R. (2016). Effects of recreation on animals revealed as widespread through a global systematic review. *PloS one*, *11*(12), e0167259.

Lay, Chris. "The status of the American badger in the San Francisco Bay area." (2008).

Nogeire, T. M., Davis, F. W., Duggan, J. M., Crooks, K. R., & Boydston, E. E. (2013). Carnivore use of avocado orchards across an agricultural-wildland gradient. *PLoS One*, *8*(7), e68025.

Pathways for Wildlife, Coyote Valley Linkage Assessment Study 2015-2016.

Pathways for Wildlife and Sonoma Land Trust, Sonoma Valley Wildlife Corridor Road Underpass Use Report, 2013-2014.

Penrod, K., P. E. Garding, C. Paulman, P. Beier, S. Weiss, N. Schaefer, R. Branciforte, and K. Gaffney. "Critical linkages: Bay area & beyond. "*Produced by Science & Collaboration for Connected Wildlands, Fair Oaks, CA [www. scwildlands. org], in collaboration with the Bay Area Open Space Council's Conservation Lands Network [www. BayAreaLands. org]* (2013).

Quinn, J., Diamond T. 2008. Mammalian Species of Special Concern in California, American Badger. Prepare for the California Department of Fish and Game.

Singleton, P. H. (2002). *Landscape permeability for large carnivores in Washington: a geographic information system weighted-distance and least-cost corridor assessment* (Vol. 549). US Department of Agriculture, Forest Service, Pacific Northwest Research Station.

Washington Connected Landscape Project. Washington Wildlife Habitat Connectivity Working Group. (December 2010).

ATTACHMENT D

Griffin Cove Transportation Consulting, PLLC

September 26, 2022

Mr. Brian Oh, Comprehensive Planning Manager
Permit Sonoma County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403
Brian.Oh@sonoma-county.org

Via E-mail Only

Subject: ***Review of Draft Environmental Impact Report Transportation Analysis***
Sonoma Developmental Center Specific Plan, Sonoma County, California

Dear Mr. Oh:

Griffin Cove Transportation Consulting, PLLC (GCTC) has completed a review of the transportation analysis completed with respect to the proposed Sonoma Developmental Center Specific Plan project (Project) in Sonoma County, California. Details regarding the Project are presented in the *Sonoma Developmental Center Specific Plan Public Review Draft* (Dyett & Bhatia, August 2022).

The proposed Project is the subject of a Draft Environmental Impact Report (DEIR) prepared for the County of Sonoma (Reference: Dyett & Bhatia, *Sonoma Developmental Center Specific Plan Draft Environmental Impact Report*, August 2022). Section 3.14 of the DEIR presents the transportation analysis. No separate technical report was prepared, although Appendix F to the DEIR is labeled "Traffic Model Data." We should note, however, that no traffic model data are actually presented in that appendix; instead, it simply provides a table that is virtually identical to DEIR Table 3.14-3: Projected Traffic Volumes in Plan Area. (DEIR p. 441)

Our review focused on the technical adequacy of the transportation analysis presented in DEIR Section 3.14, including the detailed procedures and conclusions documented there.

BACKGROUND

The proposed Sonoma Developmental Center (SDC) Specific Plan project involves the potential redevelopment of the 180-acre "Core Campus" within the overall SDC site. According to the DEIR Executive Summary (p. 7), the Project would result in buildout of 1,000 housing units, 2,400 residents, and 940 jobs. More specific development plans are described in DEIR Section 3.14 – Transportation, as follows:

- 435 single-family residential units,
- 345 multifamily residential units,
- 220 senior residential units,
- 40,000 square feet (SF) of commercial/retail space,
- 190,000 SF of office space,
- 70,000 SF of institutional space (described in DEIR Table 2.5-3 – Planning Area Non-Residential and Employment Buildout Summary (p. 80) as 30,000 SF of public space and 40,000 SF of institutional space),
- 120 hotel rooms, and
- 12.1 acres of recreational uses.

We note that the specific breakdown of housing unit types addressed in the transportation analysis is not presented in either the DEIR Project Description or in the Specific Plan document. Questions regarding the specific development plan are discussed in our comments below.

TRANSPORTATION ANALYSIS REVIEW

Our review of the DEIR transportation analysis for the proposed Sonoma Developmental Center Specific Plan project revealed several issues that must be addressed prior to certification of the environmental document and approval of the project by the County of Sonoma. These issues are presented below.

B11-246

1. ***Flawed Analysis of Plan Consistency*** – Impact 3.14.4.5 (DEIR p. 443) addresses the issue of potential Project-related conflicts with "a program, plan, ordinance, or policy addressing the circulation system." Among the plans considered here is the Sonoma County General Plan 2020. The DEIR states that:

   > *Objectives CT-4.1 and CT-4.2 of the Sonoma County General Plan pertain to upholding vehicle level of service standards. As individual development projects occurring within the Proposed Plan complete traffic impact studies as required by the Sonoma County Department of Transportation and Public Works (DTPW), the potential exists for identification of locations where LOS* [Level of Service] *targets would be exceeded.*

   The General Plan objectives referenced here require operation at LOS C on roadway segments (except where exceptions have been adopted) and LOS D at intersections. Attachment 1 contains an excerpt from the General Plan, including the figure illustrating where LOS exceptions have been approved.

   The DEIR (p. 444) goes on to state:

   > *. . . while traffic congestion effects of the Proposed Plan or development of individual sites within the Planning Area may not comply with the LOS targets established in Sonoma County General Plan Objectives CT-4.1 and CT-4.2, for the purposes of the Proposed Plan's CEQA assessment this would not be considered an adverse environmental impact.*

   We believe this conclusion is erroneous. In fact, we believe that the failure to conform to level of service standards established within the County's adopted General Plan constitutes a clear "conflict with a program, plan, ordinance, or policy addressing the circulation system." Further, the failure to include any documentation within the DEIR regarding conformance to the General Plan LOS objectives is a significant deficiency.

   We note that a detailed traffic impact analysis has been conducted for the Project, although that document has not been included in the DEIR. Specifically, Footnote 118 (DEIR p. 410) references the *Focused Traffic Operations Analysis for the SDC Specific Plan* (W-Trans, August 2022 [actually July 6, 2022]). Although the traffic analysis is not part of the DEIR, we reviewed it to establish whether the Project conforms to General Plan Objectives CT-4.1 and CT-4.2. Our review revealed that the W-Trans report (p. 3) states:

   > *Under future conditions with implementation of the SDC Specific Plan, two intersections are projected to operate unacceptably if no modifications to the current roadway configurations are made. The intersection at Arnold Drive/Harney Street would operate unacceptably at*

> *LOS F during the p.m. peak hour . . . The future new intersection on SR 12 at the new SDC Connector Road would have unacceptable LOS E operation on the stop-controlled connector road approach . . .*

Although improvements are identified that would remedy these deficiencies, no assurance is provided that those measures would be implemented.

The focused traffic study (p. 5) also says:

> *With the additional traffic generated by the buildout of the SDC Specific Plan, the segment of SR 12 between Arnold Drive and Trinity Road would continue to operate below the County's standard at LOS D, as would the segment of Arnold Drive between SDC and Madrone Road.*

Although these road segments are also identified as falling short of the County LOS standard without the Project, no mitigation measures were proposed to allow operation at an acceptable LOS. In any event, it is clear that these two roadway segments will fail to meet the County LOS standard upon completion of the Project, thereby violating the General Plan objectives.

In conclusion, the information necessary to address conformance with General Plan Objective CT-4.1 and CT-4.2 exists, but was not included within the DEIR, which would have allowed public review. As described here, that information indicates that the Project fails to conform to the County's LOS standard, as two intersections and two road segments will operate at unacceptable levels of service upon completion of the Project, and no assurance was provided that these deficiencies will be remedied. Thus, a significant impact exists with respect to conflicts with the adopted General Plan.

Finally, the focused traffic study must be incorporated into the DEIR. The provision of this new information within the DEIR provides grounds for recirculation of the document.

B11-247

2. ***Project Trip Generation is Underestimated*** – The DEIR (p. 440) states that the Project will generate 5,736 daily trips. Of that total, 1,398 of those trips (i.e., 24.4 percent of the total) will be "captured within the campus itself," resulting in net external trip generation of 4,338 trips. We believe the DEIR has substantially underestimated the volume of traffic associated with the Project.

   The DEIR's Project trip generation estimate was developed using the SCTM19 travel demand forecasting model maintained by the Sonoma County Transportation Authority (SCTA). The specific trip generation factors employed were not revealed in the DEIR. Consequently, it is impossible for the reviewing public to evaluate the reasonableness of either those factors or the resulting trip generation estimates.

   Traffic impact analyses for proposed development projects commonly use information presented in the Institute of Transportation Engineers (ITE) document *Trip Generation Manual* (Eleventh Edition, 2021) to develop project-related trip generation estimates. Although we acknowledge that the ITE trip rates often differ from corresponding rates contained within travel demand forecasting models such as the SCTM19 model, comparison of an estimate based on the ITE information versus the estimate documented in the DEIR provides a valuable perspective on the credibility of the DEIR Project's transportation analysis.

Two scenarios are addressed here. The first employs the Project plan as described in DEIR Section 3.14 - Transportation, and the second considers a maximum residential development scenario based on information in the Specific Plan document.

DEIR Section 3.14 – Transportation Project Plan Scenario

Table 1 provides a trip generation estimate for the Project based on the plan as described in DEIR Section 3.14 - Transportation and on commonly-accepted procedures documented in the ITE ***Trip Generation Manual***. That estimate reflects the following parameters:

- The land use values described in DEIR Section 3.14 – Transportation, including the specific housing type breakdown, were evaluated.
- The ITE ***Trip Generation Manual*** typically provides two methods to develop an estimate of project-related traffic: one using an average rate and one using a fitted curve equation. For this analysis, we have reported whichever of those two methods provides a lower value, so as to provide a conservative estimate of Project trips. The trip generation data sheets for this estimate are presented in Attachment 2.
- Within each housing type, it was assumed that 25 percent of the residential units would be inclusionary income-restricted units, in order to conform to Specific Plan Policy 4-14 (Specific Plan, p. 4-25). Because these units generally produce lower volumes of traffic, this assumption again results in a conservative trip generation estimate.
- Because the specific uses included within the public/institutional land use are not currently well-defined, no trip generation estimate was included for that land use category.

As shown in Table 1, the Project is estimated to generate 12,253 daily trips. This is obviously substantially (i.e., 114 percent) greater than the DEIR estimate of 5,736 daily trips. As we stated above, model-based trip generation factors often differ from the ITE trip rates. However, a difference of this magnitude is exceptional and is greater than we have ever seen. Consequently, we question the validity of the DEIR trip generation estimate.

Table 1
Daily Trip Generation[1]
1,000 Dwelling Units (25 Percent Inclusionary Income-Restricted)

Land Use		Size	Daily Trips
Residential			
Single-Family Residential	Market Rate	326 DU[2]	2,993
	Affordable[3]	109 DU	524[4]
Multifamily Residential	Market Rate	259 DU	1,736
	Affordable	86 DU	414
Senior Residential	Market Rate	165 DU	711[5]
	Affordable	55 DU	178[6]
Residential Subtotal		1,000 DU	6,556
Non-residential			
Commercial		40,000 SF[7]	2,701
Hotel		120 Rooms	959
Office		190,000 SF	2,028
Public/Institutional		70,000 SF	--[8]
Recreation		12.1 Acres	9
Non-residential Subtotal			5,697
		TOTAL	**12,253**

Notes:
1 Reference: Institute of Transportation Engineers, *Trip Generation Manual*, 11th Edition, 2021.
2 Dwelling unit.
3 Affordable housing assumed to be 25 percent of all residential types.
4 Based on ITE Land Use Code 223 – Affordable Housing – Income Limits, which is defined as including only multifamily housing. This represents a conservative assumption regarding trip generation for this land use category.
5 Based on ITE Land Use Code 251 – Senior Adult Housing – Single Family.
6 Based on ITE Land Use Code 251 – Senior Adult Housing – Multifamily. This rate is conservative, since "Affordable Housing" rate is 48 percent higher than this.
7 Square feet.
8 No estimate is possible, given the lack of information regarding specific land uses in this category.

Maximum Residential Development Scenario

As we indicated above, we have questions regarding certain aspects of the proposed development plan. One such question concerns how many residential units will be constructed. Although the DEIR transportation analysis addresses development of 1,000 residential units, the Specific Plan indicates that a greater number of units is possible.

Table 4-2: Minimum and Maximum Housing Units by District (Specific Plan, p. 4-12) provides detailed information regarding how many housing units could be constructed within various subareas of the Project. That table reveals that the maximum number of housing units that could potentially be built is 1,210. Further, the notes to the table state that "[u]p to 10% deviations from the minimum and maximum by district are subject to approval by the Community Development Director." If such a deviation from the maximum values were to be approved, the total number of residential units would increase to 1,331 (1,210 X 1.10 = 1,331).

To assess the impacts of this maximum development scenario with respect to the volume of traffic associated with the Project we have performed a second trip generation analysis, as summarized in Table 2. The basic parameters of this analysis are similar to those described above for the Table 1 analysis. Attachment 3 contains the data sheets for the residential uses; the non-residential data sheets are unchanged from the previous analysis.

With consideration of the larger number of residential units, the Project's total daily trip generation increases to 14,290. This is 149 percent greater than the value claimed in the DEIR.

Summary

The analysis presented here indicates that the Project's daily trip generation has been substantially underestimated. This finding relates directly to the Project's impact with respect to vehicle-miles traveled (VMT). The DEIR acknowledges the relationship between trips and VMT at p. 447, where it says:

> *. . . trip reductions should in theory translate to roughly equivalent VMT reductions.*

Thus, trip increases, as we have described, will similarly translate to roughly equivalent increases in VMT. Further, as described at DEIR p. 425, the calculation of VMT:

> *. . . is based on the estimated number of vehicles* [actually, vehicle-trips] *multiplied by the distance traveled by each vehicle.*

If, as we have found, the number of vehicle trips is 2.14 – 2.49 times greater than the value considered in the DEIR, then the VMT values associated with the Project will also be 2.14 – 2.49 times greater than the DEIR findings.

Although the DEIR has already concluded that the Project's VMT impact will be significant and unavoidable, it has failed to accurately portray the magnitude of that impact. This is a serious deficiency in the DEIR, which suggests a need to reevaluate the Project's impact and recirculate the DEIR for further public review.

Table 2
Daily Trip Generation[1]
1,331 Dwelling Units (25 Percent Inclusionary Income-Restricted)

Land Use		Size	Daily Trips
Residential			
Single-Family Residential	Market Rate	434 DU[2]	3,894
	Affordable[3]	145 DU	680[4]
Multifamily Residential	Market Rate	345 DU	2,287
	Affordable	114 DU	548
Senior Residential	Market Rate	220 DU	948[5]
	Affordable	73 DU	236[6]
Residential Subtotal		1,000 DU	8,593
Non-residential			
Commercial		40,000 SF[7]	2,701
Hotel		120 Rooms	959
Office		190,000 SF	2,028
Public/Institutional		70,000 SF	???[8]
Recreation		12.1 Acres	9
Non-residential Subtotal			5,697
		TOTAL	**14,290**

Notes:
1 Reference: Institute of Transportation Engineers, *Trip Generation Manual,* 11th Edition, 2021.
2 Dwelling unit.
3 Affordable housing assumed to be 25 percent of all residential types.
4 Based on ITE Land Use Code 223 – Affordable Housing – Income Limits, which is defined as including only multifamily housing. This represents a conservative assumption regarding trip generation for this land use category.
5 Based on ITE Land Use Code 251 – Senior Adult Housing – Single Family.
6 Based on ITE Land Use Code 251 – Senior Adult Housing – Multifamily. This rate is conservative, since "Affordable Housing" rate is 48 percent higher than this.
7 Square feet.
7 No estimate is possible, given the lack of information regarding specific land uses in this category.

B11-248

3. ***Internal Trips are Substantially Overestimated*** – As described above, the DEIR transportation analysis (p. 440) claims that 1,398 of the Project's total 5,736 daily trips will occur completely within the Project site. In other words, 24.4 percent of the vehicle-trips resulting from the Project would never leave the Project site. These trips, which are typically referred to as internal trips, would have no impact on any element of the transportation system beyond the Project boundaries. Because this a substantial percentage, it seemed appropriate to test the validity of this claim.

   Various tools are available to develop estimates of internal tripmaking at mixed-use developments such as the proposed Project. Three such tools have been employed here:

   - Institute of Transportation Engineers/NCHRP 684 Internal Trip Capture Estimation Tool – As described in the ITE *Trip Generation Handbook* (Third Edition, September 2017, p. 46), this approach is based on procedures documented in National Cooperative Highway Research Program (NCHRP) Report 684: Enhancing Trip Capture Estimation for Mixed-Use Developments. That report documents the extensive research, data collection, and analysis undertaken in developing and validating the recommended procedure.
   - U.S. Environmental Protection Agency (EPA) Mixed Use Trip Generation Model – As described at the EPA website (https://www.epa.gov/smartgrowth/mixed-use-trip-generation-model), this model was developed cooperatively between EPA and ITE. Six metropolitan regions were evaluated in detail and the resulting model was validated against actual traffic counts at mixed-use developments across the country. This model is in use in California, Washington, and New Mexico, and according to EPA the model has been adopted as a statewide standard by the Virginia Department of Transportation.
   - San Diego Association of Governments (SANDAG) Smart Growth Trip Generation Spreadsheet Tool – Similar to the EPA method, this tool employs trip generation rates specific to the San Diego region. Although the trip rates vary from the ITE rates, the internal trip capture results should be representative of a development similar to the proposed Project.

   The results of these analyses are summarized below.

   ITE/NCHRP 684 Internal Trip Capture Estimation Spreadsheet Tool

   Attachment 4 contains a copy of the spreadsheet illustrating the results of this analysis procedure. Although the spreadsheet tool allows for adjustments to be made to reflect transit usage and changes to vehicle occupancy, no such modifications were made. Doing so would simply reduce the number of vehicle-trips estimated (internal, external, and total) with no effect on the resulting internal trip percentages.

   As shown in Attachment 4, the model projects an internal capture percentage of nine percent (actually 8.8 percent). The gross total of 12,256 daily trips would be reduced to 11,180, with 1,076 internal trips estimated. (Note that three of the individual daily trip totals were rounded up to ensure equal numbers of entering and exiting daily trips in the spreadsheet. Thus, the total trip generation in the model is 12,256 instead of the 12,253 described earlier.)

EPA Mixed Use Trip Generation Model

The results of this analysis are presented in Attachment 5. According to the EPA tool, the Project's 12,253 daily trips would be reduced to 11,291 external vehicle-trips (a difference of 962 trips). Those 962 internal trips include 796 vehicle-trips, 114 external walking trips, and 53 external transit trips.

Considering only vehicle-trips (and ignoring external walking and transit trips), the 796 internal vehicle-trips represent an internal capture rate of 6.5 percent.

SANDAG Smart Growth Trip Generation Spreadsheet Tool

As described above, the SANDAG tool is very similar to the EPA tool, but with minor modifications to reflect local San Diego conditions. Nonetheless, it is believed to provide valuable perspective regarding the level of internal tripmaking at the proposed Project. The SANDAG results are provided in Attachment 6.

The SANDAG model estimates that a total of 996 trips will be in the form of 821 internal vehicle-trips, 120 external walking trips, and 55 external transit trips. The 821 internal vehicle-trips constitute 6.7 percent of the 12,253 gross total daily trips.

Summary

The internal trip values derived from the three models presented here range from 6.5 to 8.8 percent, and all are substantially lower than the 24.4 percent value employed in the DEIR analysis. By substantially overstating the volume of traffic to be captured within the Project site, the number of external trips was excessively reduced. Consequently, the DEIR analysis has failed to accurately assess the off-site impacts of the Project.

Specifically, by underestimating the number of external trips, the analysis has similarly understated the Project-related VMT, which serves as basis for determining the significance of the Project's transportation impact. In short, the Project's transportation impact has been greatly understated due to a failure to provide an accurate estimate of the volume of traffic resulting from the Project.

Table 3
Internal Vehicle-Trip Percentage Summary

Source	Total Trips	Internal Vehicle-Trips	Net External Vehicle-Trips	Internal Vehicle-Trip Percentage
DEIR	5,736	1,398	4,338	24.4%
ITE Spreadsheet Tool	12,256	1,076	11,180	8.8%
EPA Mixed Use Trip Generation Model	12,253	796[1]	11,291	6.5%
SANDAG Smart Growth Trip Generation Spreadsheet Tool	12,253	821[2]	11,257	6.7%

Notes:
[1] EPA model also projects 114 external walking trips and 53 external transit trips.
[2] SANDAG model also projects 120 external walking trips and 55 external transit trips.

B11-249

4. ***Flawed Project Traffic Assignment*** – DEIR Table 3.14-3: Projected Traffic Volumes in Plan Area (DEIR p. 441) presents traffic volume information for the three road segments that provide access to the site – Arnold Drive north and south of the site and the proposed Highway 12 connector. (Orchard Road connects to Jack London State Park to the west of the site, but would not be expected to carry a meaningful volume of Project traffic. That road is not included in the DEIR analysis.) Information is presented for various scenarios, both with and without the Project and with and without the Highway 12 connector. Based on this information, it is possible to derive the Project traffic assignment – that is, how many of the Project's claimed 4,338 external daily trips are estimated to be added to each of these three road segments. Table 4 below summarizes that information. (We should note that we were unable to confirm all of the existing traffic volumes, as DEIR p. 419, which apparently includes some of that information, was missing from the document that was available for downloading from the county website.)

   In each scenario analyzed, the volume of Project traffic assigned to the regional access roads falls substantially short of the 4,338 external trips claimed to be generated by the Project. In both scenarios involving implementation of the Highway 12 connector, the volume of traffic projected on Arnold Drive between Harney and Glen Ellen is actually shown to be reduced upon completion of the Project, which seems unlikely. The volume of Project traffic and its relationship to the claimed Project trip generation is summarized as follows:

   - Existing + Project (With Highway 12 Connector): 4,070 Daily Trips (93.8% of Project trips)
   - Existing + Project (No Highway 12 Connector): 3,410 Daily Trips (78.6% of Project trips)
   - Future + Project (With Highway 12 Connector): 3,320 Daily Trips (76.5% of Project trips)
   - Future + Project (No Highway 12 Connector): 2,650 Daily Trips (61.1% of Project trips)

   The DEIR analysis apparently fails to include a substantial portion of the Project traffic. Oftentimes, this sort of oddity is described as being due to existing or "background" traffic being diverted to other routes when the Project traffic demand is added to the study area roads. This can occur in a travel demand forecasting model when the added traffic causes a particular route to become congested and have high travel times, so the model redirects traffic to other, less congested routes so as to create an equilibrium condition on the study area road network with respect to travel time.

   In this case, though, no such alternative routes are available, so this explanation would not apply. The only explanation that does seem to apply is that the analysis is defective, and that it fails to accurately account for the full volume of Project traffic. The significance of this deficiency is magnified by the fact that the DEIR analysis only includes about 38 percent of the actual volume of Project traffic (i.e., 4,338 external trips compared to the corrected values of 11,180 – 11,291 documented in Table 3).

   The transportation analysis must be revised to remedy these substantial deficiencies, and the new analysis must recirculated for public review.

Table 4 **Project Traffic Assignment Summary**			
	Daily Vehicle-Trips		
Scenario	Arnold Drive – Harney to Glen Ellen	Arnold Drive – Harney to Madrone Rd.	Highway 12 Connector
Existing Conditions with Highway 12 Connector			
Existing No Project	6,330	7,150	--
Existing + Project	6,220	9,940	1,390
Project Only	-110	2,790	1,390
TOTAL PROJECT TRAFFIC	**4,070**		
Existing Conditions - No Highway 12 Connector			
Existing No Project	6,330	7,150	--
Existing + Project	7,400	9,490	--
Project Only	1,070	2,340	--
TOTAL PROJECT TRAFFIC	**3,410**		
Future Conditions with Highway 12 Connector			
Future No Project	6,730	7,670	--
Future + Project	6,310	9,960	1,450
Project Only	-420	2,290	1,450
TOTAL PROJECT TRAFFIC	**3,320**		
Future Conditions - No Highway 12 Connector			
Future No Project	6,730	7,670	--
Future + Project	7,410	9,640	--
Project Only	680	1,970	--
TOTAL PROJECT TRAFFIC	**2,650**		
Reference: DEIR, Table 3.14-3: Projected Traffic Volumes in Plan Area, p. 441.			

B11-250

5. ***Defective Vehicles-Miles Traveled Analysis*** – The analysis of VMT impacts (Impact 3.14-2, DEIR p. 445) indicates that the Project will have a significant and unavoidable impact, with a significant impact relative to Household VMT and less than significant impacts regarding Employment VMT and Total VMT per Service Population. A significant impact was also found with respect to induced VMT associated with the proposed connector to Highway 12 (which is described as an "east-west emergency access connection from the site"). (DEIR p. 447)

   We believe the VMT analysis is flawed, as described in the following sections.

   Transportation Demand Management Effects

   The VMT analysis is summarized in DEIR Table 3.14-4: Planning Area VMT Metrics. (DEIR p. 446) That table includes a section labeled "Proposed Plan with 15% TDM Reduction," which is described as being for informational purposes and "reflect[s] a theoretical 15% reduction in VMT associated with required TDM measures." We believe this information is misleading, as no support is provided with respect to the feasibility of actually achieving a 15 percent reduction in VMT. Further, based on this "theoretical" information the DEIR makes the questionable and conclusory statement that (DEIR p. 447):

. . . it is likely that actual VMT will be less than the projections above.

Our analysis has suggested that, to the contrary, the actual VMT will be substantially greater than those projections. In fact, only one paragraph later the DEIR contradicts itself and recognizes the questionable nature of the suggested TDM benefits (DEIR p. 447):

However, the ability for individual development projects to achieve a 15 percent reduction in VMT is uncertain.

Clearly, any statement regarding the potential benefits of implementing TDM measures at the Project must be taken with a sizable grain of salt.

Employment VMT Analysis

As noted above, the DEIR analysis found a less than significant impact with respect to Employment VMT (also referred to as "Home-Work VMT per Worker" in the DEIR), with a finding of 4.8 home-based commute VMT per worker. (DEIR p. 445) Table 3.14-4 lists values for other pertinent geographical areas near the Project, as follows:

- Planning Area Baseline Average: 7.1 home-based commute VMT per worker,
- Countywide Baseline Average: 12.4 home-based commute VMT per worker, and
- Regional Baseline Average: 16.9 home-based commute VMT per worker.

These values raise questions regarding the validity of the DEIR's employment VMT finding of 4.8 home-based commute VMT per worker. This value is about 67 percent of the corresponding value for the Planning Area, 39 percent of the Countywide value, and only 28 percent of the Bay Area Region value. Without further substantiation of the DEIR's VMT analysis procedures and background parameters and inputs, it is difficult to readily accept that the Project's VMT result would be so vastly different from the other areas referenced above.

Unfortunately, the reviewing public is expected to blindly accept the output of the SCTM19 travel demand forecasting model even though, as described above, the model has obvious flaws with respect to its ability to estimate Project-related traffic volumes. In short, we question whether the employment VMT value derived for the Project is credible.

Proposed Policies Reducing VMT Impact

In recognition of the Project's significant and unavoidable VMT impact, the DEIR addresses ways to reduce that impact. The primary approach to achieving this goal is apparently Specific Plan Policy 3-41, which states, in part (Specific Plan p. 3-12):

Require all development to reduce vehicle trips by at least 15 percent below rates listed by the Institute of Transportation Engineers Trip Generation manual using transportation demand management strategies.

As we described above, however, the Project's supposed trip generation, as reflected in Section 3.14 – Transportation, is already extremely low. According to the DEIR, the total daily trip generation is 5,736 trips/day. This includes trips associated with 1,000 residential dwelling units and substantial

non-residential development types although, unfortunately, no trip generation breakdown is provided between the residential and non-residential land uses.

For perspective, if we totally ignore the non-residential development (a frankly ridiculous notion, given that this ignores 190,000 SF of office space and 40,000 SF of commercial space), the Project's trip generation rate would be 5.736 trips per dwelling unit (i.e., 5,736 trips / 1,000 DU = 5.736). If the non-residential land uses were included, the overall Project trip rate would be substantially lower.

For comparison, the current ITE daily trip generation rates for various types of residential uses that are potentially applicable to the Project are as follows:

- Single-Family Detached Housing: 9.43 daily trips/dwelling unit,
- Single-Family Attached Housing: 7.20 daily trips/dwelling unit,
- Multifamily Housing (Low Rise – Not Close to Rail Transit): 6.74 daily trips/dwelling unit.

Therefore, it appears that, if the Project's trip generation estimate is to be believed, the Project trip rate is already substantially less than 15 percent below the ITE trip rates. Two conclusions can be derived from this information:

- The Project's trip generation as presented in the DEIR is not to be believed, and
- Specific Plan Policy 3-14 is specious.

Summary

As we have described above, the DEIR transportation analysis is significantly flawed and those flaws relate directly to the validity of the VMT analysis. To briefly summarize:

- The Project trip generation estimate substantially understates the volume of traffic that will result from the Project.
- The internal trip capture rate is excessive, resulting in further reduction of the Project's traffic volumes.
- Only a portion of the Project's trips have actually been assigned to the study area roads.
- The purported benefits of implementation of TDM strategies are unlikely to be realized.
- The Project's derived Employment VMT value is highly questionable, when viewed in light of corresponding values for nearby geographical areas.
- Specific Plan Policy 3-41, which is claimed as a means to reduce Project VMT, is virtually meaningless, unless the Project's trip generation estimate is substantially modified to reflect reality.

The VMT analysis must be modified to correct the deficiencies described above. Upon completion of that revised VMT analysis, the DEIR must be recirculated for further public review.

CONCLUSION

Our review of the transportation analysis presented in the Draft Environmental Impact Report for the proposed Sonoma Developmental Center Specific Plan project in Sonoma County, California revealed several issues affecting the validity of the conclusions presented in that document. Particular deficiencies were identified with respect to the volume of traffic associated with the Project, how much of that traffic will be captured internally, the assignment of that traffic to the study area roads, and the validity of the estimate of Project-related vehicle-miles traveled. These issues must be addressed prior to approval of the proposed project and its environmental documentation by the County of Sonoma.

Sincerely,

GRIFFIN COVE TRANSPORTATION CONSULTING, PLLC



Neal K. Liddicoat, P.E.
Principal

Attachments

ATTACHMENT 1

Excerpt from Sonoma County General Plan 2020
Circulation and Transit Element

Sonoma County General Plan 2020

CIRCULATION AND TRANSIT ELEMENT

Sonoma County Permit and Resource Management Department
2550 Ventura Avenue
Santa Rosa, CA 95403

Adopted by Resolution No. 08-0808
of the Sonoma County Board of Supervisors
September 23, 2008

Amended by Resolution No. 10-0636 on August 24, 2010
Amended by Resolution No. 16-0283 on August 2, 2016

Policy CT-3ggg: Educate motorists, bicyclists, and pedestrians with regard to safety, rights, and responsibilities associated with use of the County transportation system.*

Policy CT-3hhh: Support constructive efforts from advocacy groups to address bicycle and pedestrian transportation issues.

Policy CT-3iii: Provide the option of flexible work schedules to County employees in order to accommodate commuting by bicycle, walking, or transit.*

Policy CT-3jjj: Develop a Guaranteed Ride Program for County workers and employees of other employers with participating programs who regularly bicycle, walk, vanpool, carpool, or use transit for their trip to work. The program would encourage use of alternative transportation modes by providing free transportation in the event of personal emergencies, illness, or unscheduled overtime.*

Policy CT-3kkk: Consider establishing greenhouse gas impact fees for new development. Use a portion of this fee to fund planning, design, and construction of bikeways and pedestrian facilities*.

Policy CT-3lll: Work with Federal, State, regional, and local agencies and any other available public or private funding sources to secure funding for bikeways and pedestrian facilities*.

Policy CT-3mmm: Encourage multi-jurisdictional funding applications for design, construction and maintenance of bikeways and pedestrian facilities that provide regional connectivity*.

Policy CT-3nnn: Develop a long range strategy to provide long term funding necessary to maintain and operate the Class I bikeway network*.

2.6 COUNTYWIDE HIGHWAY SYSTEM

GOAL CT-4:	**Provide and maintain a highway system capacity that serves projected highway travel demand at acceptable levels of service in keeping with the character of rural and urban communities.**
Objective CT-4.1:	Maintain LOS C or better on roadway segments unless a lower LOS has been adopted as shown on Figure CT-3.
Objective CT-4.2:	Maintain LOS D or better at roadway intersections.*
Objective CT-4.3:	Allow the above levels of service to be exceeded if it is determined to be acceptable due to environmental or community values, or if the project(s) has an overriding public benefit that outweighs lower

levels of service and increased congestion.*

Objective CT-4.4: Utilize the American Association of State Highway Transportation Officials (AASHTO) functional classification system and guidelines for geometric design for the highway network.*

Objective CT-4.5: Consider developing a Heritage Road Program for Sonoma County. Heritage Roads would be subject to special design guidelines protecting their unique character, while meeting accepted AASHTO safety standards.

Objective CT-4.6: In recognition of the responsibility of the Cities and the County to contribute their fair share toward the mobility of County residents, coordinate with the Cities in the review of proposed development projects to identify a nexus between the project and impacts to the County transportation system, and to ensure that adequate mitigation is provided for impacts on the County transportation system.

Objective CT-4.7: Prioritize planned capacity improvements on Highways 101, 12, and 116 in recognition of the primary role that these highways play in providing mobility between communities. Prioritize capacity improvements to arterials over those for collector and local roads.

The following policies shall be used to achieve these objectives:

Figure CT - 3

Level of Service (LOS) Objectives

Level of Service (LOS) *

Level of Service D

Level of Service E

Level of Service F

* All other County roadway segments are LOS C or better during Weekday PM Peak Hour.

Windsor
Santa Rosa
Sebastopol
Rohnert Park
Cotati
Petaluma
Sonoma

WESTSIDE RD
WINDSOR RD
PLEASANT AV
SHILOH RD
AIRPORT BLVD
101
MARK WEST SPRINGS RD
RIEBLI RD
CALISTOGA RD
SAINT HELENA RD
RIVER RD
FULTON RD
PINER RD
STEELE LN
116
GUERNVILLE RD
HALL RD
3RD ST
BOHEMIAN HWY
GRATON RD
OCCIDENTAL RD
12
LUDWIG AV
BELLEVUE AV
SANTA ROSA AV
PETALUMA HILL RD
BENNET VALLEY RD
TODD RD
MTN VIEW AV
SONOMA MTN RD
BODEGA HWY
1
SNYDER LN
ROBERTS RD
OLD REDWOOD HWY
RAILROAD AV
ROBLAR RD
PETALUMA VLY FORD RD
STONY POINT RD
ARNOLD DR
BOYES BLVD
VERANO AV
PETALUMA AV
5TH ST
NAPA ST
LEVERONI RD
NAPA RD
WATMAUGH RD
PEPPER RD
ADOBE RD
ELY RD
S ELY RD
TOMALES RD
BODEGA AV
LAKEVILLE ST
D ST
121
RAMAL RD
LAKEVILLE RD
37

Base Map Data

City Boundaries

Highways

Roads

0 1.5 3 Miles

1:200,000

Note:
Map Scale and Reproduction methods limit precision in physical features displayed.

Author: PRMD Cartography: N. Najarian Date: 09/23/2008
File Number: S:\GIS-DATA\PRMD_BASE\PRMD Department Projects\Comprhensive Planning\General Plan 2020\GP figure CT-3.mxd

Sonoma County General Plan 2020
Circulation and Transit Element

Permit and Resource Management Department
2550 Ventura Avenue, Santa Rosa, California 95403
707-565-1900 FAX 707-565-1103

Sonoma County General Plan

ATTACHMENT 2

Project Trip Generation Data Sheets
1,000 Dwelling Units (25 Percent Inclusionary Income-Restricted)

(Source: Institute of Transportation Engineers,
***Trip Generation Manual*, Eleventh Edition, 2021.*)**

Single-Family Detached Housing
(210)

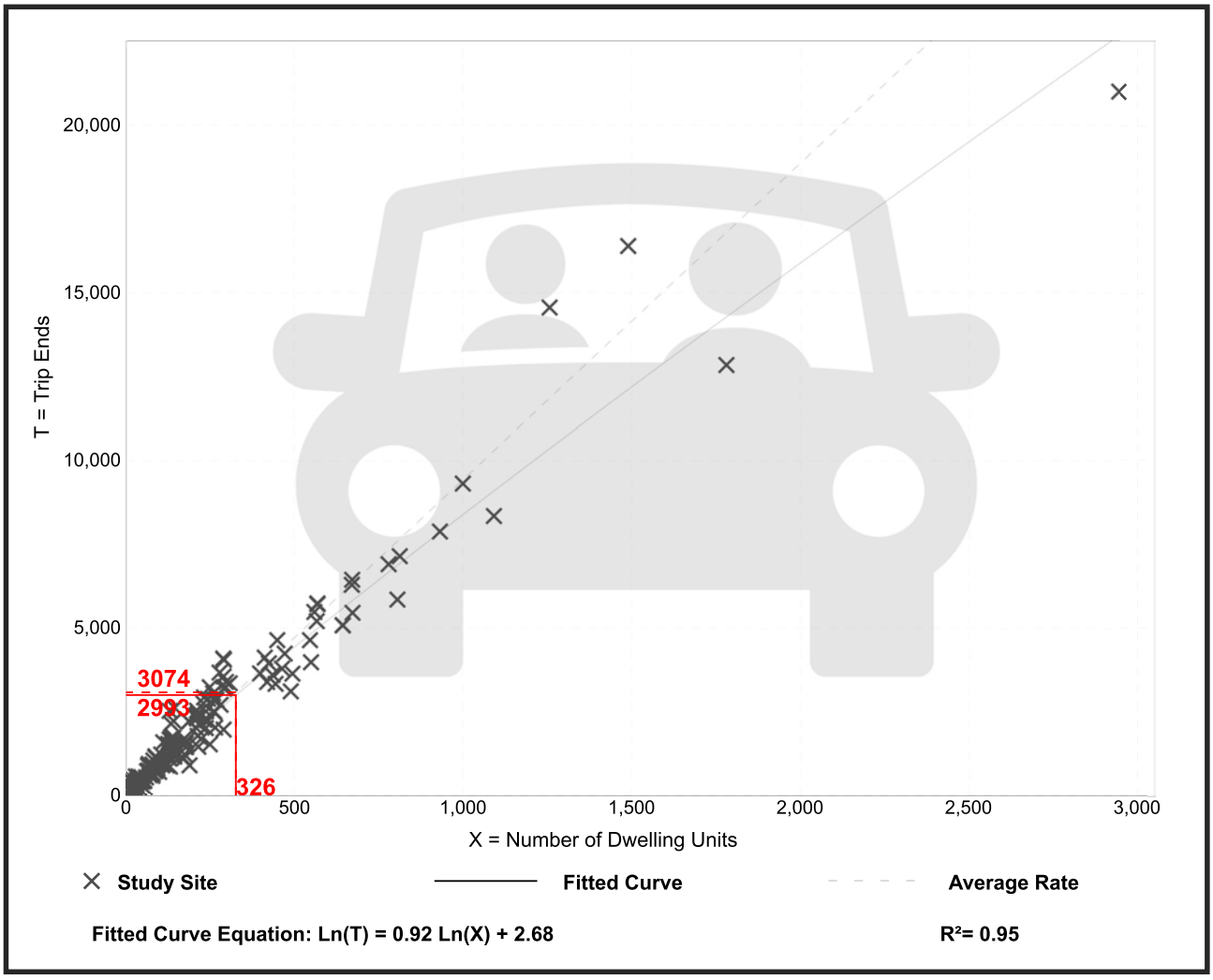
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Affordable Housing - Income Limits
(223)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

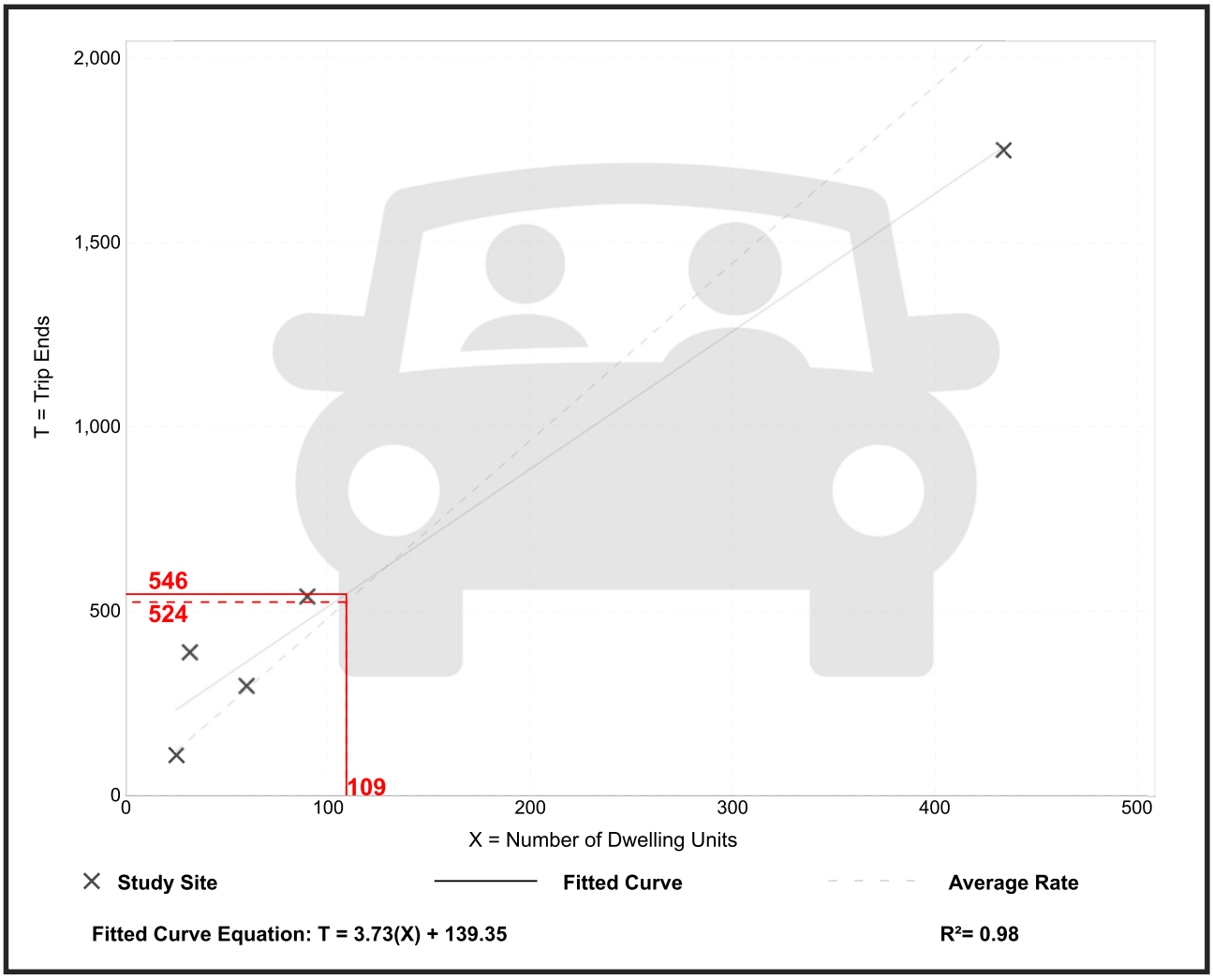
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Dwelling Units: 128
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.81	4.03 - 12.16	2.03

Data Plot and Equation

Caution – Small Sample Size



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

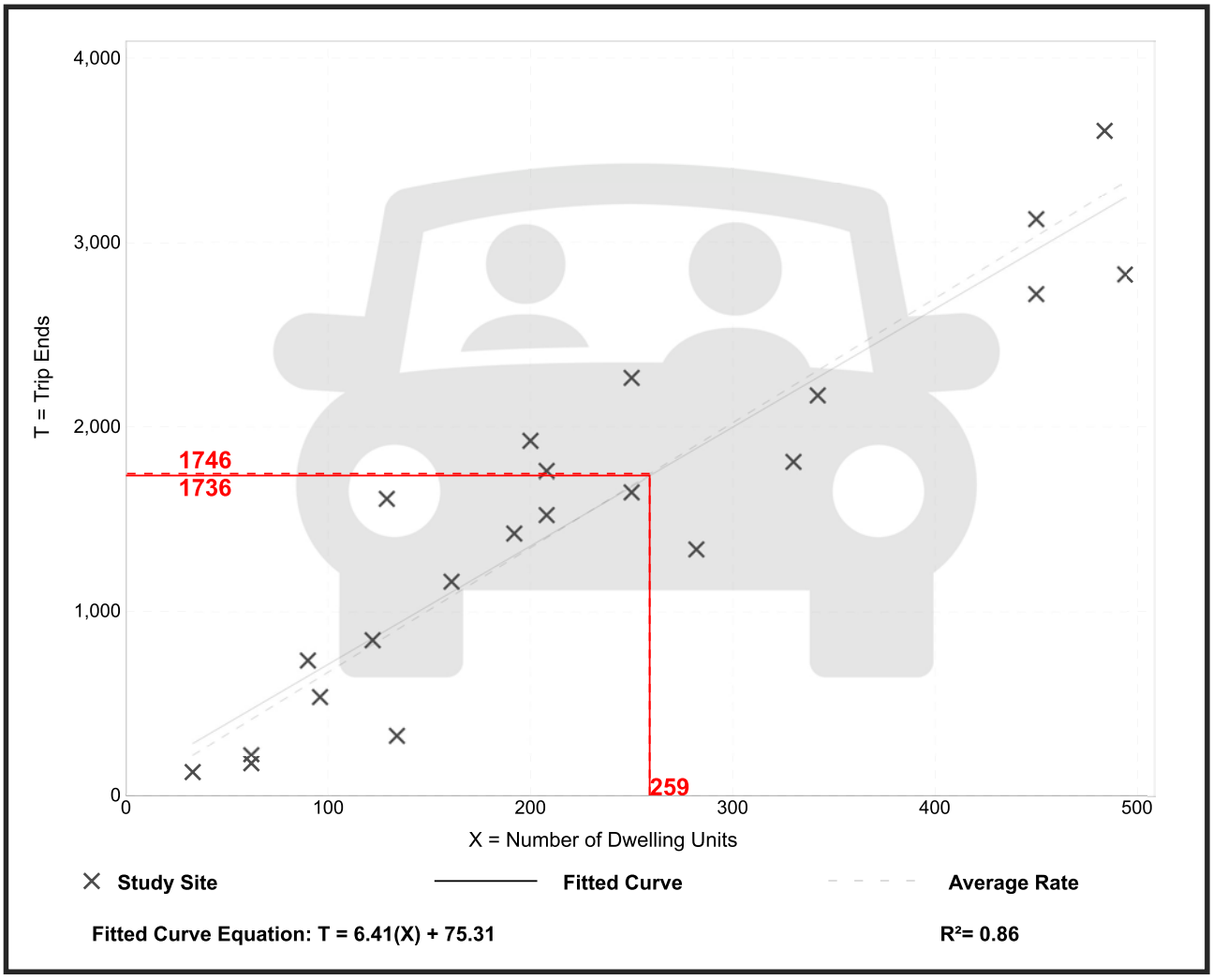
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 229
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

Affordable Housing - Income Limits
(223)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

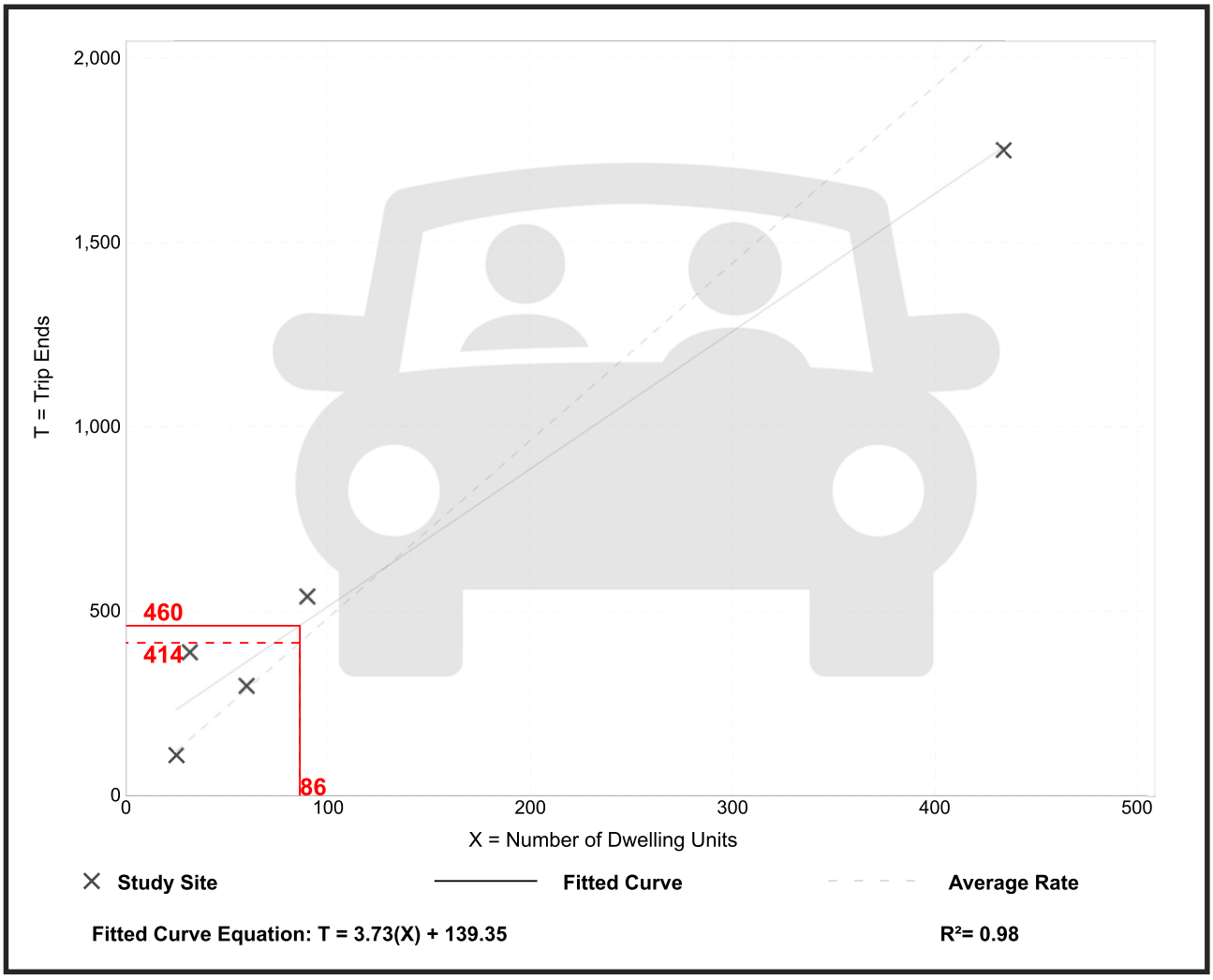
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Dwelling Units: 128
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.81	4.03 - 12.16	2.03

Data Plot and Equation

Caution – Small Sample Size



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Senior Adult Housing - Single-Family
(251)

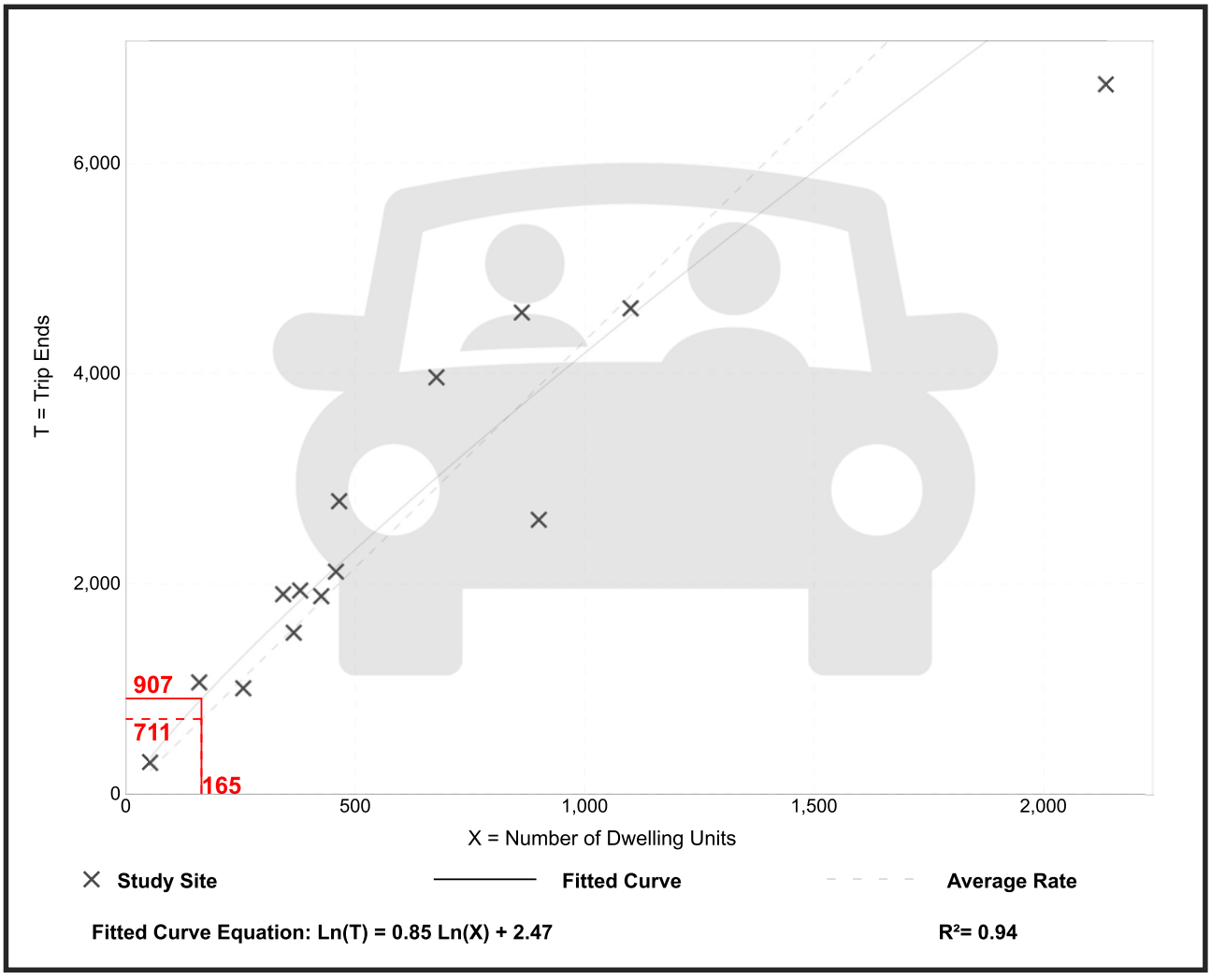
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 15
Avg. Num. of Dwelling Units: 646
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.31	2.90 - 6.66	1.07

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Senior Adult Housing - Multifamily
(252)

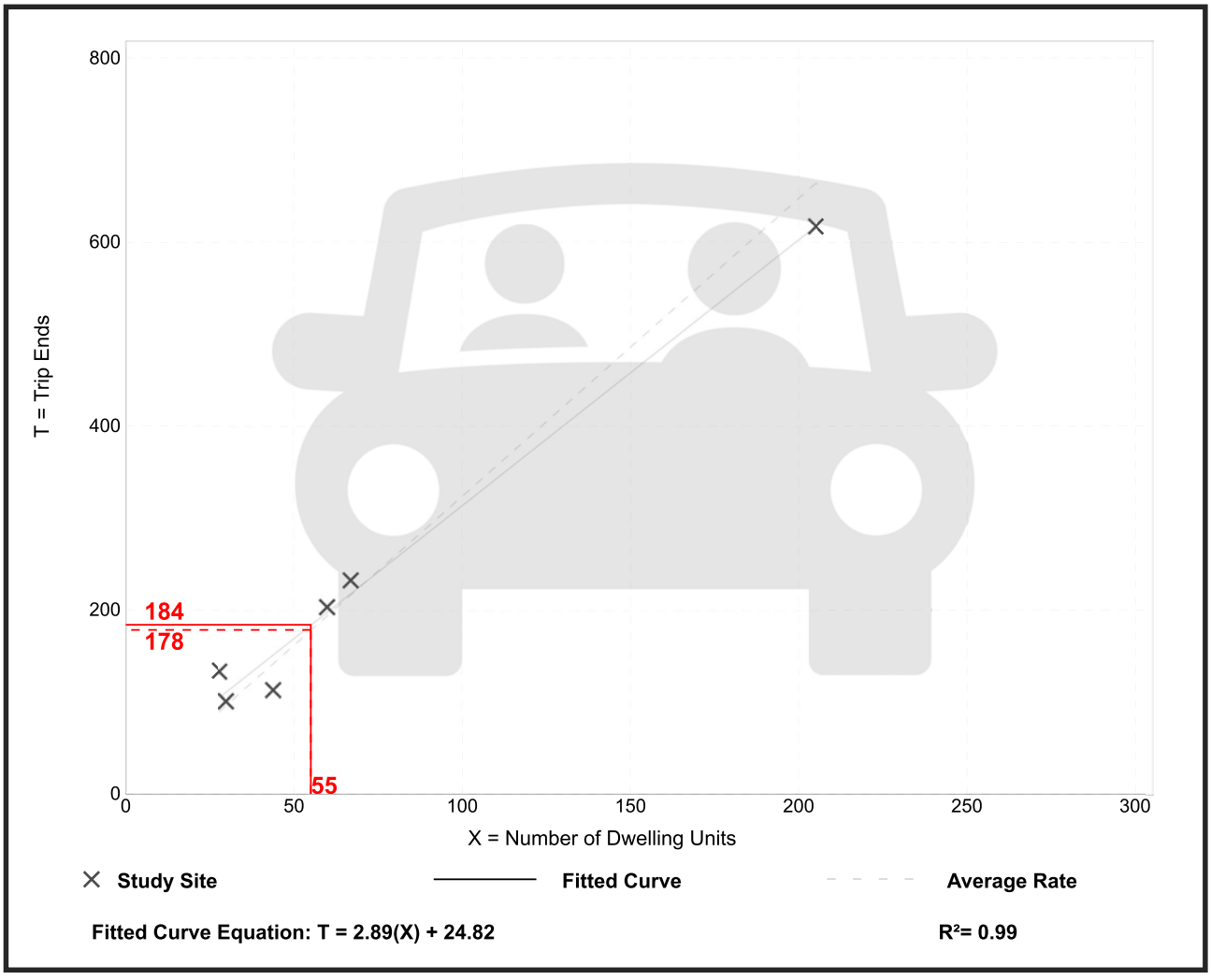
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. Num. of Dwelling Units: 72
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
3.24	2.59 - 4.79	0.53

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Shopping Plaza (40-150k) - Supermarket - No (821)

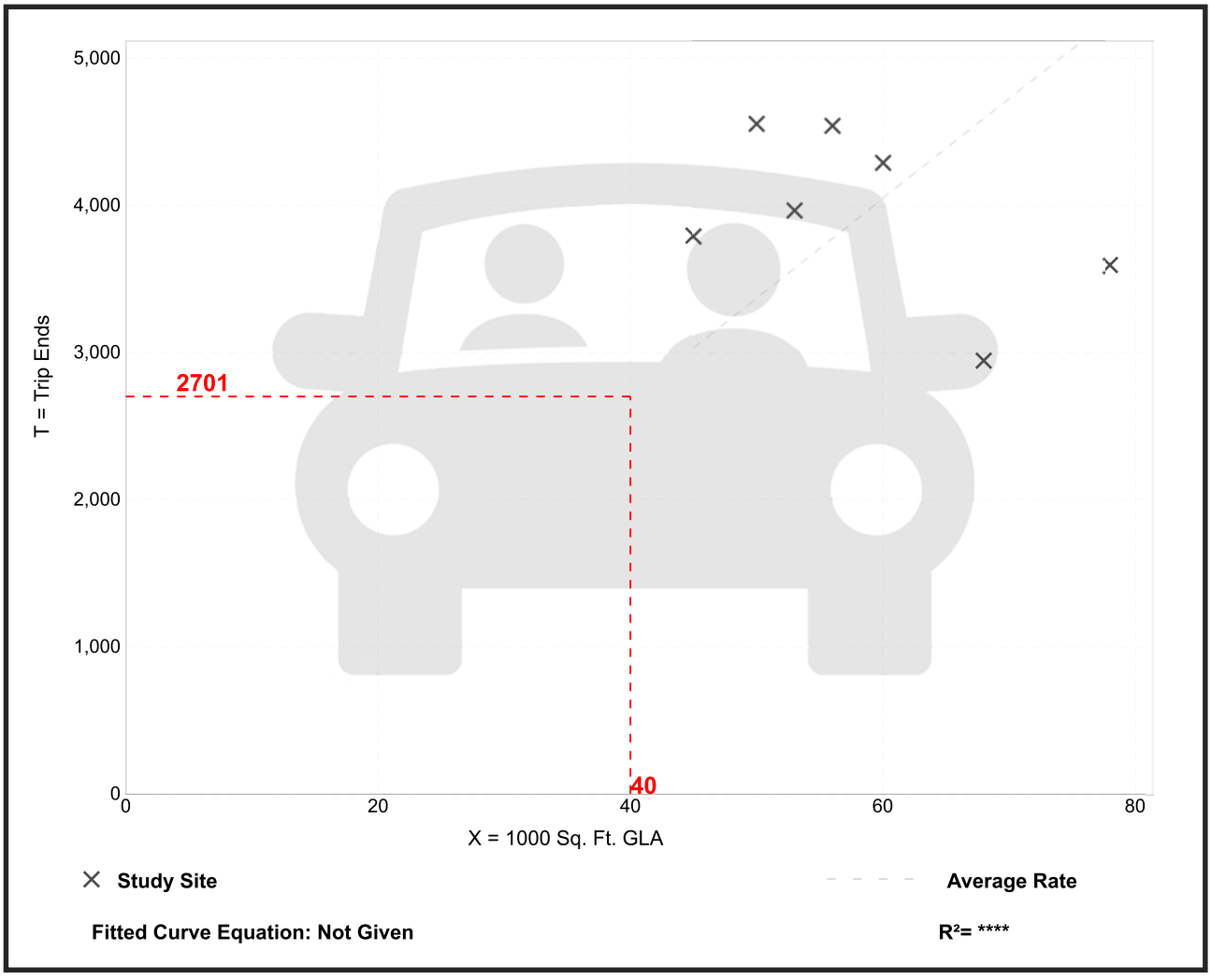
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 7
Avg. 1000 Sq. Ft. GLA: 59
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
67.52	43.29 - 91.06	19.25

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Hotel
(310)

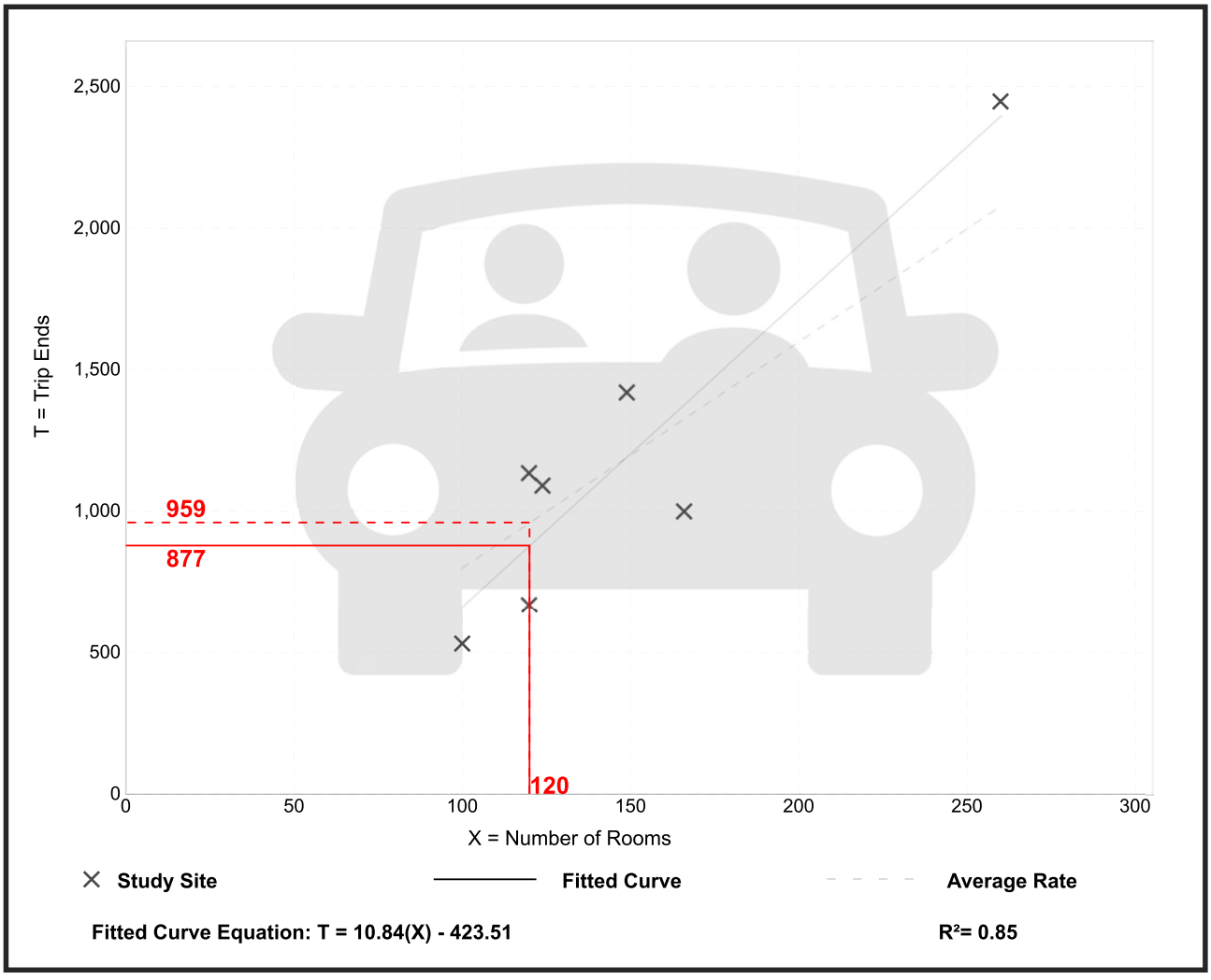
Vehicle Trip Ends vs: **Rooms**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 7
Avg. Num. of Rooms: 148
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
7.99	5.31 - 9.53	1.92

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

General Office Building
(710)

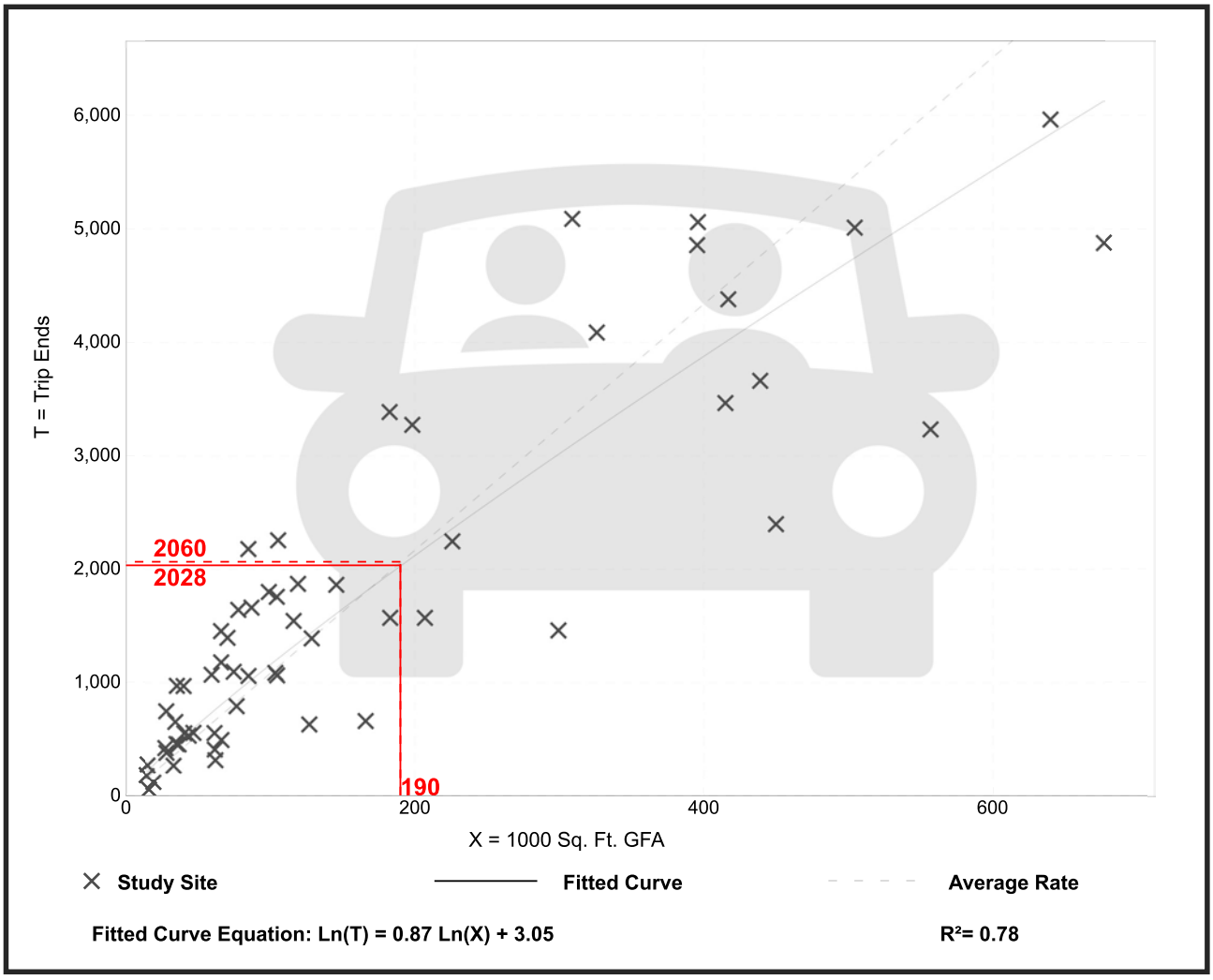
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 59
Avg. 1000 Sq. Ft. GFA: 163
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.84	3.27 - 27.56	4.76

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Public Park
(411)

Vehicle Trip Ends vs: **Acres**
On a: **Weekday**

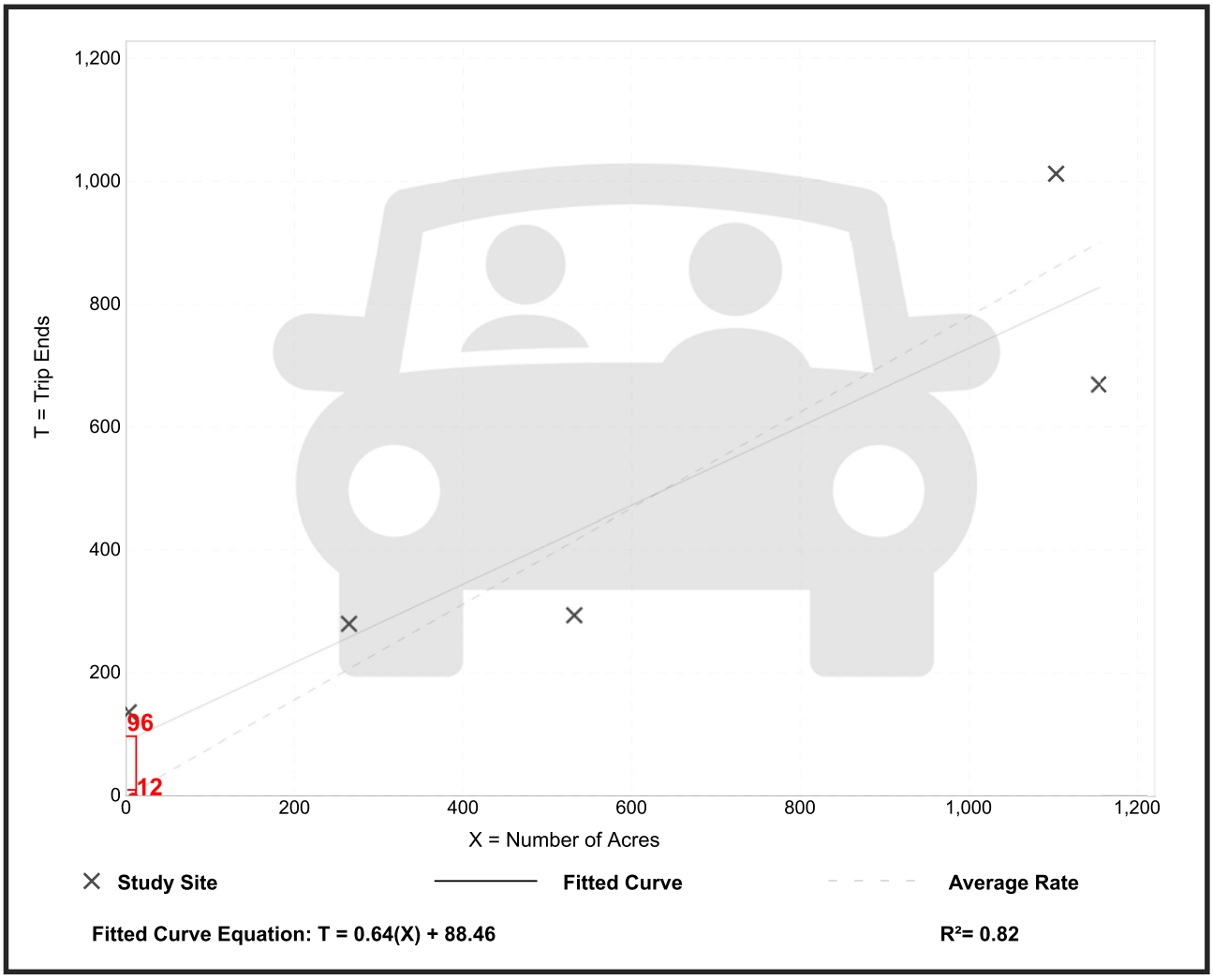
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Acres: 612
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
0.78	0.55 - 34.00	1.36

Data Plot and Equation

Caution – Small Sample Size



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

ATTACHMENT 3

Project Trip Generation Data Sheets – Residential Only
1,331 Dwelling Units (25 Percent Inclusionary Income-Restricted)

(Source: Institute of Transportation Engineers,
***Trip Generation Manual*, Eleventh Edition, 2021.*)**

Single-Family Detached Housing
(210)

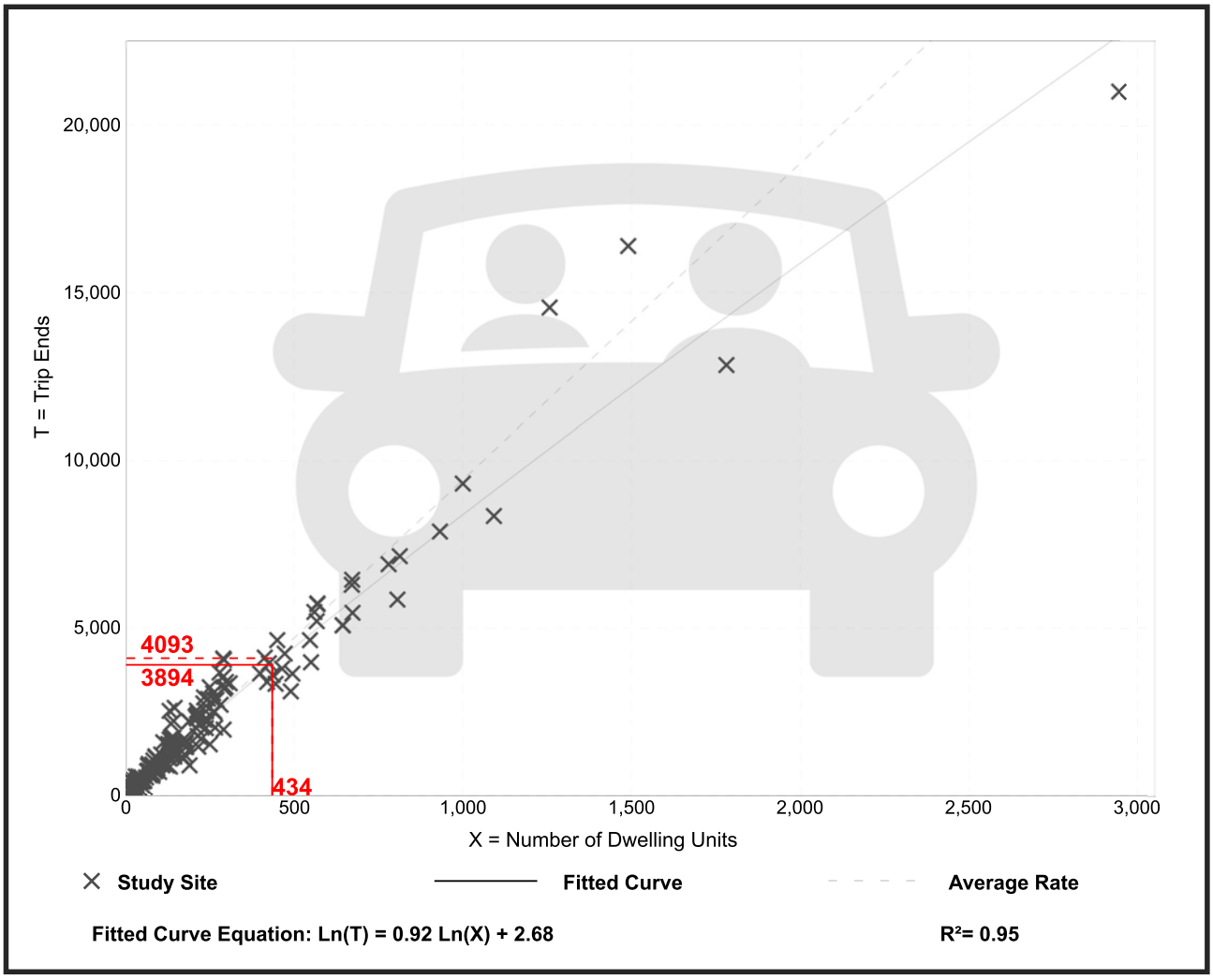
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Affordable Housing - Income Limits
(223)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

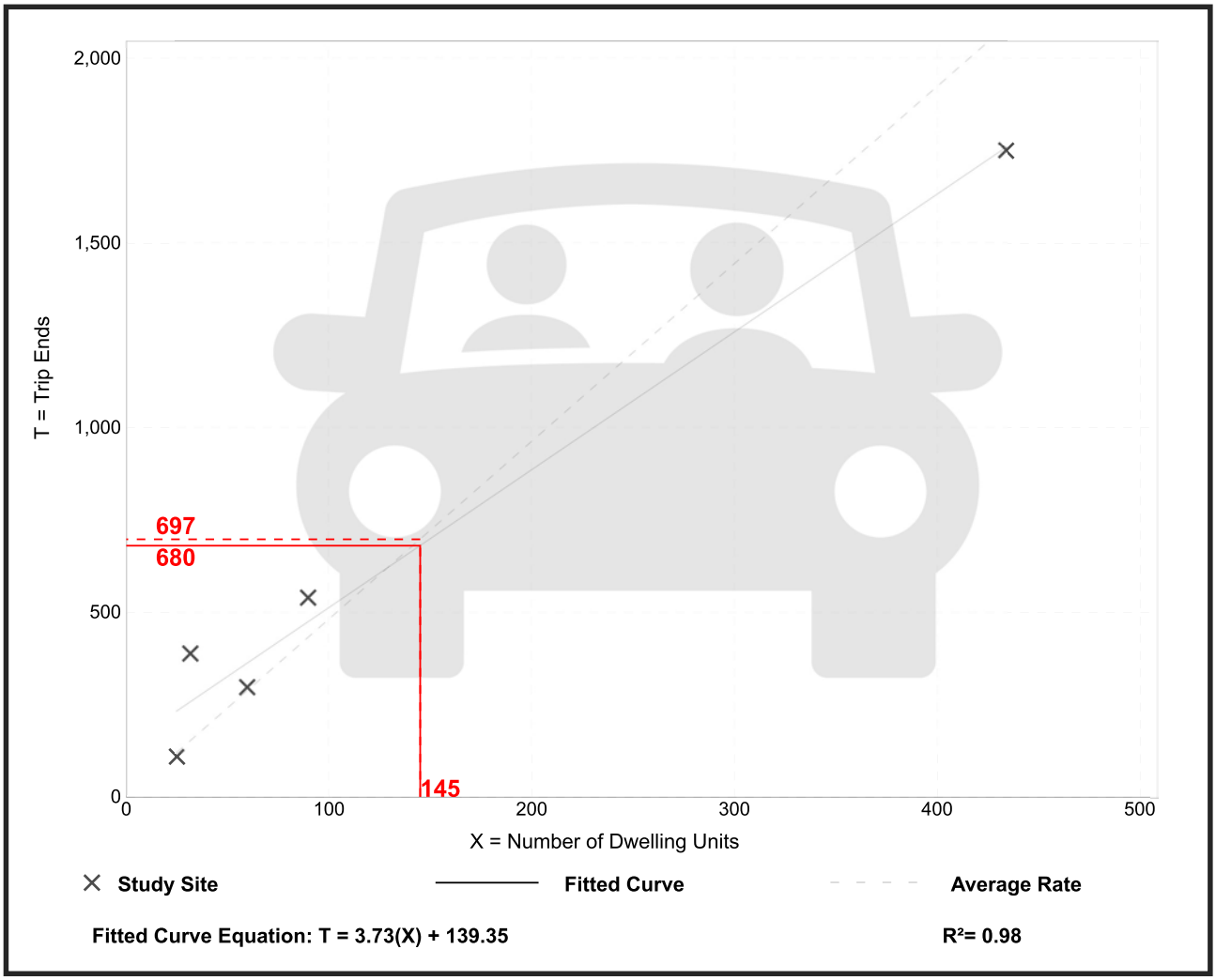
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Dwelling Units: 128
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.81	4.03 - 12.16	2.03

Data Plot and Equation

Caution – Small Sample Size



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

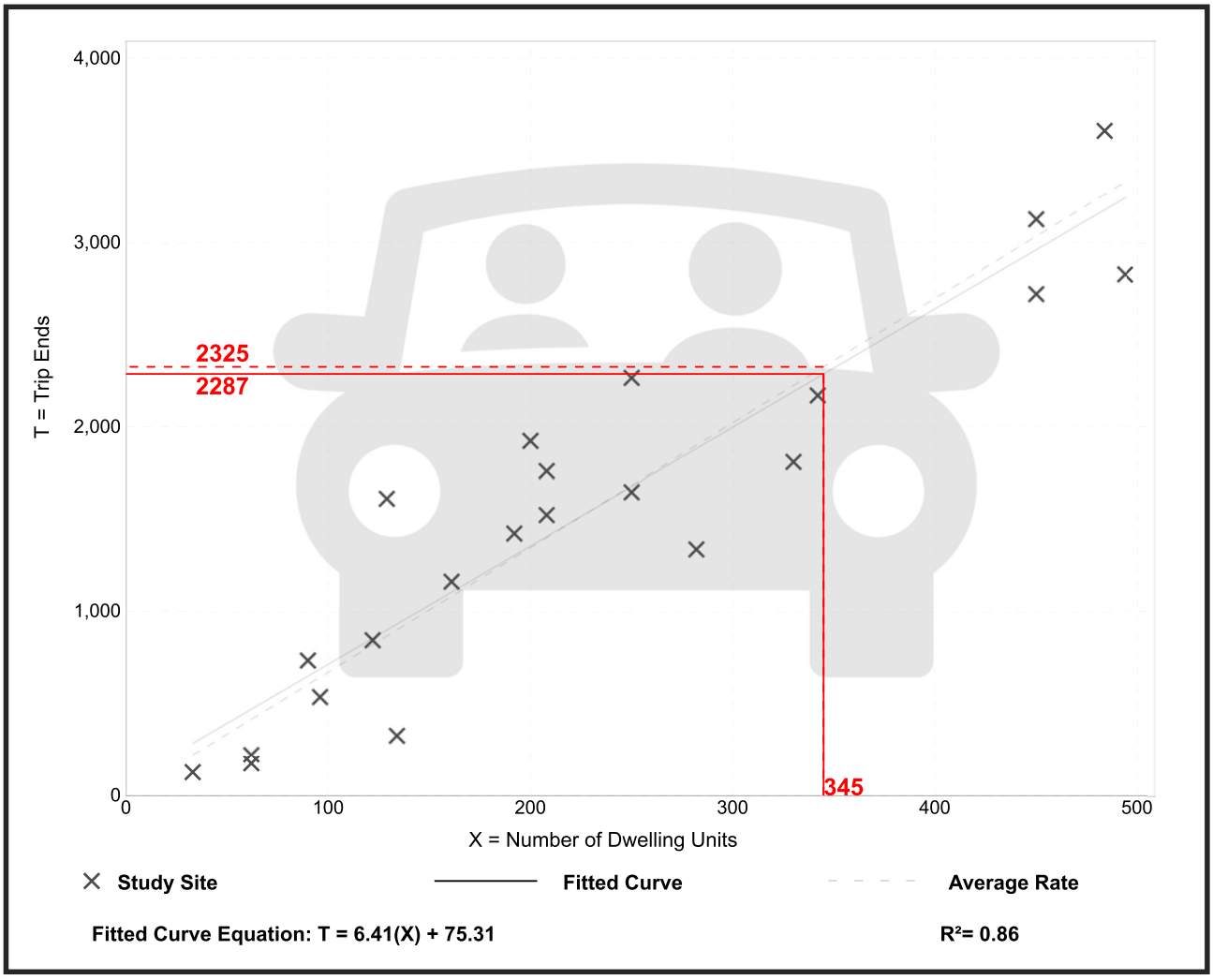
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 229
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Affordable Housing - Income Limits
(223)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

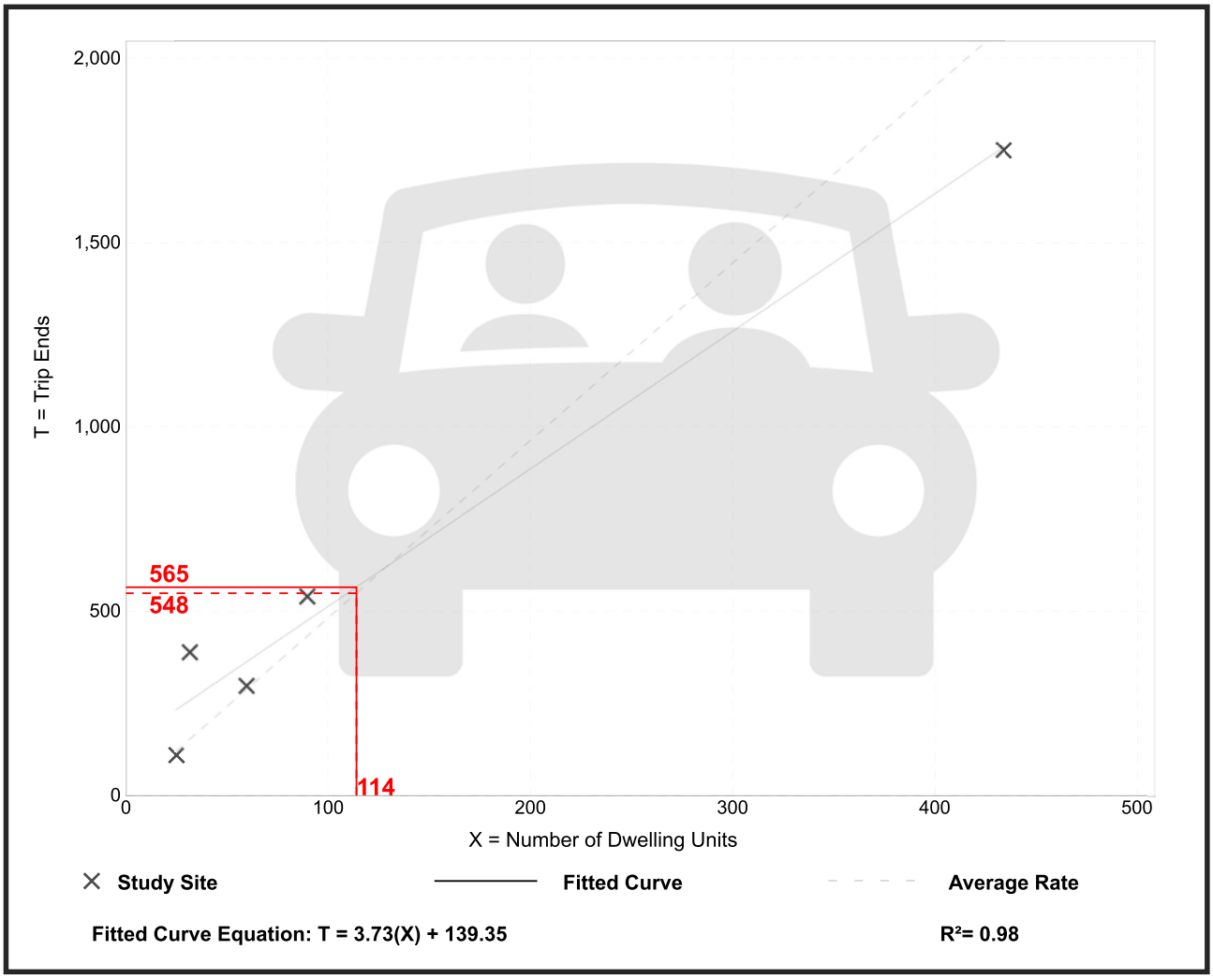
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Dwelling Units: 128
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.81	4.03 - 12.16	2.03

Data Plot and Equation

Caution – Small Sample Size



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Senior Adult Housing - Single-Family
(251)

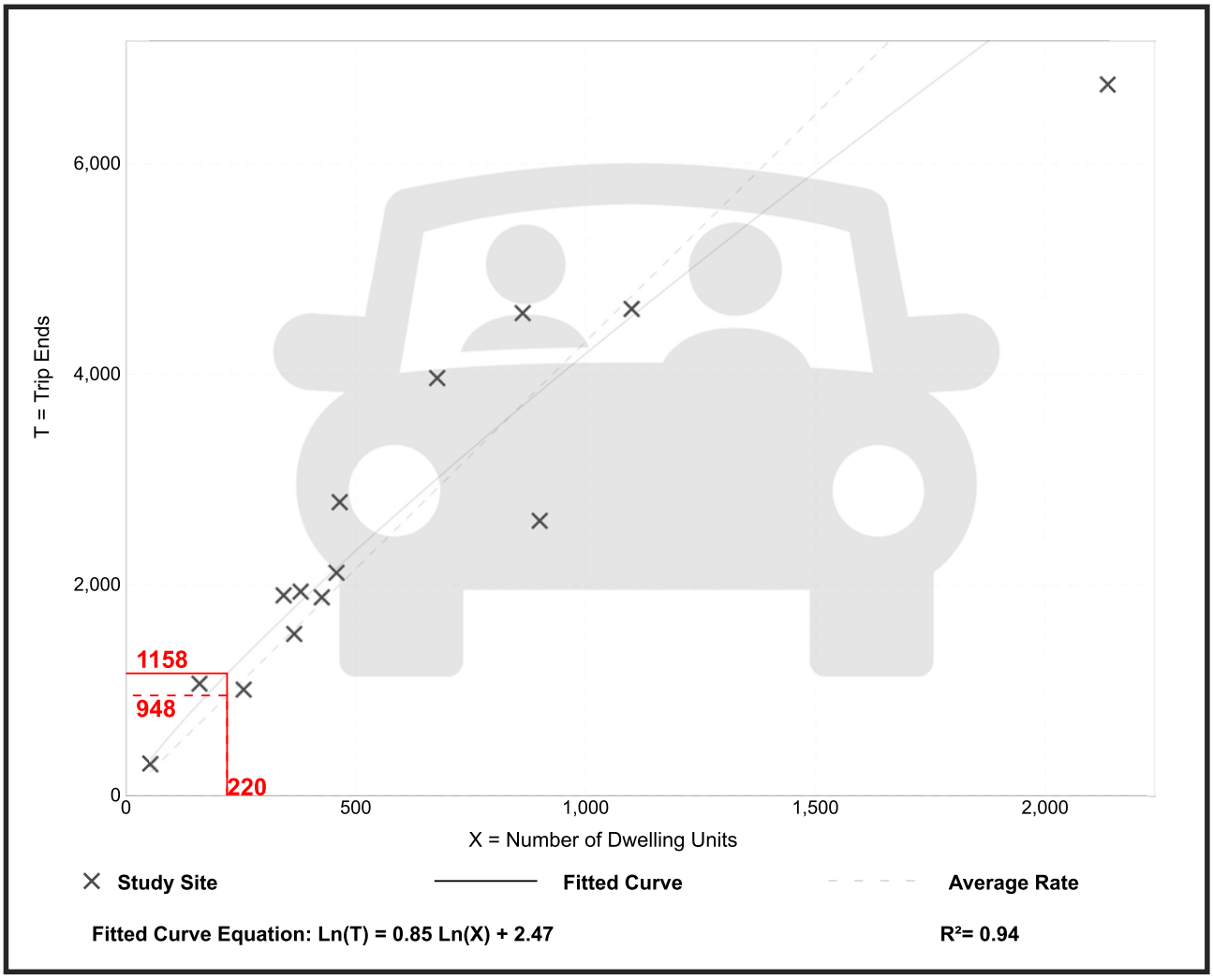
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 15
Avg. Num. of Dwelling Units: 646
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.31	2.90 - 6.66	1.07

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Senior Adult Housing - Multifamily
(252)

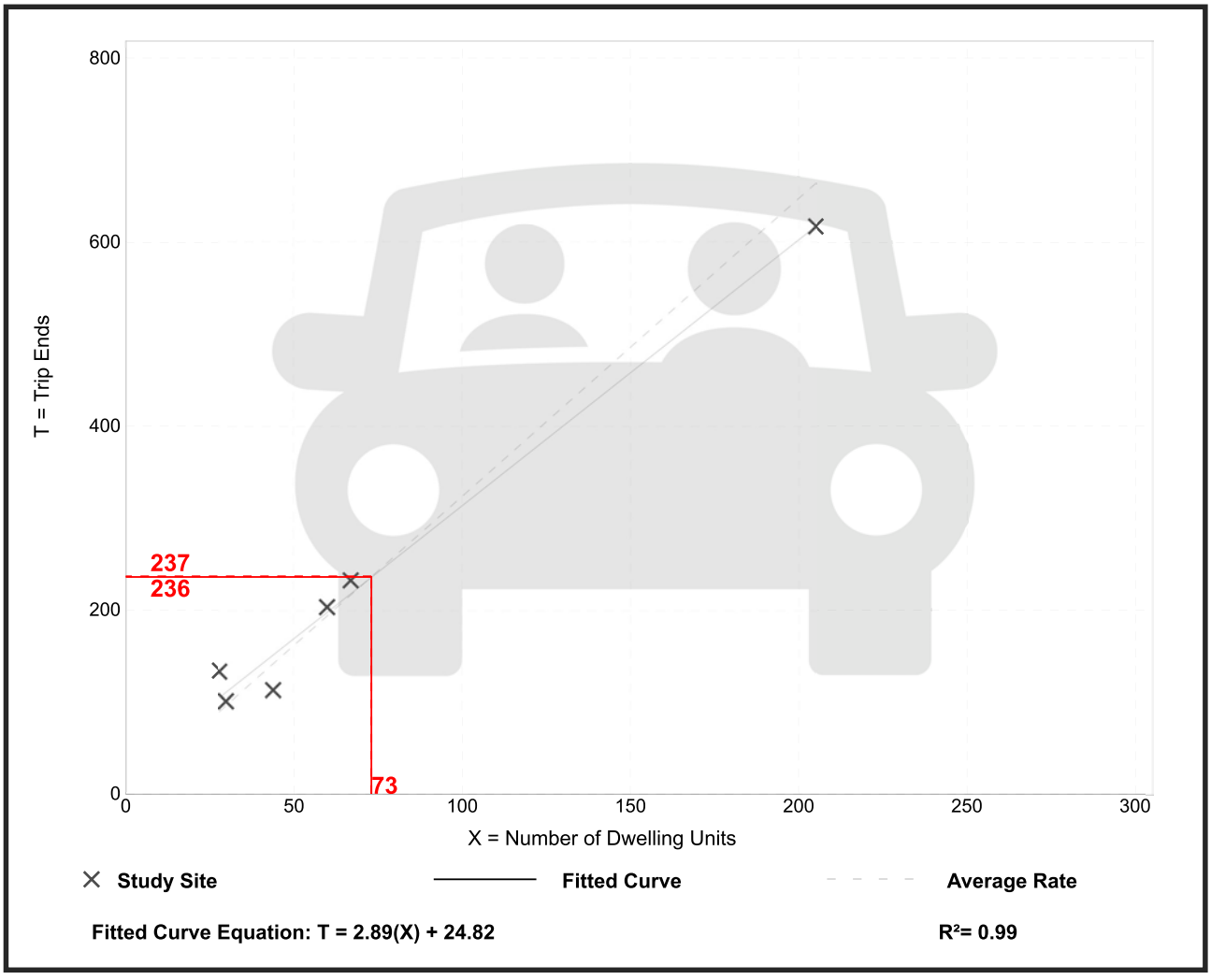
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. Num. of Dwelling Units: 72
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
3.24	2.59 - 4.79	0.53

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

ATTACHMENT 4

Institute of Transportation Engineers/NCHRP 684
Internal Trip Capture Estimation Tool

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Sonoma Developmental Center	**Organization:**	Griffin Cove Transportation Consulting
Project Location:	Sonoma County, CA	**Performed By:**	NKL
Scenario Description:	Project w/ 1,000 DU	**Date:**	16-Sep-22
Analysis Year:		**Checked By:**	
Analysis Period:	**Daily**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (***For Information Only***)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				2,028	1,014	1,014
Retail				2,702	1,351	1,351
Restaurant				0		
Cinema/Entertainment				0		
Residential				6,556	3,278	3,278
Hotel				960	480	480
All Other Land Uses[2]				10	5	5
				12,256	6,128	6,128

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		284	0	0	0	0
Retail	41		0	0	66	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	30	33	0	0		0
Hotel	30	54	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	12,256	6,128	6,128
Internal Capture Percentage	9%	9%	9%
External Vehicle-Trips[5]	11,180	5,590	5,590
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	10%	28%
Retail	27%	8%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	2%	2%
Hotel	0%	18%

[1]Land Use Codes (LUCs) from ***Trip Generation Manual***, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE ***Trip Generation Manual***).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

ATTACHMENT 5

U.S. Environmental Protection Agency
(EPA) Mixed Use Trip Generation Model

EPA MIXED USE TRIP GENERATION MODEL - RESULTS

MODEL APPLICATION - ALL TRIPS

	Daily			
	HBW	HBO	NHB	Total
Baseline # of External Trips (ITE Model)	2804	6976	2474	12253
% External Trip Reduction (predicted by MXD Model)				
Internal Capture	3.71%	7.46%	6.93%	6.49%
Walking External	0.93%	1.24%	0.37%	0.99%
Transit External	0.23%	0.42%	0.86%	0.46%
# of Trips Reduced (predicted by MXD Model)				
Internal Capture	104	520	172	796
Walking External	25	80	8	114
Transit External	6	27	20	53
MXD Model # of Vehicle Trips	**2668**	**6349**	**2274**	**11291**

Results	**External Vehicle Trips**		
	Baseline	Adjusted	Reduction %
Daily	12,253	11,291	8%
AM Peak Hour	760	708	7%
PM Peak Hour	1,147	1,060	8%

MODEL APPLICATION - TRIP ENDS ASSOCIATED WITH HOUSES IN THE PROJECT ONLY

	Daily			
	HBW	HBO	NHB	Total
Baseline # of External Trips (ITE Model)	1282	4054	900	6235
% External Trip Reduction (predicted by MXD Model)				
Internal Capture	3.71%	7.46%	6.93%	6.61%
Walking External	0.93%	1.24%	0.37%	1.05%
Transit External	0.23%	0.42%	0.86%	0.44%
# of Trips Reduced (predicted by MXD Model)				
Internal Capture	48	302	62	412
Walking External	12	46	3	61
Transit External	3	16	7	26
Adjusted # (MXD Model) of Vehicle Trips generated by Project Residences	**1220**	**3689**	**827**	**5736**

	External Vehicle Trips		
Results	Baseline	Adjusted	Reduction %
Daily	6,235	5,736	8%
AM Peak Hour	487	452	7%
PM Peak Hour	602	556	8%

ATTACHMENT 6

San Diego Association of Governments (SANDAG)
Smart Growth Trip Generation Spreadsheet Tool

MIXED USE TRIP GENERATION MODEL V4 - RESULTS

MODEL APPLICATION - ALL TRIPS

		Daily			
		HBW	HBO	NHB	Total
Number of "Raw" SANDAG Rate Trips Subject to Model		3395	6453	2405	12253
Predicted Probabilities:					
	Internal Capture	3.89%	7.66%	8.10%	6.70%
	Walking External	1.00%	1.33%	0.39%	1.05%
	Transit External	0.30%	0.44%	0.87%	0.48%
Number of Trips:					
	Internal Capture	132	494	195	821
	Walking External	33	79	9	120
	Transit External	10	26	19	55
Net Number of IXXI Vehicle Trips		**3221**	**5854**	**2183**	**11257**

	External Vehicle Trips		
Results	Raw	Net	Reduction %
Daily	12,253	11,257	8%
AM Peak Hour	906	842	7%
PM Peak Hour	1,129	1,039	8%

MODEL APPLICATION - TRIP ENDS TO/FROM RESIDENCES IN THE PROJECT ONLY

		Daily			
		HBW	HBO	NHB	Total
Number of "Raw" ITE Trips Subject to Model		1320	4174	927	6420
Predicted Probabilities:					
	Internal Capture	3.89%	7.66%	8.10%	6.95%
	Walking External	1.00%	1.33%	0.39%	1.12%
	Transit External	0.30%	0.44%	0.87%	0.47%
Number of Trips:					
	Internal Capture	51	320	75	446
	Walking External	13	51	3	67
	Transit External	4	17	7	28
Net Number of IXXI Vehicle Trips generated by Project Residences		**1252**	**3786**	**841**	**5879**

	External Vehicle Trips		
Results	Raw	Net	Reduction %
Daily	6,420	5,879	8%
AM Peak Hour	514	475	7%
PM Peak Hour	621	571	8%

ATTACHMENT E

September 26, 2022

Via Email Only

Mr. Brian Oh, Comprehensive Planning Manager
Permit Sonoma County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403

Brian.Oh@sonoma-county.org

Dear Mr. Oh:

I have been asked to review and comment on the Sonoma Developmental Center (SDC) Specific Plan and associated Draft Environmental Impact Report (DEIR). I write this as a research scientist who has spent more than two decades studying wildfire science and fire ecology, global change, and conservation biology. From this perspective, I appreciate the intention to balance human welfare and economic development with plans for preservation of historical and natural resources in the area. Nevertheless, my review of the plan and DEIR have led me to conclude that many issues relative to wildfire risk have been overlooked. B11-251

The discussion of fire risk in the DEIR reflects several misconceptions concerning fire ecology, fire history, and the consequences and effectiveness of different fire mitigation strategies. The SDC property is situated within a highly fire-prone landscape, and based on evidence from the scientific literature, the Proposed Plan has high potential to significantly increase fire risk even further to new and existing structures at the SDC property as well as to the surrounding communities. A rise in human-caused ignitions due to increased population growth and expansion of human infrastructure could increase fire frequency to the point that wildfire would significantly affects public health, ecological functioning, and provision of ecological services (e.g., erosion and flood control). Unfortunately, research on recent destructive fires shows that the proposed mitigation strategies to reduce fire risk are unlikely to eliminate these significant impacts.

Below please find an explanation for my conclusions summarized in three main points.

RELIANCE UPON FIRE HAZARD SEVERITY ZONES IS INAPPROPRIATE FOR CONCLUDING THERE IS NO FIRE RISK. B11-252

The reliance upon existing Fire Hazard Severity Zones as the basis of the findings reflects a misunderstanding of the purpose of the maps, their scale of accuracy, and their potential for uncertainty at specific locations. They are also out of date. The Cal Fire maps were not designed with the intention of indicating precisely where structures are most at risk for wildfire. Instead, the objective for these maps is for use in *general* planning and policy guidance. For example, defensible space practices are only enforceable within high hazard zones; homeowners are required to disclose upon sale whether the property is in a in high hazard zone; and county governments can use the zones to enforce building codes or other fire safety measures. The maps

were developed in 2007 using a simple set of variables, map overlays, and general assumptions to delineate the relative degree of fire hazard across the landscape – that is, areas where fire behavior is likely to become extreme given a fire occurs.

B11-252

In other words, the hazard areas shown on Fire Hazard Severity Zones are delineated in very broad classes and have limited precision. Given the uncertainty and coarse scale of these maps, they are not appropriate for predicting where buildings are likely to be destroyed. This is something that Cal Fire has been transparent about (Sapsis 2018), as the appropriate use of these maps has been misinterpreted elsewhere.

Part of the reason they are inappropriate to predict structure loss is that the location and behavior of fire is stochastic and unpredictable at any given time or location. Fire occurrence, behavior, spread, and eventual destruction of a house depends upon a large suite of random factors, such as where and when an ignition occurs; what the fire weather at the time of ignition is; what direction the wind is blowing; what the fuel and topography conditions are at the point of ignition; what kind of housing density and arrangement are in the surrounding area; whether any other fires are burning and the availability of firefighters, etc. This does not mean that the maps of fire hazard are useless. It means that they need to be interpreted with an understanding of what they can or cannot do; and that they are not completely accurate.

B11-253

This is true of fire mapping in general. For example, a map delineating probability of ignition will look completely different than a map delineating probability of a large fire (e.g., Syphard et al. 2019). Unlike the Cal Fire maps, some maps are designed with the specific objective of delineating fire risk to structures (e.g. Syphard et al. 2012), but even these maps have substantial uncertainty given the random nature of wildfire. A study comparing maps of fire risk to structures in southern California with the Cal Fire maps in the same regions found significant differences in the areas mapped as high risk, and the Cal Fire maps performed poorly compared to the other maps (Syphard et al. 2012).

Another source of uncertainty in the Cal Fire maps is the assumption that hazard is likely to be governed by the same factors in the same way across the state. Science shows that the relative weighting and direction of variables that influence the locations of fire occurrence, size, and risk vary from region to region (e.g., Syphard et al. 2019). Therefore, accuracy of the Cal Fire maps is likely to vary from place to place, and there is no guarantee that the maps near the SDC are accurate, even in a general sense or for their intended purpose. There are examples of recent highly destructive fires where substantial structure loss occurred in areas not mapped as high risk in the Cal Fire maps (e.g., Coffee Park in the Tubbs Fire, Malibu City in the Woolsey Fire). This should serve as an important illustration of why the maps should not be the final word in a conclusion about fire risk to structures.

B11-254

An important point is that the current maps - the ones used for the DEIR - were developed in 2007. The current landscape reflects very different environmental and housing conditions than those that were there 15 years ago. The factors used to create the 2007 the maps, such as fuel type, fire history, and housing, have all changed substantially. Cal Fire has been putting significant effort into updating their maps with new variables and assumptions, and these may be

more appropriate for future decisions. However, those maps are not available yet - and maps developed in 2007 should not be trusted to assess the fire risk for a development to be constructed after 2022.

B11-254

The Proposed Plan Is Likely To Increase Regional Fire Risk

Although the DEIR acknowledges that the location of the proposed development is in a fire-prone part of the landscape, it does not thoroughly establish the baseline conditions that this is an area with a long history of wildfires that have already resulted in serious impacts. It was only a few years ago that structures were destroyed by wildfire at this very site and many more structures were destroyed nearby. Even without the new residents and visitors proposed for the site, the evacuation situation has apparently been extremely problematical in recent fires - and evacuation is often the time when people lose their lives to wildfires. These baseline conditions have not been adequately described in the DEIR despite the need to establish them before assessing the impact of the project.

B11-255

Based on data regarding repeat fires in the same locations, there is reason to believe that the area proposed for development on the SDC site is susceptible to more wildfires in the future. There is also reason to believe that the SDC development will lead to an increase in the number of wildfires in the region, not only due to the potential for climate change to exacerbate fire risk, but also because of the probable increase in human-caused ignitions. In addition, the DEIR lacks a description of how the Proposed Project will not only be impacted by fire, but also how it will impact fire in the vicinity in the future.

As evidenced by the almost perfect overlap of the nearby 2017 Tubbs fire with the 1964 Hanley Fire (Keeley and Syphard 2020), fires often recur in the same locations. This is because certain locations are more fire-prone than others given their topography, location within a wind corridor, climate, and vegetation. Research on structure loss in California has demonstrated that structures located in areas with a history of recurring fire are among those that are most likely to be destroyed by fire (Syphard et al. 2012). Although the 1964 Hanley Fire occurred in nearly the same location as the 2017 Tubbs Fire, there were only about 100 structures lost, and there were no fatalities. However, in 2017, more than 5500 structures were destroyed and 22 people lost their lives. The difference is the rapid growth of human population and housing in the footprint of the fire during the interim.

B11-256

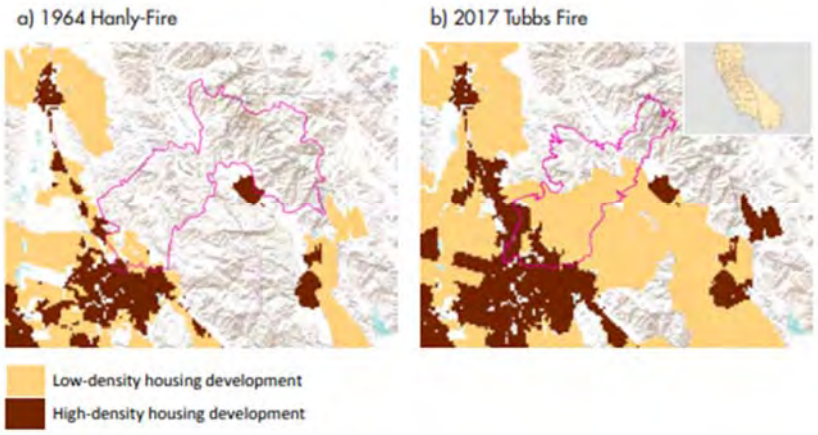


Figure 10. a) 1964 Hanly Fire perimeter in pink, and b) 2017 Tubbs Fire perimeter in pink, with changes in low density and high density housing *(from Keeley and Syphard 2019).*

The placement of new housing in fire-prone locations, like the proposed Project, not only increases the exposure of those structures to wildfire, but it also increases the likelihood of more fire occurring in the surrounding region due to human-caused ignitions. As recognized in the DEIR, humans cause more than 95% of the fire ignitions in Sonoma County, and studies repeatedly show that fire frequency is highest in low-intermediate-density development patterns, particularly when surrounded by wildland vegetation (i.e., the Wildland Urban Interface) (Syphard et al. 2007, Syphard et al. 2019, Radeloff et al. 2018). This is because, as low-medium density housing development expands (the kind proposed for this development), there is an increase in the number of people and opportunities for fires to ignite; and there is still ample continuous vegetation in the surrounding landscape for wildfires to spread. Larger numbers of people also increase the odds of fires starting during severe fire-weather conditions that lead to the most catastrophic outcomes. Recent research shows that human-caused ignitions are the top-ranking reason for area burned in Santa Ana wind-driven fires; and that human-caused fires have worse outcomes than lightning-caused fires.

B11-257

Extensive research also shows that the location of human ignitions tends to occur closest to roads and human infrastructure (Syphard et al. 2008, Molina et al. 2019, Chen and Jin 2022). Therefore, the addition of people coming into and out of the region because of the new development increases the likelihood of more fires starting near the area. The lack of public transport is a concern not only in terms of greenhouse gas emissions, but also in terms of ignitions and increasing fire risk. Given that the most likely form of transportation to and from the development is via automobiles, many more people will be on the roadways, and thus, many more opportunities will arise for fire ignitions to occur. The increased access to open space areas also would provide more opportunities for humans to unintentionally start fires.

In turn, the type of low-medium density development proposed in the plan is not only where fire frequency tends to be highest, but this is also where structures are most likely to be destroyed by fire (Syphard et al. 2012, 2019, Kramer et al. 2018). Also, it is not just housing location and density that drives risk exposure; it is the overall location and pattern of development (Syphard

B11-258

et al. 2012). Isolated or remote clusters of development are particularly vulnerable (Syphard et al. 2013).

In other words, fire risk is a multi-scale issue (Syphard and Keeley 2021), and the landscape context is critical. Developments surrounded by large amounts of continuous wildland vegetation, such as is the case here, are particularly dangerous because they are exposed to potential fire on all sides. This scenario is similar to what happened in the town of Paradise in the 2018 Camp Fire. To that end, "community separation" of urban areas seems like a risky design strategy in the proposed plan - that adds edge between development and wildland. As acknowledged in the EIR, the potential for destructive wildfires is increasing in many parts of California due to climate change. Recent research also shows that proximity to the WUI is the top explanation for why fires have become destructive in the project region (Syphard et al. 2022). B11-258

Policies For Mitigation Do Not Eliminate Fire Risk

Although studies show that community planning and fire-safe design and landscaping can significantly enhance fire resilience, statistics from recent wildfires indicate that these actions are not guaranteed to reduce impacts to less than significant levels (Syphard and Keeley 2019, Baylis and Boomhower 2022). While having a strong and well-enforced community wildfire resilience plan is critically important for reducing fire risk to the largest extent possible, constructing a significant number of residences and businesses will add more frequent ignitions to an already highly fire-prone region. This will exacerbate fire risk in the region regardless of the mitigation policies put in place. Therefore, although the DEIR relies on policies and mitigation measures to conclude that the project would not exacerbate wildfire risk, the initiation and enforcement of these measures do not ensure that significant impacts would be sufficiently mitigated. B11-259

Vegetation Management

One of the measures that the DEIR relies upon to claim no significant wildfire impacts is vegetation management to reduce fire risk. Vegetation management includes mechanical fuel breaks surrounding the development, clearance of woody shrublands or understory woody trees, defensible space, and controlled burning of vegetation. There are several common misconceptions about, and overestimations of the relative effectiveness of, these measures for reducing structure loss, especially during severe fire weather when most structures are destroyed. Fuel reduction through vegetation management is often viewed as a means of stopping or slowing the spread of fire; however, treatments typically only do this under mild weather conditions. In severe fire weather, with strong winds, vegetation treatments generally do not prevent or stop fires on their own. B11-260

Policy 2-31 would require construction and maintenance of a managed landscape buffer along western and eastern edges of the Core Campus to aid in fire defense, consisting of a shaded fuel break in wooded areas and grazed or mown grassland. The construction of these types of fuel breaks can be helpful for protecting communities, when done strategically, by providing safe fire-fighter access. They may also slow fire spread enough to buy time for defensive activities

(Syphard et al. 2011). Despite these benefits, the big issue with placing too much trust in fuel breaks and other forms of vegetation management is that most structures are destroyed because they are exposed to the millions of wind-borne embers that are generated during severe fire-weather. Although woody vegetation is the primary source of firebrands, wind-borne embers are known to fly kilometers ahead of a fire front, crossing vegetation treatments, and landing on or near structures. In fact, wind-borne embers often jump California's widest freeways. Therefore, although fuel breaks can facilitate safe firefighter access in some circumstances, they cannot prevent embers from flying past them. Furthermore, despite the role of fuel breaks for providing safe firefighter access, it is often unsafe for firefighters to be present during the worst fire-weather conditions. In a historical survey of fires and fuel breaks in southern California national forests, 22- 47% of fires stopped at fuel breaks when they encountered them (Syphard et al. 2011).

B11-261

The creation of defensible space around structures at the parcel level, as suggested in policies 2-34 and 2-36, is a mitigating policy proposed for the DEIR, and I concur that this should be implemented to increase community resilience. Studies show that properly created defensible space (https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/) can significantly reduce the probability of a structure being destroyed in a fire (although there is no additional benefit to extending the distance of defensible space beyond 100 feet (Syphard et al. 2014, Miner 2014)). Nevertheless, as with other vegetation treatments, defensible space should not be considered as something that can definitively prevent structure loss. Many embers directly penetrate a structure without vegetation playing a role, and many structures with well-designed defensible space have been destroyed in recent wildfires.

B11-262

If embers land near the property, they may ignite new fires depending upon the flammability of the surroundings. While the recommended reduction of biomass near the property lowers flame lengths and enhances firefighter safety, the fuel moisture of the vegetation in the vicinity of structures is often more important than the amount of vegetation. Evergreen shrubs and trees are often referred to as "ember catchers" because of this – because the embers may be extinguished if they land on green vegetation. This argues for retaining some green vegetation near the structure and across the landscape.

Research in Australia also shows significant protective effects of irrigated land (Gibbons et al. 2018). Thus, a concern I have about the vegetation management approach described in the DEIR is the proposal to remove chaparral and other woody shrublands and to allow establishment and expansion of grass. Although fire in grass has lower flame lengths, grass is the most flammable and easily ignitable vegetation type in California (Syphard and Schwartz 2021, Syphard et al. 2022). Grass is dryer for a much longer period in the year than chaparral, and when it does ignite, it is the fastest spreading vegetation type. Most firefighters who lose their lives in fires have been killed in grass fires. Therefore, while the practice of mowing or grazing grass can enhance fire safety (if mowing does not occur during severe fire weather), removing shrublands and converting them to grass is likely to make the landscape more flammable.

B11-263

Compliance With Fire-safe Building Codes

In addition to defensible space, the DEIR relies upon class A roof retrofits and the compliance with fire-safe building codes in the construction of new buildings to mitigate fire risk. Although fire-safe building practices, such as those required in new building codes, increase the possibility that structures will survive wildfires (Syphard and Keeley 2019), they also do not guarantee prevention of structure loss. The extent to which enforcement of building codes increases the rate of structure survival in wildfires is yet unknown. For example, one study shows that building codes that enforce fire-safe construction helped to decrease rates of structure loss compared to rates of loss before the codes were enforced (Baylis and Boomhower 2021). On the other hand, an analysis of the Camp Fire, where more than 18,000 structures were destroyed, showed that homes built before and after the enforcement of building codes were destroyed at roughly equal rates (Knapp et al. 2021). Therefore, as with defensible space, many new homes with fire-resilient construction have been destroyed in recent California wildfires.

B11-264

Although fire-safe building practices improve the odds of survival for new homes, these codes do not protect the existing homes at the site and in the surrounding areas. The increase in population and human activity in the region at large increases the odds for more human-caused fires to start, as people will be moving in and out of the area, engaging in more activities that could generate sparks, and spending more time recreating in flammable open-space areas. Given that humans are mobile, ignitions are numerically more likely to occur anywhere in the surrounding area that experiences an increase in human presence and activity, and this exposes more existing structures to wildfires at a landscape scale.

B11-265

In other words, because wildfires occur over large areas, with the most destructive wildfires becoming very large (Syphard et al. 2022), impacts can be expected to occur in areas much larger than the project footprint. Furthermore, new building codes will not benefit the older structures within the project footprint, some of which have significant historical and cultural value. Policy 2-38 suggests retrofits of new roofs, siding, and windows for existing structures, but this is not a complete list of needed retrofits for fire safety, and the details of this policy are vague. Would these retrofits be applied to all existing buildings, even the historical ones? They also would not apply to buildings outside of the SDC site.

Shelter in Place

The DEIR relies in part on proposed Policy 2-54, which requires the Project proponent to build or designate an on-site shelter-in-place facility. DEIR at pages 510 and 511. This alternative of sheltering in place is a dangerous proposition, as evidenced by the Black Saturday Fires in Australia in 2009. In those fires, 173 people lost their lives, and more than half of those people had been sheltering in place. (https://www.sciencedirect.com/science/article/abs/pii/S221242091730050X). As a result of these fires, the Australians have now shifted thinking away from their stay and defend policy and now have a system in which all residents are encouraged to evacuate when weather conditions meet a “catastrophic threat” level. In short, buildings are replaceable, but human lives are not. While having a shelter-in-place facility may benefit those who are simply unable to evacuate,

B11-266

this should be a last resort, and the SDC project should not rely on this method as mitigation for wildfire risk related impact.

Finally, I question the enforceability and endurability of many of the proposed policies. Who is ultimately responsible for ensuring that the policies are followed? Activities such as fire-safe education, defensible space maintenance, or maintenance of buildings require ongoing, permanent attention. Who will ensure that these activities will continue after the structures have been built? Will a permanent staff position be created to ensure ongoing compliance? In short, people will move in and move out over time, but the houses and the landscape will remain. B11-266

Conclusion

In conclusion, contrary to the assertions made in the DEIR, there is a strong likelihood that the proposed development, and its alternatives, will have significant impacts relative to wildfire. The potential for increased numbers of wildfires – and more wildfires during severe fire weather - are likely to significantly affect public health and ecological functioning. There are also likely to be increased economic costs for management and suppression, from damage/destruction to human infrastructure or agricultural lands, and from post-event hazards such as mudslides or debris flows. Sufficient homeowners insurance for wildfire, which is becoming increasingly expensive, will also be difficult to attain, particularly for the low-income residents that are supposed to be supported by this plan.

Public health may be threatened not only from direct injury and mortality during a fire, but from smoke. The evacuation plans described in the DEIR only account for fires coming in two directions and spreading through other tow B11-251 aching the project site. These analyses should also incorporate scenarios in which fires are spreading directly from the roads east of or from Sonoma Mountain west of the project site. In these cases, if the fire weather is severe and the fires are burning toward the project site, there would likely be less time for residents to evacuate, and this puts human lives at risk. Another potential impact to public health and safety is that, if fire frequency increases regionally due to additional opportunities for human-caused ignitions, secondary hazards may occur post-fire, such as flooding, landslides, runoff, or debris flows. Not only may these secondary events be potentially harmful during the event, but there may be subsequent impacts to water quality. B11-267

While my letter is aimed at explaining the wildfire-related potential and costs associated with the project, there are also ecological impacts that may result from the increased fire risk in the area. For example, there are ecological costs associated with vegetation management and construction of fuel breaks. There are also potential ecological impacts that will result from the potential for increased fire frequency in the area. Many vegetation types in the western USA are experiencing fire-driven conversion, often from native vegetation to invasive species (Guiterman et al. 2022). Therefore, the DEIR's conclusion that the project would result in no potential loss of forest is inaccurate because it fails to account for the potential effects of increased wildfire. B11-268

While the policies to reduce fire risk at the site may work to lessen some of these impacts, the proposed policies are unlikely to offset the increase in fire risk to the property and surrounding area that results from the project. Fire hazards will nevertheless likely be significant.

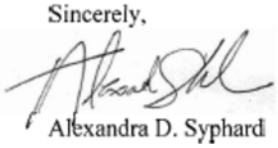
Finally, in my reading of the DEIR, I was unable to understand some of the statements. Therefore, it would be helpful to have additional clarification on the following questions:

1) Why does the plan state that the Historic Preservation Alternative leads to higher fire risk? Based on its reduced population and housing, the Historic Preservation alternative appears to be more fire-safe than the proposed project or its other alternatives.
2) On what basis does the DEIR assume that low-lying creeks and riparian areas would increase fire safety? While these areas are less flammable in general, they do not appear to be close to the proposed housing. Also, when riparian areas dry out, they can burn rapidly at high intensity.
3) On what basis does the DEIR assume that the housing in low-elevation or flat areas would not be at high risk? While it is true that topographically complex areas can often have highly erratic fire behavior, many structures are lost in low-elevation, low-relief areas (Syphard et al. 2021).

B11-269

Thank you for your time in considering my review. Please let me know if you have any questions.

Sincerely,

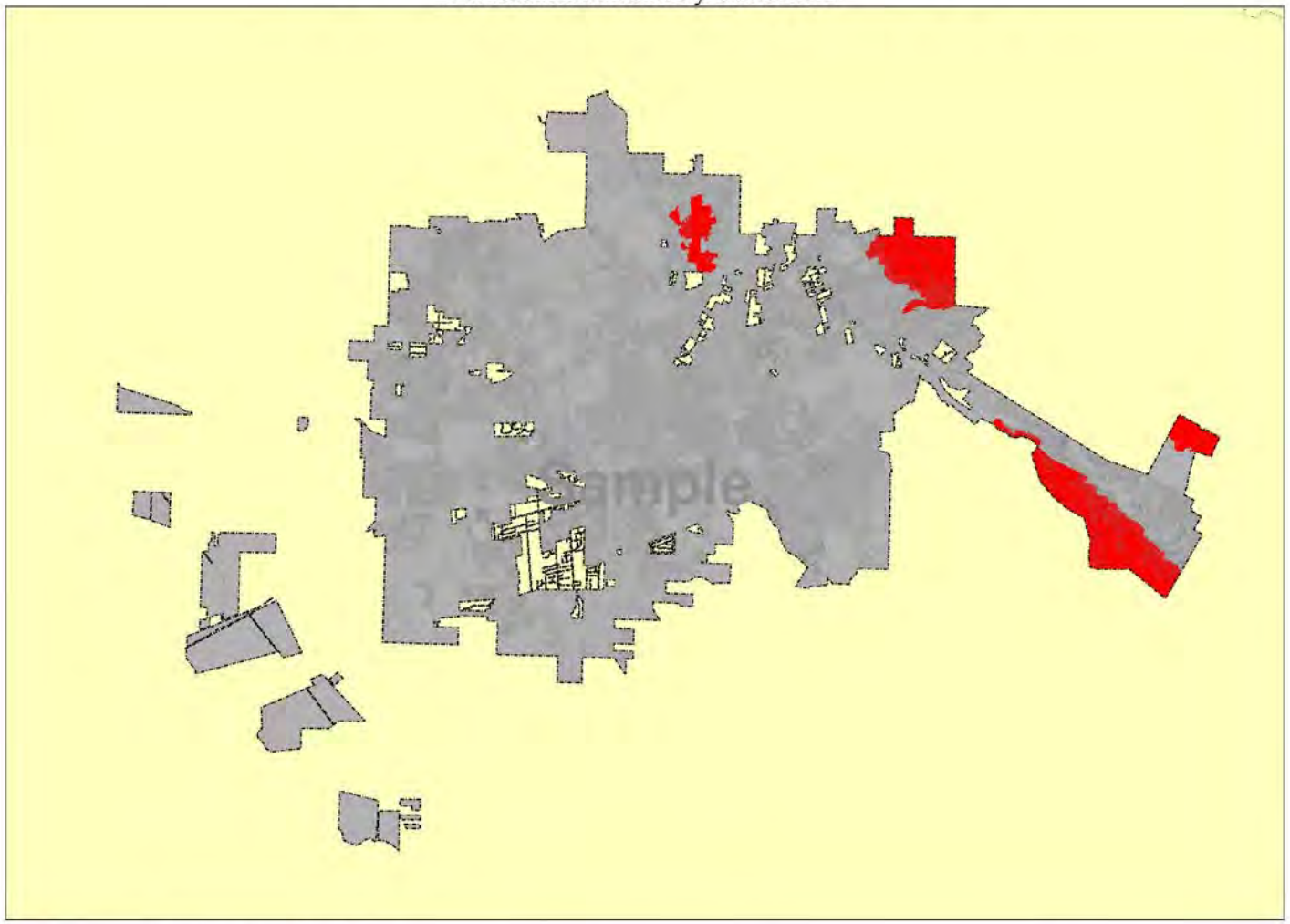


Alexandra D. Syphard


SOUTHERN CALIFORNIA
Mapping Wildand Fire Threats to People and Property: Risk Communication for Regulators, Planners, and the Public
Dave Sapsis
May 8, 2018
Sample
PACIFIC OCEAN
MEXICO
PIRU
SIMI
PADUA
GRAND PRIX
OLD
SAN BERNARDINO
LOS ANGELES
RIVERSIDE
MOUNTAIN
ROBLAR
PARADISE
CEDAR
OTAY
FIRES AND WILDLAND URBAN INTERFACE (WUI)
HOUSING DENSITY & PROXIMATE FIRE THREAT
Rural Residential (1 or more units per 20 acres & less than 1 unit per 5 acres)
Interface (1 or more units per 5 acres & less than 1 unit per acre)
Urban (One or more units per acre)
Not Mapped
5 MILES
10 KILOMETERS
Projection Albers
Scale 1:350,000
at 46° x 34°
December 01, 2003
The State of California and the Department of Forestry and Fire Protection make no representations or warranties regarding the accuracy of data or maps. Neither the State nor the Department shall be liable under any circumstances for any direct, special, incidental, or consequential damages with respect to any claim by any user or third party on account of or arising from the use of data or maps.
Obtain FRAP maps, data, metadata and publications on the Internet at http://frap.cdf.ca.gov
Arnold Schwarzenegger, Governor,
State of California
Michael Chrisman, Secretary for Resources,
The Resources Agency
Andrea E. Tuttle, Director,
WILDLAND FIRE THREAT & HOUSSING DENSITY, v03_1
1:100,000 USGS DLG

Santa Rosa

Very High Fire Hazard Severity Zones in LRA
As Recommended by CAL FIRE





This map was developed using data products such as parcel and city boundaries provided by local government agencies. In certain cases, this includes copyrighted geographic information. The maps are for display purposes only - questions and requests related to parcel or city boundary data should be directed to the appropriate local government entity.



Projection Albers, NAD 1983
Scale 1: 30,000
at 38° x 36°
November 19, 2008

The State of California and the Department of Forestry and Fire Protection make no representations or warranties regarding the accuracy of data or maps. Neither the State nor the Department shall be liable under any circumstances for any direct, special, incidental, or consequential damages with respect to any claim by any user or third party on account of, or arising from, the use of data or maps.

Obtain FRAP maps, data, metadata and publications on the Internet at http://frap.cdf.ca.gov
For more information, contact CAL FIRE-FRAP, PO Box 944246, Sacramento, CA 94244-2460, (916) 327-3939

Arnold Schwarzenegger, Governor,
State of California
Mike Chrisman, Secretary for Resources,
The Resources Agency
Ruben Grijalva, Director,
Department of Forestry and Fire Protection

MAP ID: FHSZL_c49_SantaRosa

DATA SOURCES:
CAL FIRE Fire Hazard Severity Zones (FHSZLOS_3)

STATE OF CALIFORNIA

FIRE HAZARD SEVERITY ZONES
IN STATE RESPONSIBLITY AREAS
Adopted by CAL FIRE on November 7, 2007



All these maps….

- Are designed to “help” people manage for fire
- Are somewhat unique, but still a “fire” map
- Have an element of “prediction”

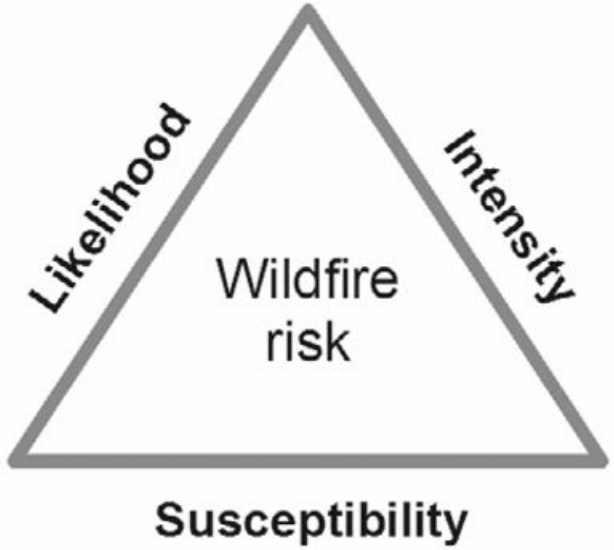
“Making predictions is *hard*…

Especially about the future.”

--Yogi Bera

Why confess?

- Science and Models give everything anyone needs to make rational decisions
- Risk = probability x outcome



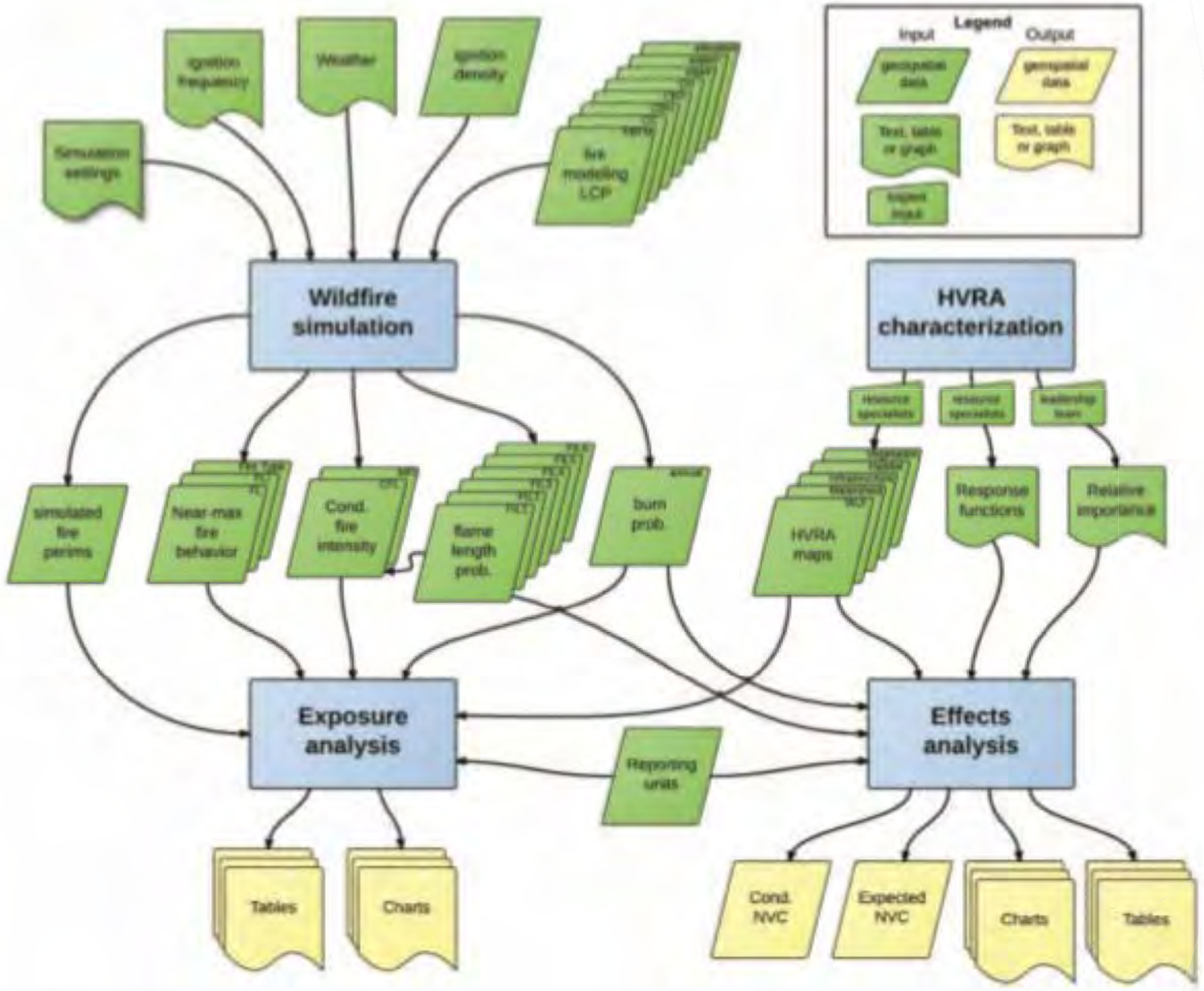
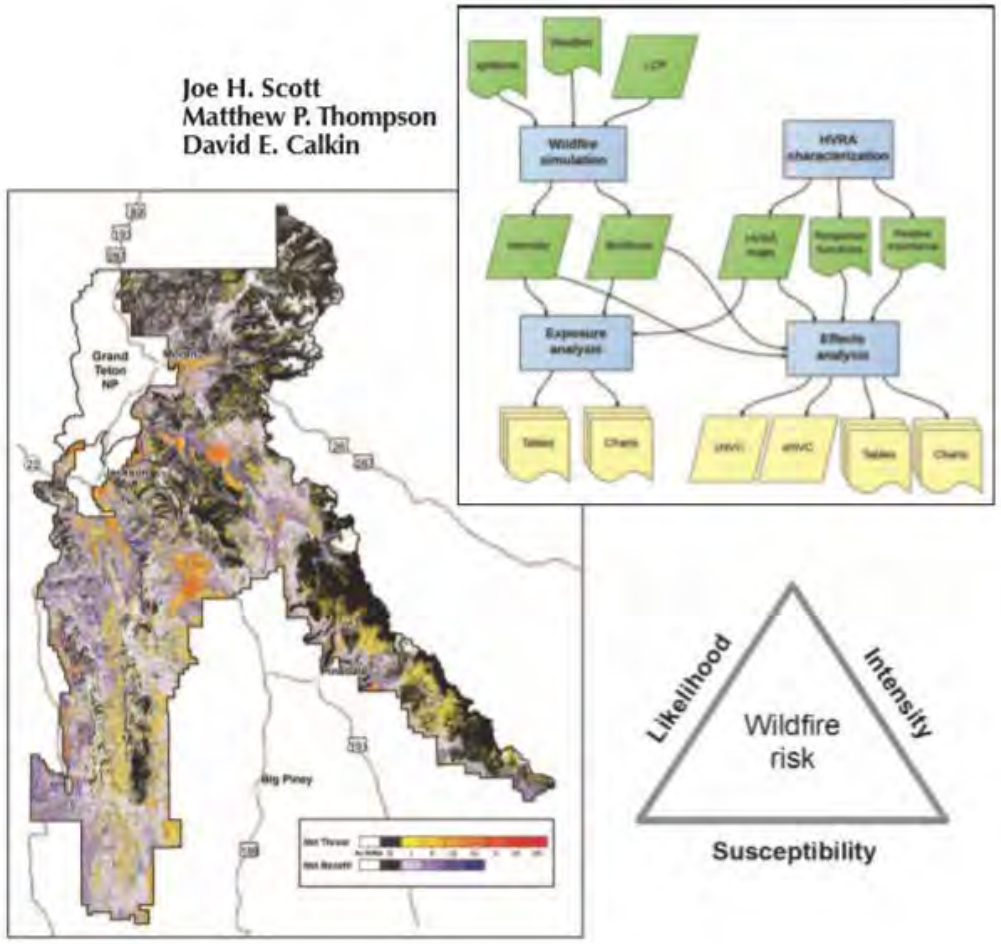


Figure 3—Process flowchart illustrating the relationships among the four components of the risk assessment process.

A Wildfire Risk Assessment Framework for Land and Resource Management

Joe H. Scott
Matthew P. Thompson
David E. Calkin



USDA United States Department of Agriculture / Forest Service
Rocky Mountain Research Station
General Technical Report RMRS-GTR-315
October 2013

Models are really only so good…

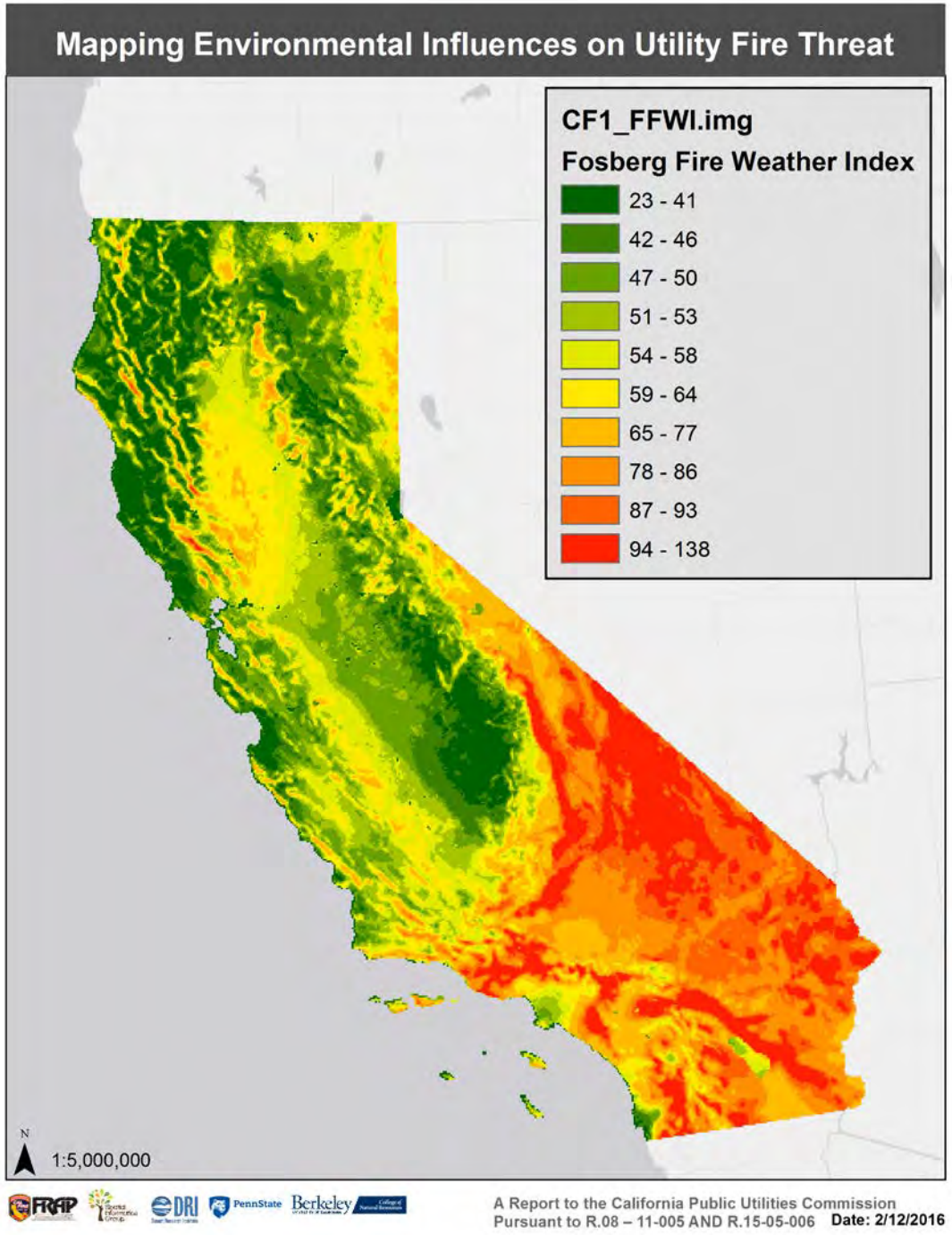
- Remember – they are predicting future outcomes:
  - UNCERTAINTY
  - STOCHASTICITY
  - PROBABILITY
- PEOPLE (how can you forget about people?)

People

- Have unique histories and experiences
- Are (usually) not experts in fire, but are very, very interested in it and want to know more
- Interpret predictions/expectations/forecasts/probabilities different
  - 1/10 of 1% ; one in one thousandths chance
- Varying opinions about the government's abilities to do the right thing*

Improve Models/Improve Communication: Technology alone will not solve the problem

- Fire Hazard Severity Zones –REFRESH
- 2018-19 (?)
- Improved Fire Allocation (probabilities, fire behavior, embers)
- Downscaled fire climatology
  - SB1241 Requires local wind information to be included

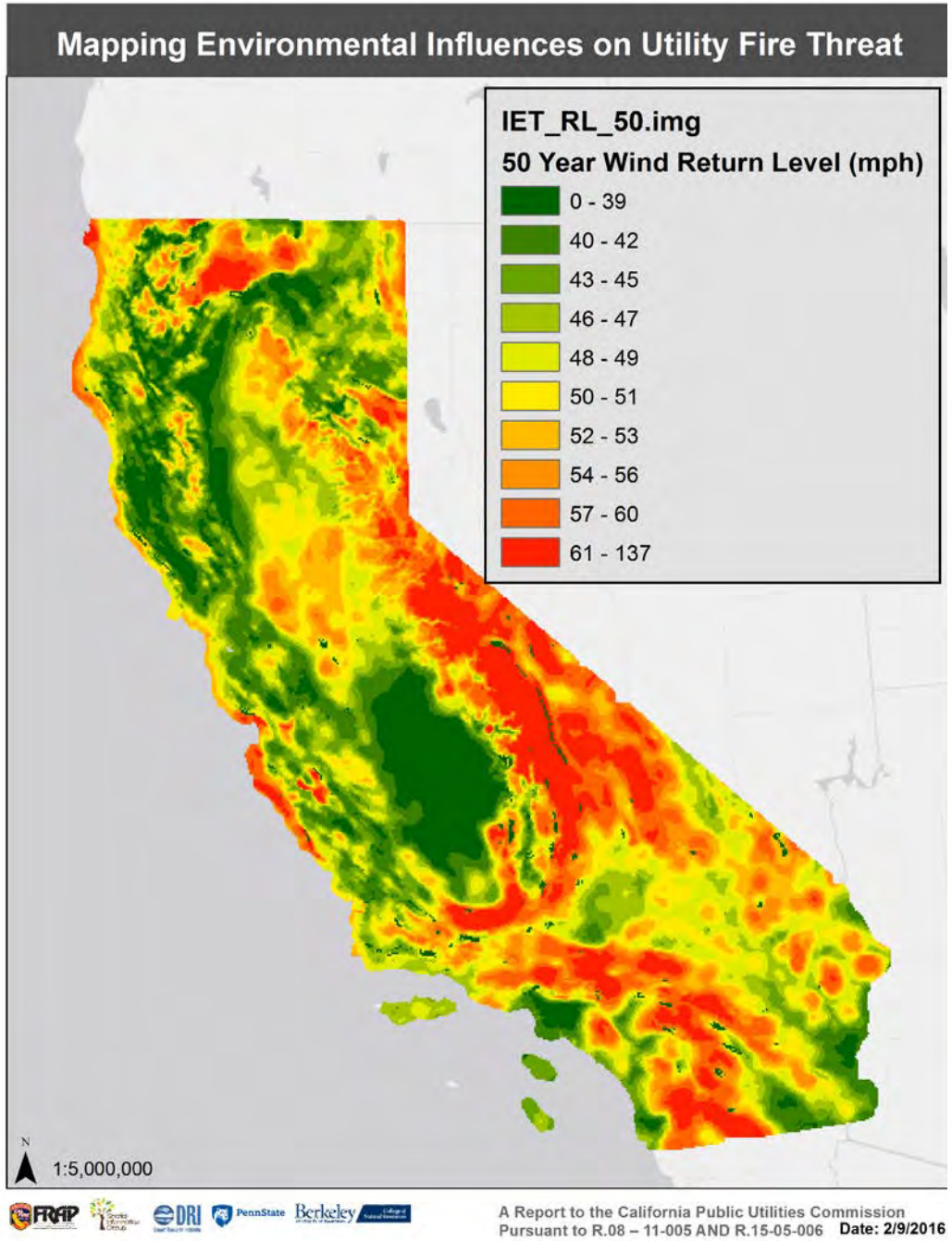


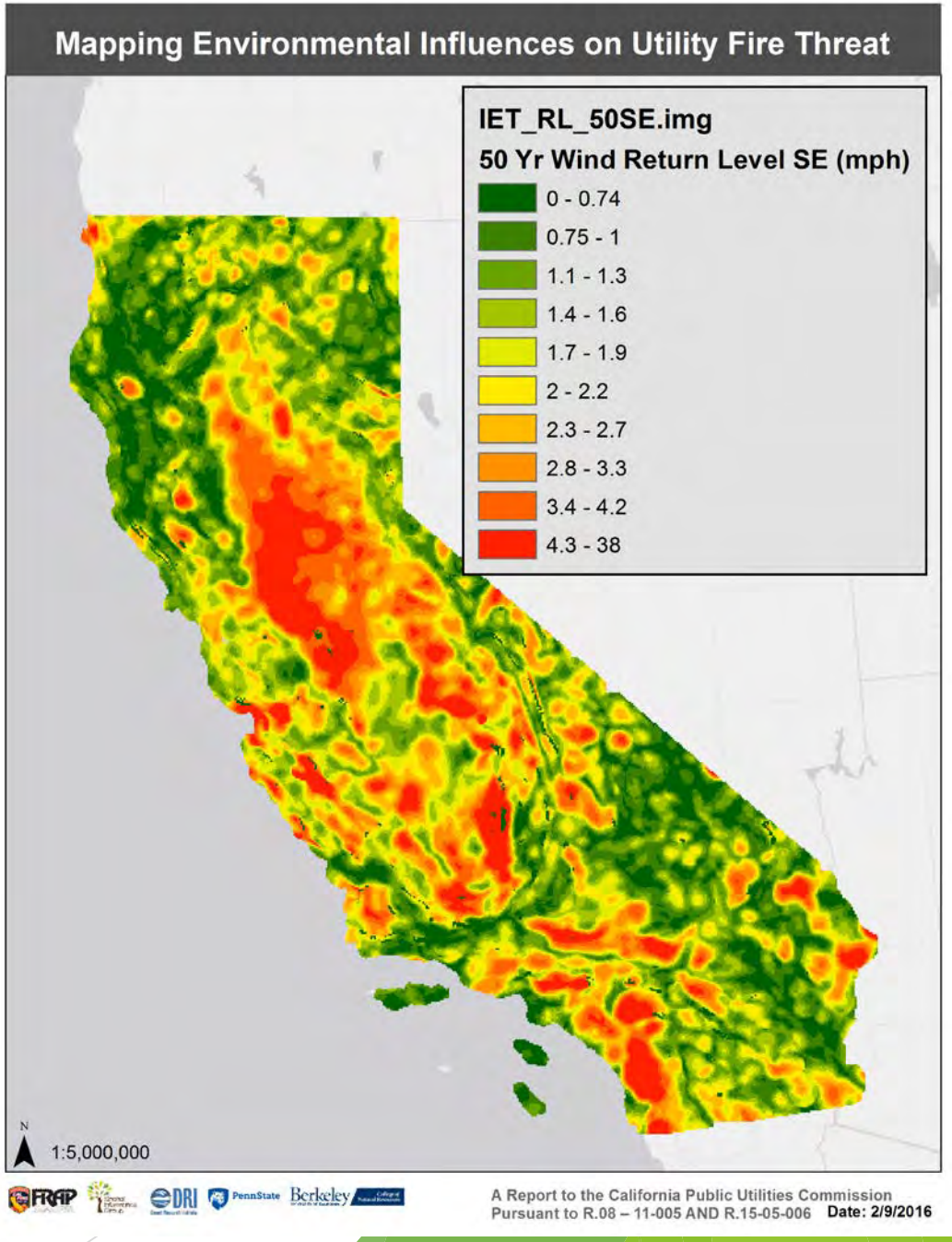
Fosberg Fire Weather Index 98thtile

10 year reconstruction
2 km grids
Hourly, 24x365 data stack

Actively working on extension and improvement: 15 years, NFDRS, H-D-W, etc.

WINDS!

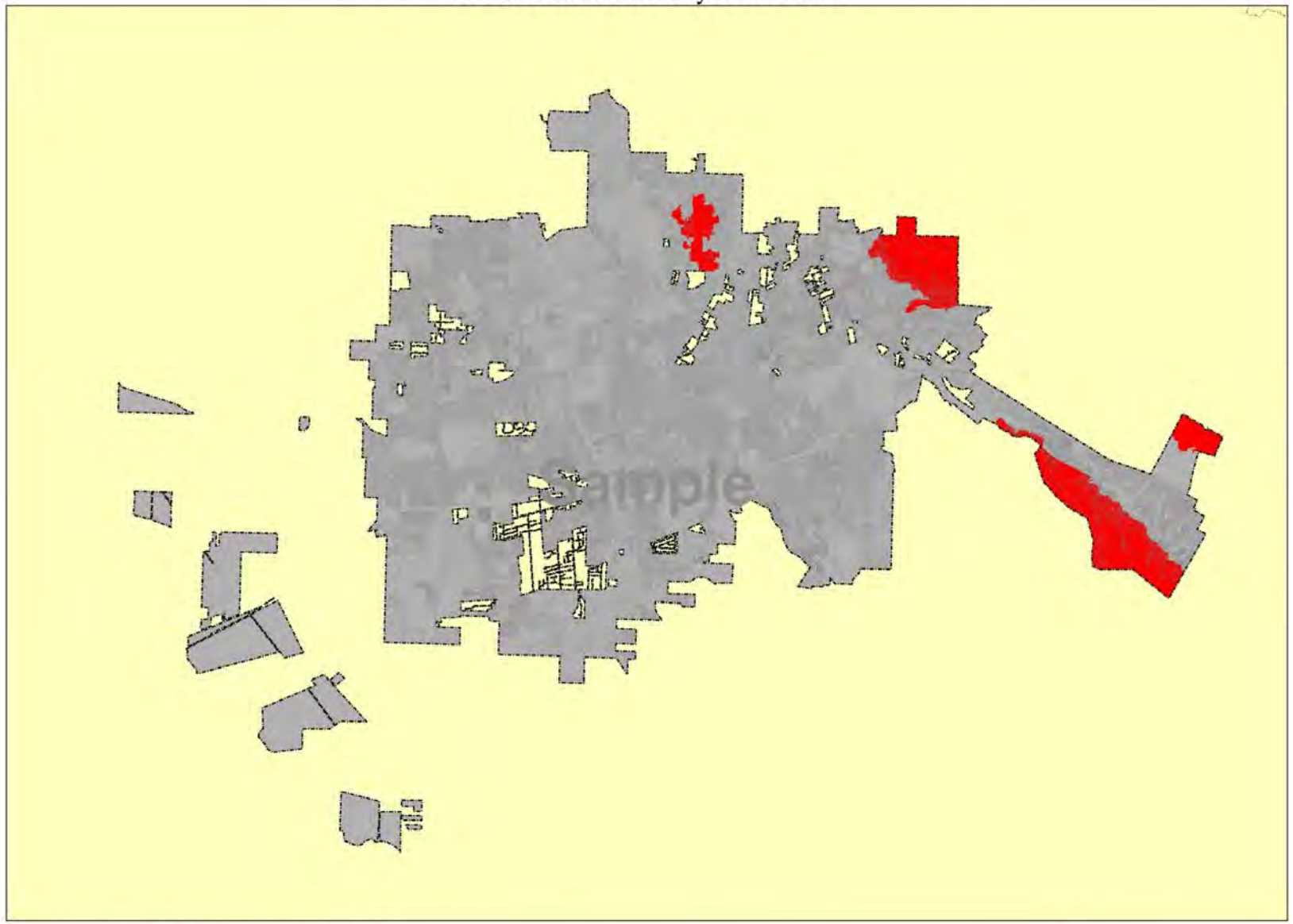

Mapping Environmental Influences on Utility Fire Threat
IET_RL_50.img
50 Year Wind Return Level (mph)
0 - 39
40 - 42
43 - 45
46 - 47
48 - 49
50 - 51
52 - 53
54 - 56
57 - 60
61 - 137
N
1:5,000,000
FRAP
DRI
PennState
Berkeley
A Report to the California Public Utilities Commission
Pursuant to R.08 – 11-005 AND R.15-05-006 Date: 2/9/2016


Mapping Environmental Influences on Utility Fire Threat
IET_RL_50SE.img
50 Yr Wind Return Level SE (mph)
0 - 0.74
0.75 - 1
1.1 - 1.3
1.4 - 1.6
1.7 - 1.9
2 - 2.2
2.3 - 2.7
2.8 - 3.3
3.4 - 4.2
4.3 - 38
N
1:5,000,000
FRAP
DRI
PennState
Berkeley
A Report to the California Public Utilities Commission
Pursuant to R.08 – 11-005 AND R.15-05-006 Date: 2/9/2016

FRAP

Santa Rosa

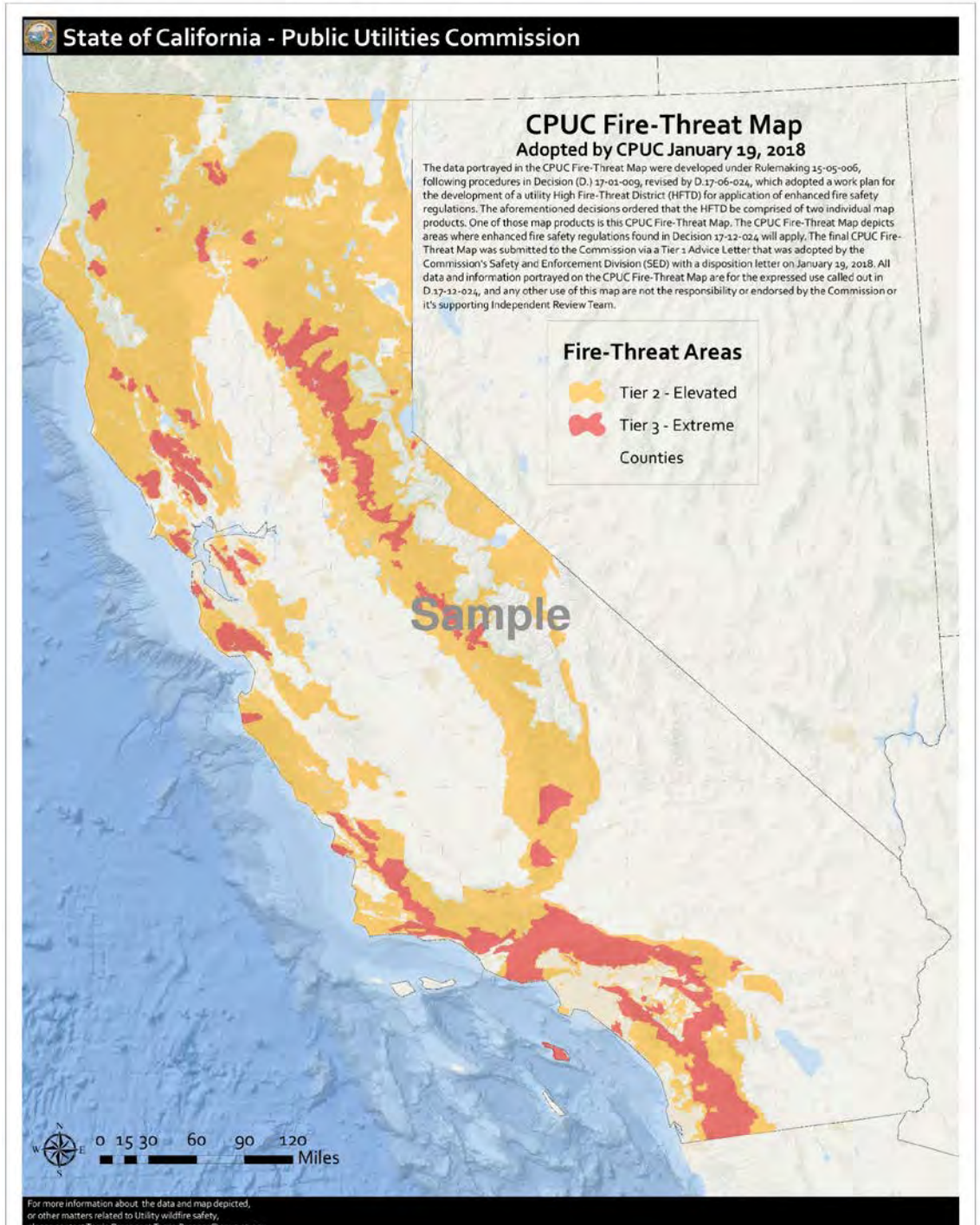
Very High Fire Hazard Severity Zones in LRA
As Recommended by CAL FIRE



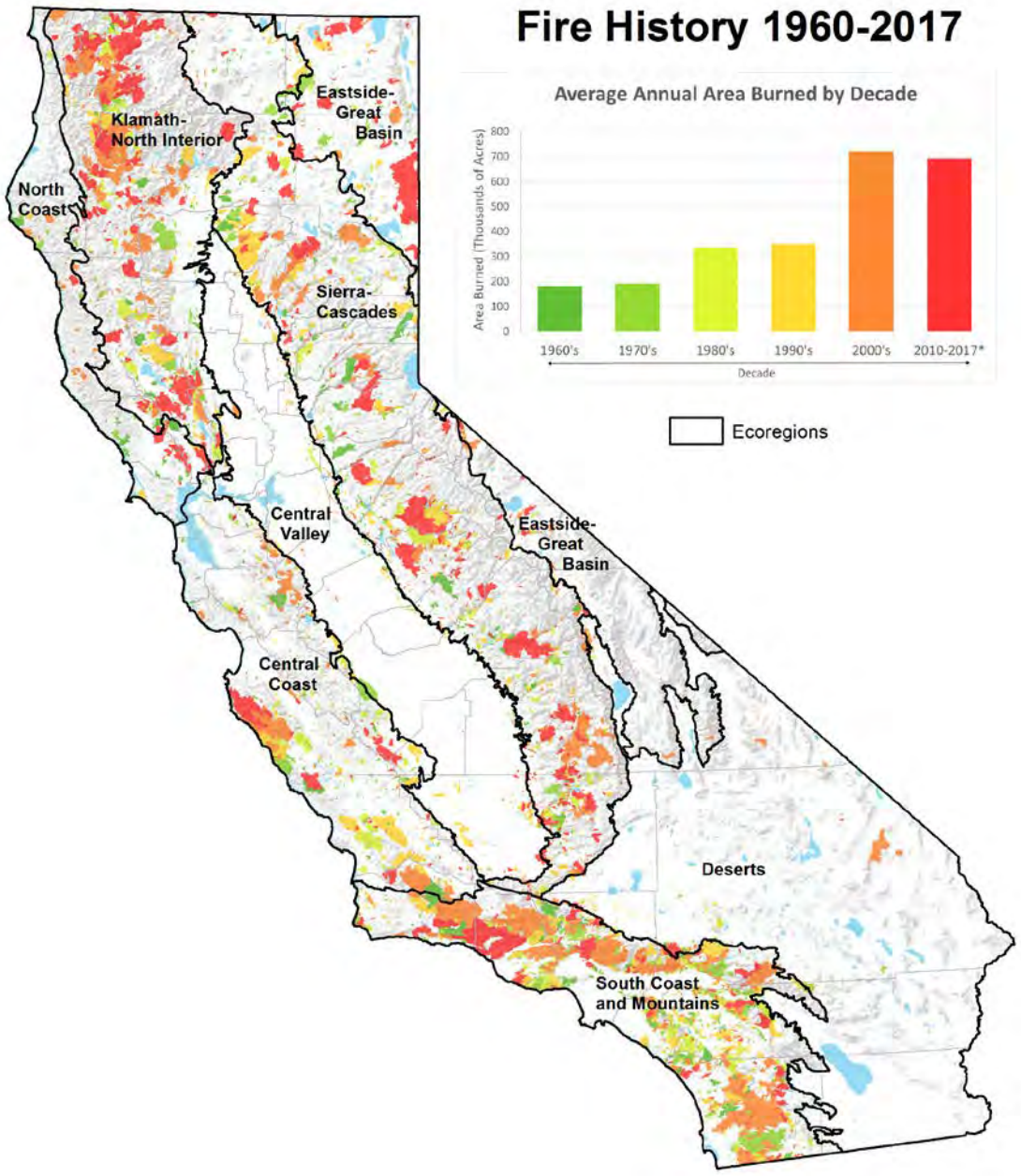
Fire Hazard Severity Zones

This map was developed using data products such as parcel and city boundaries provided by local government agencies. In certain cases, this includes copyrighted geographic information. The maps are for display purposes only - questions and requests related to parcel or city boundary data should be directed to the appropriate local government entity.

New Stuff: Ignition Reduction under extreme fire potential



Questions


Fire History 1960-2017
Average Annual Area Burned by Decade
Area Burned (Thousands of Acres)
800
700
600
500
400
300
200
100
0
1960's
1970's
1980's
1990's
2000's
2010-2017*
Decade
Ecoregions
North Coast
Klamath-North Interior
Eastside-Great Basin
Sierra-Cascades
Central Valley
Central Coast
Eastside-Great Basin
Deserts
South Coast and Mountains
Sources: Esri, USGS, NOAA

Landscape and Urban Planning 174 (2018) 10–17

Contents lists available at ScienceDirect

Landscape and Urban Planning

journal homepage: www.elsevier.com/locate/landurbplan

Research Paper

Options for reducing house-losses during wildfires without clearing trees and shrubs

Philip Gibbons[a,*], A. Malcolm Gill[a], Nicholas Shore[a], Max A. Moritz[b], Stephen Dovers[a], Geoffrey J. Cary[a]

[a] Fenner School of Environment and Society, The Australian National University, Canberra, ACT 2601, Australia
[b] University of California Cooperative Extension Division of Agriculture and Natural Resources & Bren School of Environmental Science & Management, Earth Research Institute, UC Santa Barbara, CA 93106, USA

GRAPHICAL ABSTRACT

Two houses impacted by a wildfire in southeastern Australia. Our study indicates that the "greenness", spatial arrangement and proximity (relative to the wind direction) of trees and shrubs close to houses (within red circle) can be manipulated to reduce the risk of house losses during wildfires without necessarily clearing trees and shrubs. (Imagery supplied by South Australian Government.)



ARTICLE INFO

Keywords:
Bushfire
Wildfire
House loss
Fuel reduction
Hazard reduction
Wildland-urban interface

ABSTRACT

Removing vegetation close to houses is at the forefront of advice provided to home owners by fire management agencies. However, widespread clearing of trees and shrubs near houses impacts aesthetics, privacy, biodiversity, energy consumption and property values. Thus, stakeholders may oppose this practice. Regulators and property owners therefore require options for vegetation management that reduce risk to houses during wildfires without complete removal of trees and shrubs. Using data from 499 houses impacted by wildfires, we tested three hypotheses: (1) maintaining 'green' vegetation affords houses additional protection during wildfires; (2) risk posed by trees and shrubs near houses is reduced where they are arranged as many discrete patches; and (3) trees and shrubs retained in the upwind direction from which wildfires arrive represent greater risk to houses than trees and shrubs retained in the downwind direction. We found empirical support for each hypothesis. Increasing the mean Normalised Vegetation Difference Index (NDVI) (a measure of "greenness") of vegetation near houses had the same effect on reducing house losses as removing some trees and shrubs. Trees and shrubs within 40 m of houses arranged as many discrete patches posed less risk than the same cover of trees and shrubs arranged as few discrete patches. Trees and shrubs retained downwind from houses represented less risk than

* Corresponding author at: Fenner School of Environment & Society, The Australian National University, Acton, ACT 2601, Australia.
E-mail addresses: philip.gibbons@anu.edu.au (P. Gibbons), nicholas.shore@anu.edu.au (N. Shore), mmoritz@ucsb.edu (M.A. Moritz), stephen.dovers@anu.edu.au (S. Dovers), geoffrey.cary@anu.edu.au (G.J. Cary).

https://doi.org/10.1016/j.landurbplan.2018.02.010
Received 8 June 2017; Received in revised form 15 February 2018; Accepted 20 February 2018
Available online 03 March 2018
0169-2046/ © 2018 The Author(s). Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/BY-NC-ND/4.0/).

trees and shrubs retained upwind. Our findings represent options for regulators or home owners seeking to balance risk posed by wildfires with benefits associated with retaining trees and shrubs near houses.

1. Introduction

House losses during wildfires are increasing in fire-prone regions of the world because of growing housing density at the wildland-urban interface (Crompton, McAneney, Chen, Pielke, & Haynes, 2010; Hughes & Mercer, 2009; McAneney, Chen, & Pitman, 2009). Houses are destroyed during wildfires when exposed to flame contact, radiant heat and/or burning embers. Because the likelihood or severity of flame contact, radiant heat and embers increase closer to burning vegetation (Cohen, 2000; Koo, Pagni, Weise, & Woycheese, 2010; Maranghides & Mell, 2011), it follows that the characteristics of vegetation close to houses is strongly associated with house loss during wildfires (Abt, Kelly, & Kuypers, 1987; Barrow, 1944; Gibbons et al., 2012; Ramsay, Macarthur, & Dowling, 1996; Syphard, Brennan, & Keeley, 2014; Wilson & Ferguson, 1986). Intensive management of vegetation (e.g., removal of trees and shrubs) close to houses is therefore at the forefront of advice provided to home owners by fire management agencies around the world (Gill & Stephens, 2009; Massada, Radeloff, & Stewart, 2011; Nelson, Monroe, & Johnson, 2005).

This advice results in widespread removal of trees and shrubs within, and adjacent to, the wildland-urban interface (Radeloff et al., 2005). The removal of this vegetation can have negative impacts on aesthetics and privacy (Nelson et al., 2005), biodiversity (Driscoll et al., 2010) and energy consumption (Bowler, Buyung-Ali, Knight, & Pullin, 2010); it can be associated with health effects (Tzoulas et al., 2007), influence property values (Pandit, Polyakov, Tapsuwan, & Moran, 2013) and be expensive for residents (Penman, Eriksen, Horsey, & Bradstock, 2016). Thus, there are different attitudes to vegetation clearing among stakeholders across the wildland-urban interface (Nelson et al., 2005). This limits the ability to achieve effective fuel reduction across those parts of the wildland-urban interface where there is considerable tree and shrub cover around houses, thereby placing some communities or individuals within them at increased risk from wildfire. Policy-makers and residents therefore require options for fuel management that can achieve a balance between the protection of houses from wildfire and the services provided by retaining trees and shrubs.

Our understanding of fire behaviour and the mechanisms that cause damage to houses during wildfires invite the following hypotheses:

(1) Maintaining 'green' vegetation affords houses additional protection during wildfires. Vegetation with a high moisture content requires more energy to ignite than cured vegetation. Fuel moisture plays an important role in the self-extinction of fires (Wilson & Ralph, 1985) and therefore fuel moisture influences the rate of spread of fires (Rothermel, 1972). Thus, maintaining "greener" landscaping is likely to result in a reduced probability of house loss during wildfires than drier gardens supporting equivalent cover of trees and shrubs.
(2) Risk posed by trees and shrubs near houses is reduced where they are arranged as many discrete patches. The propagation of fire depends on the properties of the flame and the properties of the fuel ahead of the flame (Catchpole, Hatton, & Catchpole, 1989) and so the spatial heterogeneity of fuels affect the rate at which fires spread (Burrows, Ward, & Robinson, 1991). This suggests that trees and shrubs arranged in a patchy distribution around houses will represent less hazard than an equivalent cover of trees and shrubs arranged in a more continuous distribution.
(3) Trees and shrubs in the upwind direction from which wildfires arrive represent greater risk to houses than trees and shrubs in the downwind direction. The effect of wind on the direction of flames, radiant heat and embers (Rothermel, 1972) suggests that trees and shrubs in the downwind direction from which wildfires arrive will have less effect on the likelihood of house loss than trees and shrubs close to houses in the upwind direction from which wildfires arrive.

We tested these hypotheses using data from three wildfires in south-eastern Australia.

2. Methods

2.1. Study area and sampling strategy

We sampled 499 houses from three wildfires that ignited on 7 February 2009 in south-eastern Australia (145°0′–146°50′E, 37°10′S–38°30′S). These wildfires, known as the East Kilmore, Murrindindi and Churchill fires, collectively burnt 194,403 ha and destroyed 1925 houses (Teague, McLeod, & Pascoe, 2010). The landscapes affected by these wildfires included rural areas where most native tree cover had been cleared, plantations dominated by introduced radiata pine (*Pinus radiata*), *Eucalyptus* forests managed for wood production and *Eucalyptus* forests managed as conservation estate. Housing occurred as a mix of rural, semi-rural and urban areas. Prior to sampling we stratified the study area by the three principal drivers of wildfire behaviour: weather, terrain and fuel (Countryman, 1972). Weather (measured using the Forest Fire Danger Index or FFDI) (McArthur, 1967), ranged from 5 to 189 (mean = 47.6). Slope ranged from 0.3° to 22.6° (mean = 8.5°). Fuel, measured as the % of land upwind from houses that had been burnt within ≤5 years and as the % of trees and shrubs cleared upwind from houses, ranged from 0% to 36% (mean = 2.8%) and 0% to 100% (mean = 32.3%) respectively. Houses were sampled using random points allocated in approximate proportion to the area of each stratum within a Geographical Information System (GIS). We sampled the nearest house to each random point using fine-scale (35 cm–50 cm pixel resolution) aerial imagery taken 1–37 months prior to the wildfires. We recorded damage to each sampled house as a binary variable (intact or destroyed) based on a visual inspection of fine scale (8–15 cm pixel resolution) aerial imagery in the visible spectrum taken 17–23 days after the wildfires. At each house we recorded a set of potential explanatory variables representing terrain; weather; and the amount, configuration, distance and direction to fuels from houses (Appendix A).

2.2. Statistical analysis

We used an information-theoretic approach (Burnham & Anderson, 1998) and Generalised Linear Modelling (GLM) to test our hypotheses. We commenced with a base model containing variables representing weather and fuel (measured at different scales) that are significantly ($p < 0.05$) associated with house loss during these wildfires as reported in a previous study (Gibbons et al., 2012). These variables were: weather (measured with FFDI), upwind distance to forest burnt within five years, the % cover of trees and shrubs and type of vegetation within 40 m of houses, total buildings within 40 m of houses, upwind distance to patches of trees and shrubs, upwind amount of private land and an 'autocovariate' to account for spatial autocorrelation between adjacent houses (Appendix A). We then compared this base model reported in Gibbons et al. (2012) with the following alternative models representing our hypotheses.

Hypothesis 1. Maintaining 'green' vegetation affords houses additional

protection during wildfires.

To test this hypothesis we added to the base model a variable representing the average NDVI within 40 m from the centroid of each house. We measured NDVI to a distance of 40 m from each house because this is the maximum distance at which the three key mechanisms that destroy houses during wildfires—flame contact, radiant heat and embers—overlap and it is within this distance that the effects of vegetation on house loss are at their greatest (Gibbons et al., 2012; Syphard et al., 2014). Average NDVI was fitted as a polynomial term, as exploratory data analysis (using Generalised Additive Models) suggested there was a curvilinear relationship between the probability of house loss and average NDVI.

NDVI is strongly associated with active photosynthesis and water use in plants, distinguishes green vegetation from non-photosynthetic land classes (e.g., impervious surfaces and water) and has been used to predict the rate of irrigation in suburban gardens (Johnson & Belitz, 2012). We calculated NDVI in ArcMap using Landsat TM imagery sourced from the United States Geological Survey (USGS) Earth Explorer for the Kilmore-Murrundindi fire (dated 31 January 2009) and the Churchill fire (dated 24 January 2009). NDVI was calculated as

$$\frac{NIR - RED}{NIR + RED}$$

where *NIR* is the near infrared part of the electromagnetic spectrum that is reflected by leaves and *RED* is part of the electromagnetic spectrum that actively photosynthesising leaves absorb. NDVI values range from −1 (water) to +1 (green vegetation). Landsat TM multispectral imagery has a 30 m × 30 m spatial resolution. If half or more of the area of a pixel fell within 40 m of the centroid of each house then the value of that pixel was included in the calculation of average NDVI.

Hypothesis 2. Risk posed by trees and shrubs near houses is reduced where they are arranged as many discrete patches.

To test this hypothesis we added to the base model a variable representing the number of discrete patches of trees and shrubs within 40 m of each house, and a variable representing an interaction between the number of patches and % cover of trees and shrubs within 40 m of each house. We added the interaction term to test whether the arrangement of trees and shrubs within 40 m of houses as more discrete patches, compared with larger continuous patches, reduced the probability of house loss at all levels for tree and shrub cover within 40 m of houses. We counted patches of trees and shrubs manually around each of the 499 sampled houses using fine-scale (35 cm–50 cm pixel resolution) aerial imagery taken 1–37 months prior to the wildfires. A discrete patch of trees and shrubs was defined as visible tree and shrub canopies of any size that were at least 2 m from other trees and shrubs within 40 m from the centroid of each house.

Hypothesis 3. Trees and shrubs in the upwind direction from which wildfires arrive represent greater risk to houses than trees and shrubs in the downwind direction.

To test this hypothesis we added to the base model variables representing: the distance to the nearest large patch of trees and shrubs, the direction to that patch relative to the wind direction when the wildfire impacted each house and an interaction term between these variables. The distance from houses to the nearest large patch of trees and shrubs (> 10 m width) and the direction from the house to the patch (degrees) were measured in ArcMap using fine-scale (35 cm–50 cm pixel resolution) aerial imagery taken 1–37 months prior to the wildfires. The direction to the nearest large patch of trees and shrubs was converted to one of eight cardinal or inter-cardinal directions and then compared with the wind direction recorded when wildfire impacted each house. The estimated time that wildfire impacted each house was estimated from fire progression maps (isochrones) for the Kilmore East and Murrindindi fires provided by the Victorian Department of Sustainability and Environment (now Department of Environment and Primary Industries) and for the Churchill fire provided by the Victorian Country Fire Authority; and wind direction to the nearest 30 min was taken from the nearest permanent automated weather station managed by the Bureau of Meteorology. Observed wind direction was converted to one of four inter-cardinal directions (i.e., north-east, south-east, south-west and north-west). The direction from each house to the nearest large patch of trees and shrubs relative to the wind direction when the wildfire impacted was recorded as: (i) upwind (0° difference); (ii) adjacent (45° to < 135° difference); and (iii) downwind (≥135° difference). For example, where the direction of wind was recorded as NW at the time the wildfire reached a house of interest, vegetation patches in a NW direction from the house were classified 'upwind', patches in a N, W, NE or SW direction were classified 'adjacent', and all other patches (E, S and SE) were classified 'downwind.'

We included a further two alternative "global" models in the candidate set. The first included all of the variables representing each of the three hypotheses (the average NDVI of vegetation within 40 m of houses, the number of discrete patches of trees and shrubs within 40 m of houses, the distance to the nearest patch of trees and shrubs and the direction of that patch) to examine whether there was an additive effect of these variables. The second alternative model included each of these variables plus all of the interaction terms we tested.

Alternative models were judged to have strong empirical support where Akaike's Information Criterion (AIC) values were within ≤2 of the model with the lowest AIC value, were judged to have some

Table 1
Candidate models used to test our hypotheses, the variables included in those models, the log-likelihood of each model, AIC_c differences (ΔAIC_c) relative to the 'best' model and AIC_c weights for each model, which can be interpreted as the probability that the candidate model is the best of the set. Average NDVI was fitted as a polynomial term in all models in which it is included.

Model	Variables	Log-likelihood	ΔAIC_c	AIC_c weight
1	Base model	−252.621	3.53	0.07
2	Base model + average NDVI	−251.239	7.04	0.01
3	Base model + average NDVI + (average NDVI × % cover of trees and shrubs within 40 m)	−246.049	3.01	0.09
4	Base model + number of patches	−252.018	4.41	0.05
5	Base model + number of patches + (number of patches × % cover of trees and shrubs within 40 m)	−251.306	5.08	0.03
6	Base model + distance to nearest large patch of trees and shrubs + the direction of this large patch relative to the wind direction	−248.387	1.34	0.21
7	Base model + distance to nearest large patch of trees and shrubs + the direction of this large patch relative to the wind direction + (distance to nearest large patch of trees and shrubs × the direction of this large patch relative to the wind direction)	−247.251	3.29	0.08
8	Base model + average NDVI + number of patches + distance to nearest large patch of trees and shrubs + the direction of this large patch relative to the wind direction	−245.481	4.01	0.06
9	Base model + average NDVI + (average NDVI × % cover of trees and shrubs within 40 m) + (average NDVI × vegetation type) + number of patches + (number of patches × % cover of trees and shrubs within 40 m) + distance to nearest large patch of trees and shrubs + the direction of this large patch relative to the wind direction + (distance to nearest large patch of trees and shrubs × the direction of this large patch relative to the wind direction)	−236.976	0	0.41

empirical support where AIC differences were between > 2 and < 6 and were rejected where AIC differences were ≥6 (Symonds & Moussalli, 2011). We also calculated AIC weights for each model, which can be interpreted as the probability that the candidate model is the best of the set (Burnham & Anderson, 1998). All calculations of AIC were for small samples (AIC_c). All predictions from selected models were made with covariates held at their median (or for categorical variables the level with the highest sample size), except for FFDI, which was held at 100 (Catastrophic). Most houses destroyed during wildfires in Australia (64%) occurred on days when FFDI exceeded 100 (Blanchi, Lucas, Leonard, & Finkele, 2010) suggesting that it is at more severe weather conditions when the effect of these variables is most important. Errors around all means are 95% confidence limits. We also calculated Pearson correlation coefficients for all pairs of continuous variables. All statistical analyses were undertaken using R (R Development Core Team, 2010).

3. Results

The list of candidate models, the variables included in those models, AIC_c differences (ΔAIC_c) and AIC weights are provided in Table 1. The model with strongest empirical support was the global model that contained all terms representing our hypotheses plus the interaction terms (Model 9 in Table 1), suggesting an additive effect of each of the variables representing our hypotheses. The only model with no empirical support (i.e., $\Delta AIC_c > 6$) was Model 2 which was the base model with average NDVI added as a polynomial term.

3.1 Hypothesis 1: Maintaining 'green' vegetation affords houses additional protection during wildfires

Average NDVI values recorded within 40 m of houses ranged from 0.03 to 0.57 (median = 0.24) and the % cover of trees and shrubs within 40 m of houses ranged from 0% to 90% (median = 25%). Average NDVI was not highly correlated with the % cover of trees and shrubs within 40 m of houses (r = 0.41) so both of these variables were included in alternative models. There was some empirical support ($\Delta AIC_c = 3.01$) for the candidate model in which an interaction between average NDVI within 40 m of houses and the cover of trees and shrubs within 40 m of houses were added to the base model (Model 3 in Table 1). However, there was stronger empirical support for the full model that including this interaction and all of the other variables (Model 9 in Table 1). Predictions from this full model indicated that, for houses surrounded by a given percentage of trees and shrubs, the mean probability of house loss was less where vegetation surrounding the house had higher values for average NDVI, although there is considerable uncertainty around these predictions (Fig. 1). For example, if the cover of trees and shrubs around houses was 20% and the average NDVI was 0.20 then the mean probability of house loss is 0.53 ± 0.15. If the cover of trees and shrubs was doubled to 40% then the mean probability of house loss increases to 0.65 ± 0.15. However, if the NDVI can be concomitantly increased to 0.30, then the mean probability of house loss remains similar at 0.52 ± 0.15 despite doubling the cover of trees and shrubs.

3.2 Hypothesis 2: Risk posed by trees and shrubs near houses is reduced where they are arranged as many discrete patches

The number of discrete patches of trees and shrubs within 40 m of the sampled houses ranged from 0 to 46 (median = 10). The number of discrete patches of trees and shrubs within 40 m of houses was not highly correlated with the % cover of trees and shrubs within 40 m of houses (r = 0.33). Although there was some empirical support for the model including the number of patches of trees and shrubs within 40 m of houses (Model 4 in Table 1) and an interaction between this variable and the cover of trees and shrubs within 40 m of houses (Model 5 in Table 1), there was strongest empirical support for the full model that contained these terms plus all of the others examined here (Model 9 in

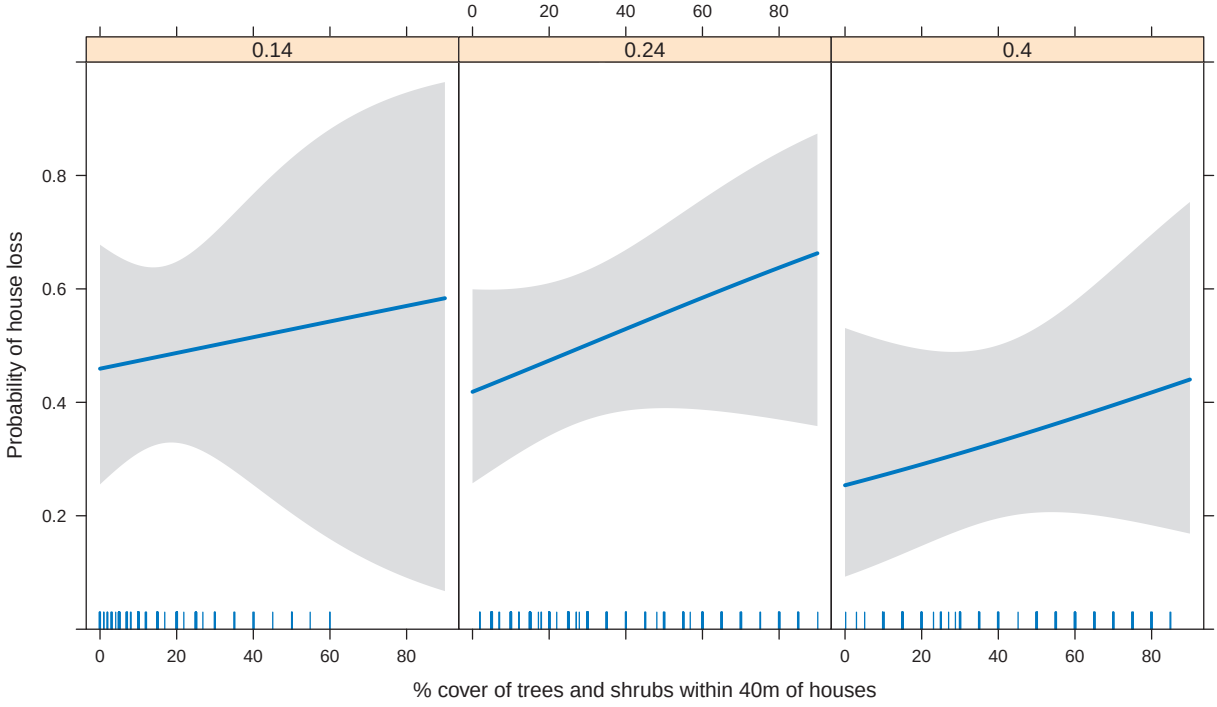


Fig. 1. The mean (± 95% confidence interval) predicted probability of house loss with changes to the % cover of trees and shrubs within 40 m of houses when the average NDVI of this vegetation is 0.14, 0.24 and 0.40 (i.e., the 10th, 50th and 90th percentiles). Predictions were made from Model 9 in Table 1 with all other continuous covariates held at their median except for FFDI which was fixed at 100.

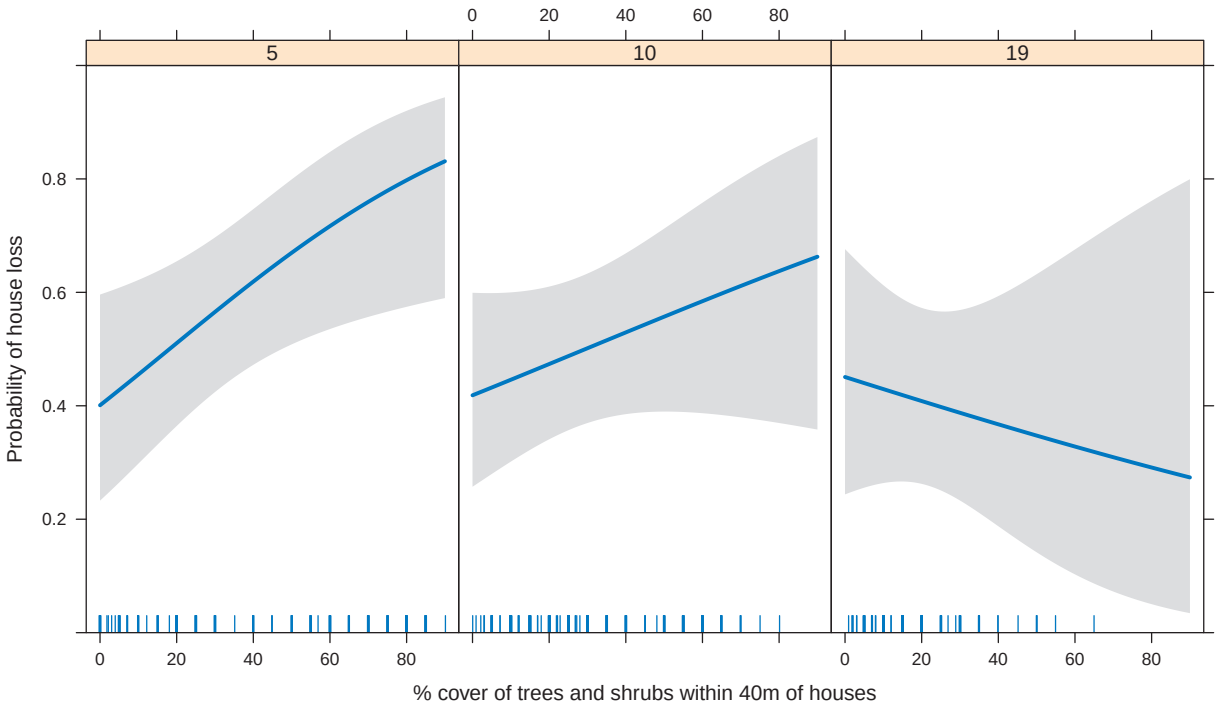


Fig. 2. The mean (± 95% confidence interval) predicted probability of house loss with changes to the total % cover of trees and shrubs within 40 m of houses when this vegetation was configured as 5, 10 or 19 discrete patches (i.e., the 10th, 50th and 90th percentiles). Predictions were made from Model 9 in Table 1 with all other continuous covariates held at their median except for FFDI which was fixed at 100.

Table 1). Predictions from this full model indicated that, other things being equal, the risk posed to houses from trees and shrubs within 40 m is reduced where that vegetation is configured as many discrete patches, particularly a higher levels of tree and shrub cover (Fig. 2). For example, houses surrounded by 50% cover of trees and shrubs configured as five discrete patches had a higher mean probability of house loss (0.67 ± 0.15) than houses surrounded by the same cover of trees and shrubs configured as 10 discrete patches (0.56 ± 0.17). However, predictions from this model should be disregarded at higher amounts of tree cover and a larger number of patches due to a high amount of uncertainty (i.e., wide confidence bands) (Fig. 2).

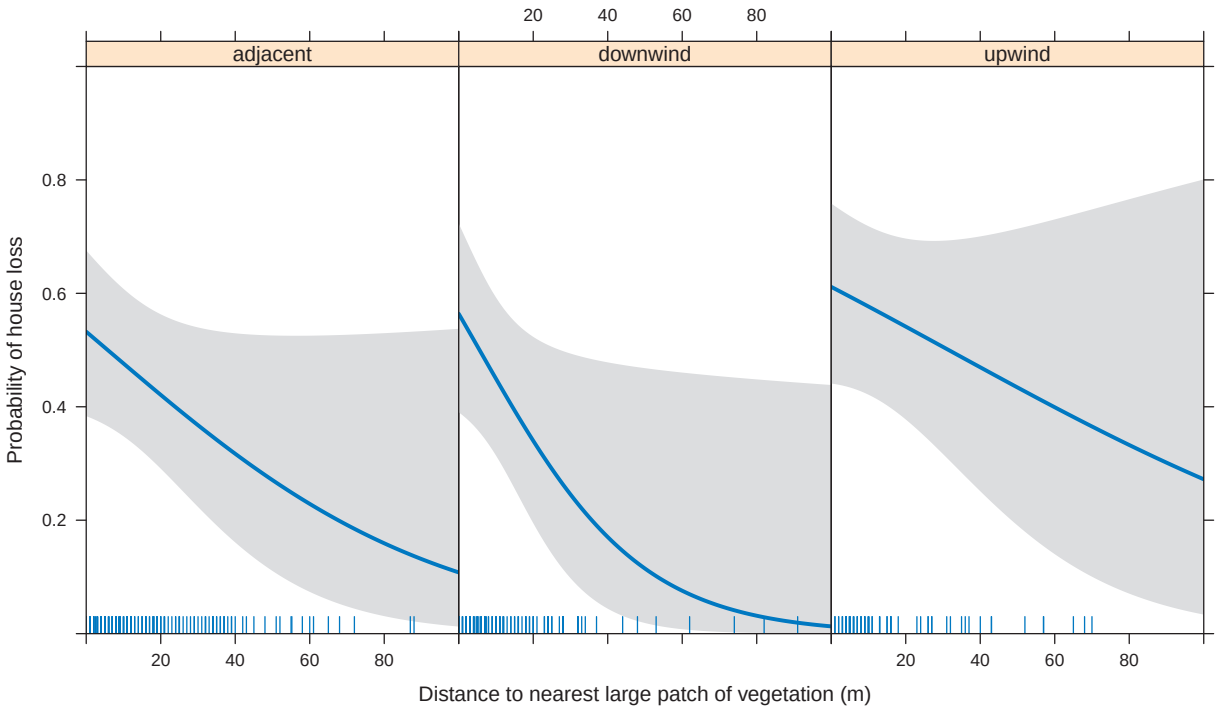


Fig. 3. The mean (± 95% confidence interval) predicted probability of house loss with distance to the nearest large patch of trees and shrubs (> 10 m across) when this patch is adjacent, downwind or upwind relative to wind direction when the wildfire impacted the house. Predictions were made from Model 9 in Table 1 with all other continuous covariates held at their median except for FFDI which was fixed at 100.

3.3 Hypothesis 3: Trees and shrubs in the upwind direction from which wildfires arrive represent greater risk to houses than trees and shrubs in the downwind direction

The distance from houses to the nearest large patch of trees and shrubs (> 10 m wide in its narrowest dimension) ranged from 0 to 433 m (median = 8 m). The % of the nearest large patches of vegetation that were upwind, adjacent and downwind from houses was 23%, 45% and 32% respectively. There was empirical support for models that included variables representing distance to the nearest large patch of trees and shrubs, the direction of large patches relative to the wind direction (Model 6 in Table 1) and/or an interaction term between these variables (Model 7 in Table 1). However, there was strongest support for the model that included these and all other terms (Model 9 in Table 1). Predictions from this latter model suggested that, for any given distance between houses and a large patch of trees and shrubs, there was a greatest risk to houses when this vegetation was upwind from houses, except when patches are very close to houses (Fig. 3). For example, other things being equal, predictions from this model indicated that the mean probability of house loss when the nearest large patch of trees and shrubs is located 10 m in the upwind direction was 0.58 ± 0.16, while this estimate was 0.45 ± 0.14 when the nearest large patch of trees and shrubs was 10 m in the downwind direction from houses.

4. Discussion

We sought to identify landscaping options that afford some protection to houses during wildfire, but represent an alternative to widespread removal of trees and shrubs, and thus provide options for home owners and regulators seeking to balance the protection of built assets and natural assets at the wildland-urban interface. Drawing on current understanding of wildfire behaviour and the mechanisms by which houses are destroyed during wildfires, we posed three hypotheses: (1) maintaining 'green' vegetation affords houses additional protection during wildfires; (2) risk posed by trees and shrubs near houses is reduced where they are arranged as many discrete patches; and (3) trees and shrubs in the upwind direction from which wildfires arrive represent greater risk to houses than trees and shrubs in the downwind direction. We found evidence to support each our hypotheses.

4.1. Maintaining 'green' vegetation affords houses additional protection during wildfires

For any amount of tree and shrub cover within 40 m of houses, there were slightly lower predicted house losses where this area had higher average values for NDVI. NDVI is positively associated with the density of vegetation, vegetation "greeness" (the degree to which vegetation is photosynthesising) and the moisture content of vegetation (Ceccato, Flasse, Tarantola, Jacquemoud, & Grégoire, 2001; Gamon et al., 1995). Further, NDVI is indicative of reflectance in the upper vegetation stratum at a site rather than vegetation in lower strata. Thus, it is not clear which of the variables correlated with NDVI is critical with respect to house loss. However, given average NDVI within 40 m of houses was only weakly positively correlated with the % cover of trees and shrubs within 40 m of houses and NDVI had an additional effect to the % cover of trees and shrubs around houses (Table 1), our results suggest that 'greenness' of the upper stratum of vegetation is a factor associated with house loss during wildfire. Some plants have naturally higher moisture content and this is, in turn, associated with lower flammability (Gill & Moore, 1996). Thus, the negative association between average NDVI and house loss may indicate that the selection of plants with lower flammability affords houses some protection during wildfire—a strategy recommended in some wildfire-prone areas (Detweiler & Fitzgerald, 2006). The level of irrigation used in gardens is also positively associated with NDVI (Johnson & Belitz, 2012) and therefore our results could also suggest that irrigating vegetation around houses could reduce risk to houses as an alternative, or adjunct to, removing trees and shrubs. However, this strategy is likely only to be effective where there is capacity to increase "greeness" among the plant species around houses, which may not be feasible among plant species adapted to relatively low available water, which is the case for many native plant species in our study area. Therefore, advantages from irrigation may only be realised with the concomitant replacement of some plant species with others. However, notwithstanding any of these issues, there was considerable scope to substantially increase the average NDVI of vegetation around houses: 34% of houses were surrounded by vegetation with an average NDVI ≤ 50% of the 90th percentile (0.40).

4.2. Risk posed by trees and shrubs near houses is reduced where they are arranged as many discrete patches

Trees and shrubs within 40 m of houses arranged as many discrete patches posed less risk to houses than the same cover of trees and shrubs arranged as few discrete patches—particularly at higher levels of cover for trees and shrubs (Fig. 2). As fuels become less continuous, the heat transfer between burning fuel and adjacent fuel becomes less efficient and the intensity and spread of a fire will decline (Rothermel, 1972). Effects of fuel patchiness on fire behaviour have been confirmed in the field by several authors (e.g., Bradstock & Gill, 1993; Burrows et al., 1991). On the other hand, a wider spacing between trees and shrubs can result in less sheltering of wind during fire (Zylstra et al., 2016), although we are unaware of any empirical studies where this has been linked to reduced house losses. The effect of patchiness among trees and shrubs on house loss during wildfires is likely to have greatest effect where fuel between patches of trees and shrubs (e.g., grass) is insufficient to maintain the intensity or rate of spread of the fire. However, benefits from increasing the number of patches of trees and shrubs became increasingly uncertain where the total number of patches and the cover of trees and shrubs were close to maximum observed values (Fig. 2), possibly reflecting few observations in the field where a high cover of trees and shrubs could be configured as many discrete patches.

4.3 Trees and shrubs in the upwind direction from which wildfires arrive represents a greater risk to houses than trees and shrubs in the downwind direction

Our results indicated that patches of trees and shrubs represented greatest risk when they occurred in the upwind direction from which the wildfire arrived, except where this vegetation was very close to houses (Fig. 3). Fire is more likely to propagate rapidly downwind because fuels are exposed to relatively greater convective and radiant heat (Rothermel, 1972), and direct ignition by flames. Further, embers are a key factor in the ignition of houses during wildfires (Barrow et al., 1944; Chen & McAneney, 2004; Cohen, 2000) and will predominantly travel downwind from a fire. However, fuels downwind or adjacent to houses during a wildfire can represent a hazard where they are close enough to direct radiant heat to the structure, where convective winds caused by the fire are drawn towards the structure from multiple directions, or on lee slopes where fires can spread laterally relative to wind direction (Sharples, McRae, & Wilkes, 2012). This may explain why fuels adjacent to, or downwind, from the prevailing wind direction still pose a risk to houses, albeit a relatively lower risk than fuels upwind from houses. Our results therefore suggested that, on average, less intensive fuel management downwind from houses can be tolerated without increasing the probability of house loss. However, this is only a useful strategy where the directions from which wildfires arrive at houses are consistent.

4.4. Implications for policy

In wildfire-prone regions management agencies may permit, or demand, home-owners to remove some vegetation near houses. These regulations are often generic. For example, in two of the most wildfire-prone states of Australia, regulations focus on the removal of trees and shrubs to set distances from houses (New South Wales Rural Fire Service, 2015; Victorian Department of Planning & Community Development, 2011). However, trees and shrubs provide many services such as aesthetics, privacy, shade and biodiversity (Driscoll et al., 2010; Nelson et al., 2005) and many people are attracted to the wildland-urban interface because of these (Nelson et al., 2005). Thus, individuals may be reluctant to clear vegetation around their houses (Nelson et al., 2005) placing some of the community at greater risk than others. Our results suggest that reducing the risk that trees and shrubs pose to houses during wildfires can be achieved without necessarily removing all trees and shrubs. Each of the three strategies examined here—-maintaining a green garden, retaining vegetation in discrete clumps and retaining more vegetation downwind from houses (with less vegetation retained upwind)—are options for fuel management that reduce risk to houses during wildfires without blanket removal of trees and shrubs and thus may be more acceptable fuel management options to some stakeholders. Accommodating diverse interests at the wildland-urban interface is likely to result in more uniform hazard reduction than imposing blanket approaches that are not supported by all stakeholders.

However, it is important to note that the management of vegetation close to houses alone will not eliminate risks to houses and occupants from wildfire. Other variables not considered in this study such as building design and the ability to actively defend a house can also affect house losses during wildfire (Penman et al., 2013). Further, the efficacy of strategies such as vegetation management decline with the severity of fire weather conditions (Gibbons et al., 2012). Thus, other strategies such as evacuation well before wildfires impact houses combined with adequate house insurance, building codes that reduce risk of house loss during wildfires and planning controls that limit house construction in areas with high risk must always be considered alongside vegetation management when managing risks to communities from wildfires.

5. Conclusions

We identified three landscaping options around houses—increasing the ‘greenness’ of vegetation, configuring trees and shrubs as many discrete patches, and focusing tree and shrub removal in the upwind direction from houses—that individually or together reduce the risk of house loss during wildfires without requiring the total removal of trees and shrubs. These findings represent options for regulators or home owners seeking to balance risk posed by wildfires with benefits associated with retaining trees and shrubs at the wildland-urban interface (e.g., privacy, aesthetics, biodiversity, shade). We encourage policy-makers to consider our findings as information that can be made available to residents and other actors at the wildland-urban interface to use in light of their individual circumstances rather than imposing uniform standards or regulations.

Acknowledgements

We would like to thank several officers in the Victorian Government for providing data that was used in this study. Dr Wade Blanchard provided statistical advice. This research was supported by the Australian Government through the Australian Research Council’s *Discovery Projects* funding scheme (project DP150100878). The views expressed herein are those of the authors and are not necessarily those of the Australian Government or Australian Research Council. Three anonymous referees provided constructive comments on earlier versions of this manuscript.

Appendix A

Explanatory variables included in the base model used to predict house loss.

Variable	Definition
Buildings	The number of buildings (excluding circular water tanks) visible on the imagery intersecting a circle with a radius of 40 m from the centroid of each house
% cover of trees and shrubs	Visual estimate of % woody vegetation within a circle with a radius of 40 m from the centroid of each house using the pre-fire imagery. This estimate was verified against digitised data
Vegetation type (planted and remnant)	A visual assessment of whether woody vegetation within a circle with a radius of 40 m from the centroid of each house was predominantly planted or remnant using the pre-fire imagery. The features of trees and shrubs that were indicative of their origin were: crown texture, size, shape and arrangement relative to trees in nearby remnant vegetation
Distance upwind to nearest of trees or shrubs	Distance from each house to nearest group of ≥ 2 trees or shrubs (or one tree if its canopy was ≥ 10 m wide) from the edge of the house in the upwind direction measured manually in a GIS using the pre-fire imagery
Distance upwind to nearest block of trees	Distance from each house to nearest block of trees ≥ 50 m wide at the narrowest point from the edge of the house in the upwind direction measured manually in a GIS using the pre-fire imagery
Distance upwind to mapped cleared land	Distance from each house to nearest area without woody vegetation as mapped in the NV2005_EXTENT GIS raster provided by the then Victorian Department of Sustainability and Environment (DSE) in the upwind direction
% cleared upwind	% mapped woody vegetation calculated along a transect in the upwind direction from each house to the 2009 wildfire boundary using the NV2005_EXTENT GIS raster provided by DSE
Amount of land not burnt for ≤ 5 years upwind	Amount (m) of land from each house that was not burnt for ≤ 5 years prior to 2009 (as mapped in the PROD_FIRE_LASTBURNT100 layer provided by DSE) measured in the upwind direction
Upwind amount of private land	Amount (m) of land from each house that is not a public land tenure (as mapped in the PLM100 GIS shape file provided by DSE) in the upwind direction
Forest Fire Danger Index (FFDI)	Calculated using the formula $FFDI = 2.0 \times \exp(-0.450 + 0.987\ln(DF) - 0.0345RH + 0.338T + 0.0234V)$ where, DF is drought factor, RH is relative humidity (%), T is air temperature (°C) and V is wind speed (km h^{-1}). Weather variables used to calculate FFDI were derived from half-hourly data recorded at the closest weather station to each house

References

Abt, R., Kelly, D., & Kuypers, M. (1987). The Florida Palm Coast fire: An analysis of fire incidence and residence characteristics. *Fire Technology, 23*, 186–197.

Barrow, G. J. (1944). A survey of houses destroyed by the Beaumaris fire, January 14 1944. *Journal of the Council for Scientific and Industrial Research, 18*.

Blanchi, R., Lucas, C., Leonard, J., & Finkele, K. (2010). Meteorological conditions and wildfire-related house loss in Australia. *International Journal of Wildland Fire, 19*, 914–926.

Bowler, D. E., Buyung-Ali, L., Knight, T. M., & Pullin, A. S. (2010). Urban greening to cool towns and cities: A systematic review of the empirical evidence. *Landscape and Urban Planning, 97*(3), 147–155.

Bradstock, R., & Gill, A. (1993). Fire in semiarid, mallee shrublands-size of flames from discrete fuel arrays and their role in the spread of fire. *International Journal of Wildland Fire, 3*(1), 3–12.

Burnham, K. P., & Anderson, D. R. (1998). *Model selection and inference: A practical information-theoretic approach.* New York: Springer-Verlag.

Burrows, N., Ward, B., & Robinson, A. (1991). Fire behaviour in spinifex fuels on the Gibson Desert nature reserve, Western Australia. *Journal of Arid Environments, 20*(2), 189–204.

Catchpole, E., Hatton, T., & Catchpole, W. (1989). Fire spread through nonhomogeneous fuel modelled as a Markov process. *Ecological Modelling, 48*(1), 101–112.

Ceccato, P., Flasse, S., Tarantola, S., Jacquemoud, S., & Grégoire, J.-M. (2001). Detecting vegetation leaf water content using reflectance in the optical domain. *Remote Sensing of Environment, 77*(1), 22–33.

Chen, K., & McAneney, J. (2004). Quantifying bushfire penetration into urban areas in Australia. *Geophysical Research Letters, 31*, L12212.

Cohen, J. D. (2000). Preventing disaster: Home ignitability in the wildland-urban interface. *Journal of Forestry, 98*, 15–21.

Countryman, C. M. (1972). *The fire environment concept.* Boise, Idaho: National Wildfire Coordinating Group.

Crompton, R. P., McAneney, K. J., Chen, K., Pielke, R. A., & Haynes, K. (2010). Influence of location, population, and climate on building damage and fatalities due to Australian Bushfire: 1925–2009. *Weather, Climate, and Society, 2*(4), 300–310.

Detweiler, A. J., & Fitzgerald, S. A. (2006). *Fire-resistant plants for home landscapes: Selecting plants that may reduce your risk from wildfire, [Covallis, Or.].* Oregon State University Extension Service.

Driscoll, D. A., Lindenmayer, D. B., Bennett, A. F., Bode, M., Bradstock, R. A., Cary, G. J., et al. (2010). Resolving conflicts in fire management using decision theory: Asset-protection versus biodiversity conservation. *Conservation Letters, 3*(4), 215–223.

Gamon, J. A., Field, C. B., Goulden, M. L., Griffin, K. L., Hartley, A. E., Joel, G., et al. (1995). Relationships between NDVI, canopy structure, and photosynthesis in three Californian vegetation types. *Ecological Applications, 5*(1), 28–41.

Gibbons, P., van Bommel, L., Gill, A. M., Cary, G. J., Driscoll, D. A., Bradstock, R. A., et al. (2012). Land management practices associated with house loss in wildfires. *PLoS One, 7*(1), e29212.

Gill, A. M., & Moore, P. H. (1996). *Ignitibility of leaves of Australian plants. A contract report to the Australian Flora Foundation*. Canberra: CSIRO Plant Industry.

Gill, A. M., & Stephens, S. L. (2009). Scientific and social challenges for the management of fire-prone wildland–urban interfaces. *Environmental Research Letters, 4*(3), 034014.

Hughes, R., & Mercer, D. (2009). Planning to reduce risk: The wildfire management overlay in Victoria, Australia. *Geographical Research, 47*(2), 124–141.

Johnson, T. D., & Belitz, K. (2012). A remote sensing approach for estimating the location and rate of urban irrigation in semi-arid climates. *Journal of Hydrology, 414*, 86–98.

Koo, E., Pagni, P. J., Weise, D. R., & Woycheese, J. P. (2010). Firebrands and spotting ignition in large-scale fires. *International Journal of Wildland Fire, 19*(7), 818–843.

Maranghides, A., & Mell, W. E. (2011). A case study of a community affected by the Witch and Guejito wildland fires. *Fire Technology, 47*, 379–420.

Massada, A. B., Radeloff, V. C., & Stewart, S. I. (2011). Allocating fuel breaks to optimally protect structures in the wildland–urban interface. *International Journal of Wildland Fire, 20*(1), 59–68.

McAneney, J., Chen, K. P., & Pitman, A. (2009). 100-years of Australian bushfire property losses: Is the risk significant and is it increasing? *Journal of Environmental Management, 90*(8), 2819–2822.

McArthur, A. G. (1967). *Fire behaviour in eucalypt forest.* Canberra: Commonwealth of Australia Forestry and Timber Bureau.

Nelson, K. C., Monroe, M. C., & Johnson, J. F. (2005). The look of the land: homeowner landscape management and wildfire preparedness in Minnesota and Florida. *Society and Natural Resources, 18*(4), 321–336.

New South Wales Rural Fire Service (2015). *10/50 vegetation clearing code of practice for New South Wales.* Sydney: NSW Rural Fire Service.

Pandit, R., Polyakov, M., Tapsuwan, S., & Moran, T. (2013). The effect of street trees on property value in Perth, Western Australia. *Landscape and Urban Planning, 110*, 134–142.

Penman, T., Eriksen, C., Blanchi, R., Chladil, M., Gill, A. M., Haynes, K., et al. (2013). Defining adequate means of residents to prepare property for protection from wildfire. *International Journal of Disaster Risk Reduction, 6*, 67–77.

Penman, T. D., Eriksen, C., Horsey, B., & Bradstock, R. A. (2016). How much does it cost residents to prepare their property for wildfire? *International Journal of Disaster Risk Reduction, 16*, 88–98.

R Development Core Team (2010). *R: A language and environment for statistical computing.* Vienna, Austria: R Foundation for Statistical Computing.

Radeloff, V. C., Hammer, R. B., Stewart, S. I., Fried, J. S., Holcomb, S. S., & McKeefry, J. F. (2005). The wildland–urban interface in the United States. *Ecological Applications, 15*(3), 799–805.

Ramsay, G. C., Macarthur, N. A., & Dowling, V. P. (1996). Building in a fire-prone environment: Research on building survival in two major bushfires. *Proceedings of the Linnean Society of New South Wales, 116*, 133–140.

Rothermel, R. C. (1972). *A mathematical model for predicting fire spread in wildland fuels. USDA Forest Service Research Paper INT-115*.

Sharples, J. J., McRae, R. H., & Wilkes, S. R. (2012). Wind–terrain effects on the propagation of wildfires in rugged terrain: Fire channelling. *International Journal of Wildland Fire, 21*(3), 282–296.

Symonds, M. R., & Moussalli, A. (2011). A brief guide to model selection, multimodel inference and model averaging in behavioural ecology using Akaike's information criterion. *Behavioral Ecology and Sociobiology, 65*(1), 13–21.

Syphard, A., Brennan, T., & Keeley, J. (2014). The role of defensible space for residential structure protection during wildfires. *International Journal of Wildland Fire, 23*(8), 1165–1175.

Teague, B., McLeod, R., & Pascoe, S. (2010). *2009 Victorian bushfires royal commission.* Final reportMelbourne: Parliament of Victoria.

Tzoulas, K., Korpela, K., Venn, S., Yli-Pelkonen, V., Kaźmierczak, A., Niemela, J., et al. (2007). Promoting ecosystem and human health in urban areas using green infrastructure: A literature review. *Landscape and Urban Planning, 81*(3), 167–178.

Victorian Department of Planning and Community Development (2011). *Amendment VC83 – bushfire protection. Vegetation exemptions. Advisory note 39.* Melbourne: Victorian Department of Planning and Community Development.

Wilson, A. A. G., & Ferguson, I. S. (1986). Predicting the probability of house survival during bushfires. *Journal of Environmental Management, 23*(3), 259–270.

Wilson, J. R., & Ralph, A. (1985). Observations of extinction and marginal burning states in free burning porous fuel beds. *Combustion Science and Technology, 44*(3–4), 179–193.

Zylstra, P., Bradstock, R. A., Bedward, M., Penman, T. D., Doherty, M. D., Weber, R. O., et al. (2016). Biophysical mechanistic modelling quantifies the effects of plant traits on fire severity: Species, not surface fuel loads, determine flame dimensions in eucalypt forests. *PLoS One, 11*(8), e0160715.

Knapp et al. Fire Ecology (2021) 17:25
https://doi.org/10.1186/s42408-021-00117-0

Fire Ecology

ORIGINAL RESEARCH Open Access

Housing arrangement and vegetation factors associated with single-family home survival in the 2018 Camp Fire, California

Eric E. Knapp[1*], Yana S. Valachovic[2], Stephen L. Quarles[3] and Nels G. Johnson[4]

Abstract

Background: The 2018 Camp Fire, which destroyed 18,804 structures in northern California, including most of the town of Paradise, provided an opportunity to investigate housing arrangement and vegetation-related factors associated with home loss and determine whether California's 2008 adoption of exterior building codes for homes located in the wildland-urban-interface (WUI) improved survival. We randomly sampled single-family homes constructed: before 1997, 1997 to 2007, and 2008 to 2018, the latter two time periods being before and after changes to the building code. We then quantified the nearby pre-fire overstory canopy cover and the distance to the nearest destroyed home and structure from aerial imagery. Using post-fire photographs, we also assessed fire damage and assigned a cause for damaged but not destroyed homes.

Results: Homes built prior to 1997 fared poorly, with only 11.5% surviving, compared with 38.5% survival for homes built in 1997 and after. The difference in survival percentage for homes built immediately before and after the adoption of Chapter 7A in the California Building Code (37% and 44%, respectively) was not statistically significant. Distance to nearest destroyed structure, number of structures destroyed within 100 m, and pre-fire overstory canopy cover within 100 m of the home were the strongest predictors of survival, but significant interactions with the construction time period suggested that factors contributing to survival differed for homes of different ages. Homes >18 m from a destroyed structure and in areas with pre-fire overstory canopy cover within 30–100 m of the home of <53% survived at a substantially higher rate than homes in closer proximity to a destroyed structure or in areas with higher pre-fire overstory canopy cover. Most fire damage to surviving homes appeared to result from radiant heat from nearby burning structures or flame impingement from the ignition of near-home combustible materials.

Conclusions: Strong associations between both distance to nearest destroyed structure and vegetation within 100 m and home survival in the Camp Fire indicate building and vegetation modifications are possible that would substantially improve outcomes. Among those include improvements to windows and siding in closest proximity to neighboring structures, treatment of wildland fuels, and eliminating near-home combustibles, especially in areas closest to the home (0–1.5 m).

Keywords: Building codes, Defensible space, Flame impingement, Fuels, Radiant heat, Structure loss, Wildfire, Wildland-urban interface

* Correspondence: eric.e.knapp@usda.gov
[1]U.S. Forest Service, Pacific Southwest Research Station, 3644 Avtech Parkway, Redding, California 96002, USA
Full list of author information is available at the end of the article

© The Author(s). 2021 **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/.

Resumen

Antecedentes: El incendio de Camp Fire, el cual destruyó 18.804 estructuras en el norte de California, incluido la mayor parte del pueblo de Paradise, proveyó una oportunidad de investigar la ubicación de las casas y factores vegetales asociados con la pérdida de hogares, y determinar si la adopción de los códigos de construcción de California de 2008 para el exterior de las viviendas ubicadas en las áreas de interfaz urbano rural, mejoraban su supervivencia. Muestreamos al azar casas individuales construidas antes de 1997, de 1997 a 2007, y de 2008 a 2018, las últimas por dos períodos, anterior y posterior a los cambios en los códigos de construcción. Luego cuantificamos los doseles de la vegetación aledaña y la distancia a la vivienda y estructura más cercana destruidas por el fuego usando imágenes satelitales. Usando fotografías post-fuego, también determinamos el daño por fuego y asignamos una causa de daño, pero no casas destruidas.

Resultados: Las casas construidas antes de 1997 se desempeñaron pobremente, con solo un 11,5% de supervivencia, comparado con un 38,5% de supervivencia de aquellas construidas en 1997 y a posteriori. La diferencia en el porcentaje de supervivencia para las casas construidas antes y después de la adopción del Capítulo 7A del código de Construcción de California (37% y 44%, respectivamente), no fue estadísticamente significativa. La distancia a la estructura más cercana destruida por el fuego, el número de estructuras destruidas dentro de los 100 m, y la cobertura del dosel vegetal previo al fuego fueron los predictores de supervivencia más importantes, aunque las interacciones más significativas con el período de construcción sugieren que los factores que contribuyeron a la supervivencia difirieron para casas de diferentes edades. Las casas distantes > 18 m de una estructura destruida y en áreas con cobertura de vegetación previa dentro de los 20-100 m de esa casa < 53% sobrevivió a tasas superiores que aquellas en proximidad de una estructura destruida o en áreas con mayor cobertura vegetal pre-fuego. La mayoría de los daños a las casas supervivientes parece resultar del calor radiante de las estructuras quemadas próximas o por el impacto de las llamas de igniciones de materiales combustibles cercanos a las casas.

Conclusiones: Las fuertes asociaciones entre la distancia de la estructura destruida más cercana y la vegetación dentro de los 100 m y la supervivencia de las casas en el incendio de Camp Fire indican que es posible que las modificaciones en las construcciones y en la estructura de la vegetación mejoren los resultados en relación a su supervivencia. Entre ellos se incluye el mejoramiento de las ventanas y paredes en la proximidad de estructuras vecinas, el tratamiento de los combustibles vegetales, y la eliminación de combustibles cercanos, especialmente en áreas muy cercanas a las casas (entre 0 y 1,5 m).

Background

California, like many other regions having a Mediterranean climate, is set up to burn. Cool, wet winters, which promote vegetation growth, are followed by long, hot, nearly rain-free summers during which these wildland fuels are primed for combustion (Sugihara et al. 2018). In forested areas such as the northern Sierra Nevada, where the town of Paradise is located, wildfires ignited by indigenous peoples and lightning were historically frequent (mean fire return interval of mostly <15 years) (Van de Water and Safford 2011) and integral to shaping vegetation composition and structure (Leiberg 1902; Sugihara et al. 2018). The historical fire return interval in shrub-dominated chaparral vegetation was somewhat longer—15 to 90 years (Van de Water and Safford 2011). While overall acres burned in wildfires today is still substantially less than what burned historically (Stephens et al. 2007), both acres burned and associated losses to infrastructure have been increasing in recent times with 15 of the 20 most destructive events in modern California history, based on the number of structures destroyed, occurring since 2014 *(see California Fire Statistics:* https://www.fire.ca.gov/media/t1rdhizr/top20_destruction.pdf*).*

The increase in destructive wildfire events has been linked to changes in fire frequency, development patterns, and climate. Loss of indigenous burning and active fire suppression over the past 150 or more years following Euro-American expansion into California reduced the incidence of fire in many forested areas. Where fire historically burned most frequently, surface and vegetative fuels have increased, often leading to more severe fire when it does burn (Steel et al. 2015). Such fires are also frequently more intense because fire suppression has effectively eliminated much of the lower intensity burning under more benign weather conditions. When landscapes now experience fire, most often it is when wildfire escapes initial attack under worst-case scenario weather conditions (Calkin et al. 2014). In addition, over the last several decades, warmer temperatures and longer fire seasons (Westerling et al. 2006) have increased fuel volatility and the probability of ignitions coinciding with extreme weather conditions. In other areas such as

chaparral ecosystems in southern California, fire suppression has had less influence on the fire regime—fire frequency has increased in some areas on account of numerous human ignitions, but stand-replacing fire was and still is the norm (Conard and Weise 1998). Further complicating the wildfire challenges, human populations have increased nearly ten-fold over the last 150 years, with a substantial proportion of houses built within or among wildland vegetation (Radeloff et al. 2018). Partly due to the effectiveness of fire suppression, most of these homes were not built or maintained with the goal of being able to withstand wildfire in the absence of fire suppression resources. In addition, home design or construction codes and standards to enhance a building's exterior resistance to wildfire are relatively recent (International Code Council 2003), with substantial development having occurred prior.

Post-wildfire analyses provide an opportunity to investigate why some houses survive and learn how to better co-exist with wildfire in fire-prone environments. During wildfire, buildings can be subjected to three different wildfire exposures—wind-blown embers, radiant heat, and direct flame contact (Caton et al. 2017). Embers are produced when vegetation ignites and burns (Koo et al. 2010). In large, fast-moving wildfires burning under extreme conditions, embers can be transported several kilometers or more (Koo et al. 2010) and ignite buildings directly or indirectly (Caton et al. 2017). A direct ember ignition includes embers igniting decking or siding by accumulating on or next to the material or penetrating vents or open windows and entering the building (Quarles et al. 2010; Hakes et al. 2017). In contrast, indirect ignitions occur when embers ignite combustible materials such as vegetation, bark mulch, leaf litter, neighboring buildings, or near-home objects such as stored materials, decks, or wood fences (Quarles et al. 2010; Hakes et al. 2017). Indirect ignition scenarios ultimately result in radiant heat and/or flame contact to the home or building. Direct flame contact and extended radiant heat exposures can ignite siding and other exterior-use construction materials or break glass in windows. Radiant heat exposure often occurs when a neighboring structure ignites. The dominant mechanism of home loss in numerous particularly destructive wildfires has been described as initial direct or indirect ember ignitions, with burning homes then leading to house-to-house fire spread (Murphy et al. 2007; Cohen and Stratton 2008). However, the potential influence of housing density on structure losses in wildfires has varied, with some studies finding a greater probability of loss at higher housing densities (Price and Bradstock 2013; Penman et al. 2019), while other studies have reported a greater risk at lower housing densities (Syphard et al. 2012, 2014, 2017). Amount of near-home combustible vegetation has also been linked to the probability of home loss in wildfires (Price and Bradstock 2013; Syphard et al. 2014; Penman et al. 2019).

California leads the USA in having a building code with the objective of limiting the impact of wildfires on the built environment. In the 1960s, the state began requiring homeowners to implement defensible space fuel modifications, initially within the first 9 m (30 ft) of a building, but since expanded to 30 m (100 ft) (https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=4291.&lawCode=PRC). Work on standardized test methods to evaluate exterior-use construction materials for fire performance began in the late 1990s and later incorporated into Chapter 7A, an addition to the California Building Code which was adopted in 2008. Chapter 7A provides prescriptive and performance-based options for exterior construction materials used for roof coverings, vents, exterior walls, and decks (https://codes.iccsafe.org/content/CBC2019P4/chapter-7a-sfm-materials-and-construction-methods-for-exterior-wildfire-exposure) and applies to new construction of residential and commercial buildings in designated fire hazard severity zones. In some jurisdictions, provisions of Chapter 7A also apply to "significant remodels" of existing buildings. The 2018 Camp Fire, which destroyed much of Paradise, California, provided an opportunity to evaluate the performance of buildings constructed after the adoption of Chapter 7A and explore factors associated with home survival.

The Camp Fire started on the morning of November 8, 2018, with the failure of an electrical transmission line and spread rapidly through wildland fuels comprised of mixed conifer forest, brush, grass, and dead and down surface fuels (Maranghides et al. 2021). Surface fuels were unusually dry due to persistently low relative humidity throughout the summer and fall and the late onset of fall rains (Brewer and Clements 2019). Driven by strong NE winds, the fast-moving fire quickly reached the towns of Concow, Paradise, and Magalia and became the most destructive wildfire in California history. At least 85 people were killed and 18,804 structures were destroyed. A high proportion of the home and business losses occurred in Paradise—the largest town within the fire footprint. The fire passed from one side of Paradise to the other during one burn period over less than 12 h (Maranghides et al. 2021). With the focus on saving people's lives, very few homes were subject to firefighting efforts, and survival was therefore largely a function of characteristics of the home and surrounding environment. Previous similar analyses have typically combined data across multiple fires and years, with an unknown extent of defensive intervention.

While conditions as the Camp Fire burned through Paradise were still highly variable, the massive home loss in a single burn period presents an opportunity to investigate factors with potentially lesser confounding by differences in geography, weather, and defensive action by firefighters or civilians.

The objective of this research was to answer three questions as follows: (1) did proximity to nearby burning structures factor into the probability of home survival, (2) did fuels associated with nearby vegetation factor into the probability of home survival, and (3) was the full adoption in 2008 of Chapter 7A into the California Building Code associated with improved odds of home survival?

Methods

The Butte County Assessor's database, dated June 1, 2018, was used to extract 11,515 parcels within the Paradise city limits (Fig. 1). Parcels were sorted by use code and 7949 single-family dwellings were selected, after discarding 89 without a listed build year. Mobile homes, businesses, and other non-single-family structures were excluded. We then linked Damage Inspection (DINS) data, obtained from CAL FIRE, to parcel number to ascertain damage sustained in the Camp Fire and whether the building was destroyed, partially damaged, or had no impact from the Camp Fire. We lumped homes classified as "damaged" into the "survived" category, because in most instances, the damage, based on photos included with the DINS data, was minor—e.g., cracked windows, bubbled exterior paint, or melted vinyl gutters and window frames, with the structure itself intact.

Sample population

For our analyses, we randomly selected 400 single-family dwellings in Paradise, stratified by three time periods (Fig. 1): time 1 = homes built before 1997, while time 2 (homes built from 1997 to 2007) and time 3 (homes built from 2008 to 2018) represented the two 11-year periods on either side of the 2008 adoption of Chapter 7A in the California Building Code. If the changes to the building code improved home survival, survival percentage in time 3 should be significantly higher than survival in time 2, especially after adjusting for any potentially confounding variables. The stratification was done to ensure a large enough sample size in time period 3. Two hundred homes (out of 7288) were randomly selected in time 1, one hundred homes (out of 519) were selected in time 2, and 100 homes (out of 142) were selected in time 3 (Fig. 1). More homes were selected during time 1 because such a low percentage (13%) of older (pre-1997) homes survived. Of the population of homes that were randomly selected by the construction period, 24 of the surviving homes were noted as damaged in the DINS report, the rest undamaged. Damage was listed as "affected (1–9%)" for 23 of the damaged homes and "minor (10–25%)" for one.

Variables

For each randomly selected home, we used Google Earth to measure the distance from the edge of the home (as defined by edge of the roof, using pre-fire images when destroyed) to the closest edge of the nearest home and nearest structure, as well as the nearest home and nearest structure that burned. "Nearest structure" was in most cases another single-family home, but also

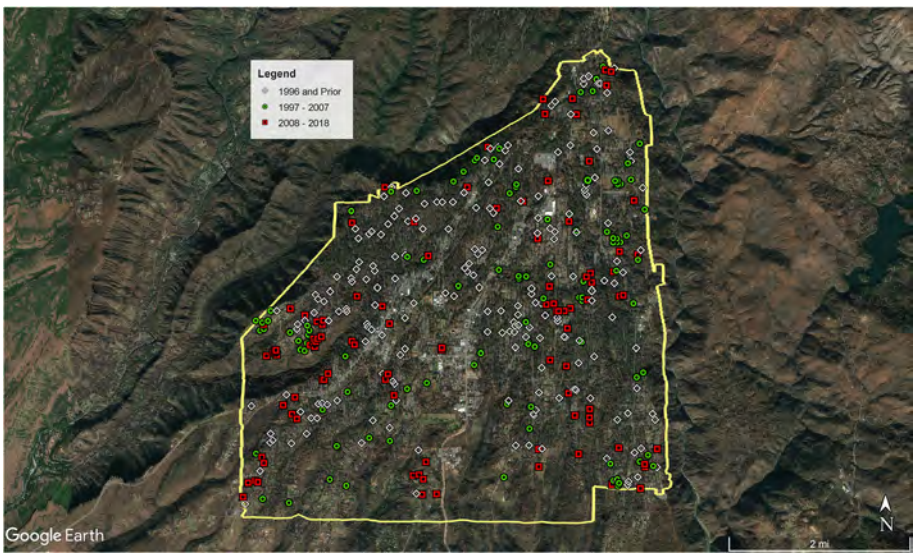


Fig. 1 Map showing the perimeter of Paradise, California, with the location of 400 randomly selected homes built during three time periods (pre-1997, 1997–2007, and 2008–2018)

included mobile homes, businesses, detached garages, or outbuildings such as larger sheds. Small sheds—those <120 ft^2, where a building permit is not required—were excluded. Such smaller sheds may have posed a threat to the home as well but were more challenging to consistently quantify, especially if under a tree canopy. We determined the density of structures in the surrounding area by counting the number of single-family homes, partially-built homes, mobile homes, and businesses (excluding small sheds) with midpoints (based on a visual estimate) included within a 100-m radius centered on the target home. We then counted how many of those structures were destroyed. We visually estimated the percentage cover of overstory vegetation from Google Earth images taken prior to the fire in 2018 and/or 2017 within a 30-m radius circle centered on the selected home and between 30 m and 100 m from the selected home. Cover of the understory of grass and/or shrubs or landscape plantings was not estimated, as pre-fire overstory canopy cover was relatively high, and this often obscured the understory. Some larger mid-story shrubs might have been included with the tree overstory due to the difficulty in distinguishing them from trees. The lot size was provided in the Butte County Assessor's data. Whether the house was located in the Wildland Urban Interface (defined as developed areas that have sparse or no wildland vegetation but are near a large patch of wildland) or the Wildland Urban Intermix (defined as areas where houses and wildlands intermingle) was determined by overlaying a University of Wisconsin data layer on the city of Paradise (Radeloff et al. 2005). We used Radeloff et al. (2005) to define the interface as census blocks with at least 6.17 housing units km^{-2} that contained <50% wildland vegetation but were within 2.4 km of a heavily vegetated area (>75% wildland vegetation) larger than 5 km^2. Intermix was defined as an area with more than 6.17 housing units km^{-2} but dominated by wildland vegetation. Percent slope was calculated as the rise between the lowest and highest point along a 100-m radius circle centered on the home.

Analysis approach

Possible explanatory variables (S1 Table) were first analyzed individually using a generalized linear model in SAS PROC GENMOD and assuming a normal distribution to evaluate whether they differed by time period or by outcome (survived, destroyed). To account for the sampling scheme, in this and all subsequent analyses, each observation was weighted by the inverse of its probability of selection—i.e., homes from time period 1 had a weight of 7288/200, homes from time period 2 had a weight of 519/100, and homes from time period 3 had a weight of 142/100. Comparisons among main effects (outcome, time period) and interactions (outcome × time period) were determined using Tukey's HSD test for multiple comparisons, when significant.

To determine the relative strength of factors associated with home survival, we used a generalized linear model fit for binary response data, with a logit link function and weighting to account for the sampling scheme. Variables in the initial model were as follows:

1. Y-variable: Outcome (Survived/Destroyed); X-variables: construction time period, year built, Wildland Urban Interface/Intermix category, distance to nearest destroyed structure, total structures destroyed within 100 m, overstory canopy cover within 30 m, overstory canopy cover between 30 m and 100 m, slope, and the interaction of each with the construction time period.

When independent variables were highly correlated ($R > 0.6$), only the one most clearly mechanistically linked to outcome was included. For example, "distance to nearest structure" was highly correlated with "distance to the nearest destroyed structure," and "total structures–100 m" was highly correlated to "total structures destroyed—100 m" (Table 1), so only the latter were included. Lot size was not included as there was no clear mechanistic link with home survival, and we hypothesized that elements contributing to fire behavior would be captured by correlated variables. The Wildland Urban Interface/Intermix category was included to quantify differences in vegetation and housing arrangement at scales larger than 100 m. Non-significant interactions and non-significant main effects for variables that did not have a significant interaction with time were sequentially removed to produce the final model. To determine whether homes constructed after the Chapter 7A building code update survived at a significantly higher rate after factoring in all other possible confounding variables, the same analysis was conducted except without interactions with the construction time period.

We then designed models to first test the effect of variables that may have directly influenced home survival during the fire and second, to test the effect of just the variables available prior to the fire. The latter variables were ones that might be mitigated preemptively through planning, retrofitting, or vegetation management. For each of these models, we determined the effect size and performed a regression tree analysis. Variables included for each approach (accounting for the fire, pre-fire only):

1. Y-variable, accounting for the fire: Outcome (Survived/Destroyed); X-variables: year built, distance to nearest destroyed structure, total structures destroyed within 100 m, canopy cover within 30 m,

Table 1 Significance of individual factors by time period, outcome (destroyed, survived), and outcome × time period for a subset of single-family homes in Paradise, CA. Means for time period, outcome, and outcome × time period (when interaction was significant) are provided below (standard error in parentheses). Levels within variables followed by different letters were significantly different ($P<0.05$)

	N	Lot size (ha)	Dist. nearest struct. (m)	Dist. nearest destr. struct. (m)	Total structures 100 m	Total structures destr. 100 m	% Canopy cover 0–30 m	% Canopy cover 30–100 m	Slope (%)
		P							
Outcome		*0.946*	*0.971*	*<0.001*	*0.004*	*<0.001*	*0.154*	*0.001*	*0.532*
Time period		*0.153*	*0.010*	*<0.001*	*0.002*	*<0.001*	*<0.001*	*0.664*	*0.290*
Outcome × time period		-	-	*0.026*	-	-	-	-	-
		Average (standard error)							
Destroyed	296	0.42 (0.07)	15.4 (1.6)	-	10.3^{a} (0.8)	8.9^{a} (0.7)	40.5 (3.1)	49.1^{a} (2.8)	6.9 (0.6)
Survived	104	0.42 (0.08)	15.5 (1.9)	-	8.1^{b} (0.9)	5.5^{b} (0.9)	36.0 (3.7)	40.0^{b} (3.3)	7.2 (0.6)
Before 1997	200	0.30 (0.04)	10.9^{b} (0.8)	-	11.4^{a} (0.4)	9.4^{a} (0.4)	49.5^{a} (1.6)	46.7 (1.4)	6.4 (0.3)
1997-2007	100	0.45 (0.09)	16.1^{a} (2.1)	-	8.0^{b} (1.0)	5.9^{b} (1.0)	35.7^{b} (4.1)	43.7 (3.7)	7.5 (0.7)
2008-2018	100	0.51 (0.17)	19.3^{ab} (4.0)	-	8.1^{ab} (1.9)	6.3^{ab} (1.8)	29.5^{b} (7.9)	43.2 (7.0)	7.2 (1.4)
<1997 Dest.	177	-	-	12.3^{c} (0.8)	-	-	-	-	-
<1997 Surv.	23	-	-	22.3^{b} (2.1)	-	-	-	-	-
1997–2007 Dest.	63	-	-	20.0^{bc} (3.4)	-	-	-	-	-
1997–2007 Surv.	37	-	-	34.6^{ab} (4.4)	-	-	-	-	-
2008–2018 Dest.	56	-	-	16.1^{bc} (6.8)	-	-	-	-	-
2008–2018 Surv.	44	-	-	54.0^{a} (7.7)	-	-	-	-	-

canopy cover between 30 m and 100 m, wildland urban interface/intermix category, slope.

2. Y-variable, pre-fire only: Outcome (Survived/Destroyed); X-variables: year built, distance to nearest structure, total structures within 100 m, canopy cover within 30 m, canopy cover between 30 m and 100 m, wildland urban interface/intermix category, slope.

To quantify the relative strength of continuous variables for explaining home survival, each of the dependent (x) variables were centered and scaled to have a mean of zero and standard deviation of one. Logistic regression (McCullagh and Nelder 1989) was then used to calculate coefficients and compare effect sizes. The logistic regression models were fit using the *svyglm* function from the *survey* package in R (Lumly 2020). A decision tree for predicting home survival was produced using the *rpart* function in the *rpart* package (Therneau and Atkinson 2019) in R, fit for binary response data with a logit link function (Breiman 1998). This approach is similar to logistic regression, where the linear predictor is a decision tree model. To determine the number of splits in the decision trees, we performed cross-validation 10,000 times to compute the optimal pruning parameters. We then used the average of the 10,000 optimal pruning parameters as the pruning parameter in the final decision tree. The latter group of statistical analyses was completed using R version 4.0.0 (R Core Team 2020). Figures were made in R using the *ggplot2* package (Wickham 2016).

Visual evaluation of damaged homes

To learn more about vulnerabilities of the Paradise home sample and gain insight into potential points of fire entry, we reviewed the CAL FIRE damage inspection (DINS) spreadsheet (obtained from CAL FIRE 12/18/2018) and obtained photographs of all damaged homes (N=310 homes with pictures).

Photographs typically keyed in on the damage, and we reviewed each, along with notes about damage in the DINS summary. Observed home damage was assigned to radiant heat, direct ember ignition, or flame impingement categories (S2 Table), based on the nature of the damage, location on the home, and visual as well as photographic (aerial imagery) evidence of other burned fuels, including homes, in the immediate vicinity. Homes where flame impingement was recorded were further split into three categories: (1) caused by fuel continuity with the broader landscape (which allowed fire to reach the home), (2) indirect ember ignition (e.g., gutter contents, near-home fuels) with flames then impacting the home, or (3) unknown/undetermined. [The DINS assessment gathered similar information, but the full suite of data was not collected for over a quarter of homes and ember ignition was not separated into direct and indirect categories.] Where DINS data were collected, our evaluation was often in agreement, but there were a few instances where we differed. For example, if the DINS assessment noted "direct flame impingement" but the photo showed no charring or near home fuels consumed, we listed the damage caused as "radiant heat." Gutter fires were variously categorized but we assigned them all to the "indirect ember ignition" category. The DINS assessment also only lists a single cause of fire damage when a considerable number of homes displayed multiple causes.

Results

Overall, most (86%) of the single-family homes in Paradise were built before 1990, and homes of this age fared poorly, with only 11.6% surviving the Camp Fire (Fig. 2). Survival increased to 20.6% for homes built between 1990 and 1996, 34.3% for homes built between 1997 and 2007, and 43.0% for homes built between 2008 and 2018. The 400 randomly selected homes in our sample had similar survival rates to the full population of single-family homes—11.5% vs. 13.3%, respectively, for the <1997 time period (time = 1), 37.0% vs. 34.3%, respectively, for the 1997–2007 time period (time = 2), and 44.0% vs. 43.0%, respectively, for the 2008 to 2018 time period (time = 3). Many of the potential explanatory variables differed over the three time periods as well and were therefore confounded with potential construction or building code differences (Table 1). Older homes (<1997) were on average in areas with higher housing density and had more homes burn within 100 m than homes built from 1997 to 2007 (Table 1). Homes built prior to 1997 had a higher average pre-fire overstory canopy cover in the first 0–30 m from the home than homes

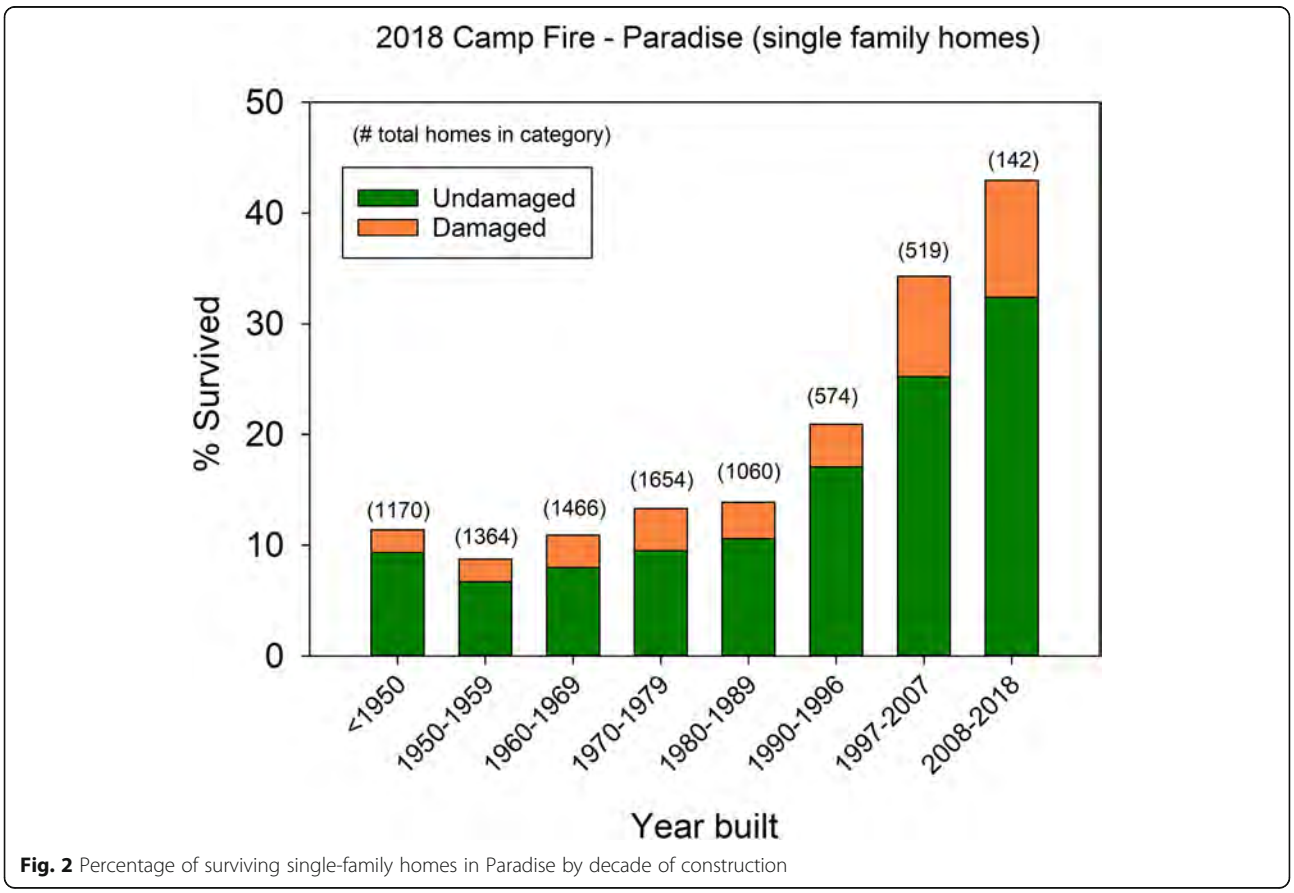


Fig. 2 Percentage of surviving single-family homes in Paradise by decade of construction

built afterwards (Table 1). The "distance to nearest destroyed structure" × time interaction was significant, with surviving homes a greater distance from the nearest destroyed structure in time periods one and three. This difference was especially pronounced for the newest homes (Table 1). While average lot size trended larger over time, the differences were not significant (Table 1). Pre-fire overstory canopy cover 30–100 m from the home was significantly lower for surviving homes (37.0%) than destroyed homes (50.4%) but did not differ between time periods (Table 1). With most houses situated on top of a plateau, the average percent slope was relatively low and did not differ significantly among outcomes or time periods (Table 1). None of the variables differed between time periods 2 and 3—immediately pre- and post-Chapter 7A adoption.

Many of the continuous variables we analyzed were significantly correlated with each other, with distance to nearest structure and distance to nearest destroyed structure (r = 0.625) and total structures within 100m and total structures destroyed within 100m (r = 0.926) being the most strongly correlated (Table 2).

Factors influencing home survival

Eliminating the two most highly correlated variables (distance to nearest structure and total structures per 100m) and analyzing the remaining variables together in the same model showed that both nearby destroyed structures and overstory canopy cover within 100 m were significantly associated with home survival. The "distance to nearest destroyed structure" × construction time period interaction was significant (Table 3), with a much higher survival probability when homes were a larger distance from a destroyed structure, especially for homes built 1997–2007 and 2008–2018 (Fig. 3a). Total structures destroyed within 100 m also was strongly linked to home survival (Table 3), with a much higher survival probability when fewer surrounding homes burned (Fig. 3b). For the vegetation variables, the "CanopyCover 0–30m" × construction time period interaction was significant (Table 3). Higher survival was noted with lower canopy cover for homes built since in 1997 and after but was not related to survival in older (<1997) homes (Fig. 3c). CanopyCover 30–100m also was highly significant, with a higher survival probability at lower canopy cover percentages across times (Table 3, Fig. 3d). Wildland urban interface/intermix category was significant, with a higher survival rate for homes in the wildland urban intermix (29.3%) than homes in the wildland urban interface (16.0%). Year built [within construction time period] and slope were not significant and did not make it into the final model (Table 3).

When the same analysis was conducted without interactions to test the effect of construction time period after correcting for covariates, homes built between 1997–2007 and 2008–2018 both survived at a significantly higher rate than homes built prior to 1997 ($P < 0.001$). Even though the survival rate was numerically higher for homes built after the 2008 building code update (44%) than homes built in an equivalent time period

Table 2 Correlation matrix of variables considered in the analyses of factors potentially contributing to home survival. The correlation coefficient (R) is above the diagonal, with statistical significance below. Distance to nearest destroyed home includes only single-family homes. Distance to nearest destroyed structure includes single-family homes, mobile homes, businesses, outbuildings, detached garages, and other large buildings

	Lot size	Year built	Dist. nearest structure	Dist. nearest dest. structure	Total struct. 100 m	Structures destroyed 100 m	Canopy Cover (%) 0–30 m	Canopy cover (%) 30–100 m	Slope (%)
Lot size		0.166	0.544	0.462	−0.499	−0.435	−0.111	−0.001	0.368
Year built	*<0.001*		0.262	0.283	−0.406	−0.424	−0.419	−0.146	0.156
Dist. nearest structure	*<0.001*	*<0.001*		0.625	−0.497	−0.432	−0.069	0.009	0.260
Dist. nearest dest. structure	*<0.001*	*<0.001*	*<0.001*		−0.471	−0.537	−0.263	−0.226	0.216
Total struct_ 100m	*<0.001*	*<0.001*	*<0.001*	*<0.001*		0.926	0.215	−0.007	−0.299
Struct. destroyed_ 100m	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*		0.300	0.134	−0.233
Canopy Cover 0-30m	*0.026*	*<0.001*	*0.171*	*<0.001*	*<0.001*	*<0.001*		0.571	−0.001
Canopy Cover 30-100m	*0.983*	*0.003*	*0.853*	*<0.001*	*0.890*	*0.007*	*<0.001*		0.135
Slope (%)	*<0.001*	*0.002*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*0.984*	*0.007*	

Table 3 Fixed effects in a generalized linear mixed model (PROC GENMOD) analysis of variance of the influence of nearby destroyed structures and pre-fire overstory canopy cover on Paradise single-family home loss in the Camp Fire, taking into account other potentially confounding variables. All variables plus their interactions with time period were put in the preliminary model with non-significant interactions and main effects sequentially dropped for the final model

Variable	DF	Chi-square	*P*
Construction time period	2	68.84	*<0.001*
Dist. nearest destroyed structure	1	57.10	*<0.001*
Tot. structures destroyed 100 m	1	179.77	*<0.001*
Canopy cover_0–30 m	1	1.61	*0.205*
Canopy cover_30–100 m	1	162.48	*<0.001*
Wildland urban intermix/interface category	1	4.54	*0.033*
Dist. nearest destroyed structure × time	2	16.45	*<0.001*
Canopy cover_0–30 m × time	2	25.35	*<0.001*

immediately before (37%), the difference was not statistically significant (adjusted $P = 0.309$).

For the next set of analyses, separate models (this time without specifying construction time period) were run on normalized data for (1) variables in play during the Camp Fire (including fire-related variables) and (2) variables present prior to the Camp Fire (i.e., variables that might factor into pre-fire planning). For the first model, distance to the nearest destroyed structure had the largest effect size, suggesting that the greater the distance to a burning structure, the higher the probability of survival (Fig. 4a). Also significant were canopy cover within 30–100 m and the number of destroyed structures within 100 m. Both the latter two variables had a negative relationship with survival, with higher survival where canopy cover within a 30–100 distance was lower, and number of destroyed structures within 100 m was fewer (Fig. 4a). Year built, slope, and canopy cover within 0–30 m all had confidence intervals that overlapped with zero. When only pre-fire variables were included, housing density had the largest effect size, with greater survival when the number of structures within 100 m was low (Fig. 4b). Canopy cover within 30–100 m had the second largest effect size, with greater survival at lower canopy cover levels (Fig. 4b). Distance to nearest structure, year built, slope, and canopy cover within 0–30 m all had confidence intervals that overlapped with zero (Fig. 4b).

Decision tree analysis using variables present during the fire indicated a threshold of 18 m from nearest destroyed structure best predicted whether a home survived or not. Survival probability for homes <18 m to the nearest destroyed structure was very low (0.058), compared with a 0.354 survival probability for homes ≥18 m from the nearest destroyed structure (Fig. 5a). Based on our sample, a majority (73.6%) of the homes in Paradise were <18 m from a destroyed structure. For the 26.3% of homes ≥18 m from a destroyed structure, if the pre-fire overstory canopy cover was also < 53% within 30–100 m, the survival probability improved to 0.481 (Fig. 5a). If the home was also built during or after 1973, the survival probability improved to 0.606 (Fig. 5a). The final split, involving just 10.2% of the homes in Paradise, suggested that for homes meeting these criteria (i.e., ≥18 m from the nearest destroyed structure, <53% canopy cover within 30–100 m, and built ≥1973), the survival probability improved to 0.733 if slope was less than 8.2%. For the decision tree including just pre-fire variables, year built was the first split, with a probability of survival of only 0.111 for homes built before 1996 (90.8% of homes in Paradise), compared with 0.396 for homes built during or after 1996 (9.2% of homes) (Fig. 5b). For homes in this latter category, survival probability improved to 0.766 if the pre-fire overstory canopy cover within 30–100 m was <33%. If pre-fire canopy cover within 30–100 was ≥33%, the survival probability fell to 0.239.

Damaged homes—nature of damage and cause

In our review of photographs of the 310 fire-damaged homes in Paradise, 63% had radiant heat damage (Fig. 6a), mostly to windows and exterior walls (Fig. 6b). Window damage consisted of cracked or broken glass and damaged window framing, but frequently included both. Blistered paint or melted/sagging vinyl siding were the most common wall (siding) damages. In most cases, the source of the radiant heat was difficult to assess, as the photos focused on the damage. However, a closer investigation of 20% of randomly sampled of homes where radiant heat damage was identified demonstrated that all had at least one neighboring structure that was destroyed during the fire, with an average distance to the destroyed structure of 12.1 m. Flame impingement was the next most common cause of damage (44% of damaged homes) (Fig. 6a). In most flame impingement cases (28% of the total damaged homes), the damage was interpreted to be the result of indirect ember ignition. For only 10% of damaged homes was the continuity of fuels from the broader surroundings (often needle or leaf litter) identified as the likely reason for flame impingement. For another 10% of damaged homes, whether needle or leaf litter was continuous with the surroundings or just localized next to the home could not be determined from the photograph. [Note—these three flame impingement categories do not add to 44% because some houses showed evidence of multiple flame impingement causes.] For the cases of flame impingement via indirect ember ignition, embers ignited near home flammable objects (e.g., fences, patio furniture, stored lumber), near home leaf litter, near home vegetation (or litter under that vegetation), leaf litter in gutters, or wood bark mulch, in order of frequency from most to least (S2 Table). Direct

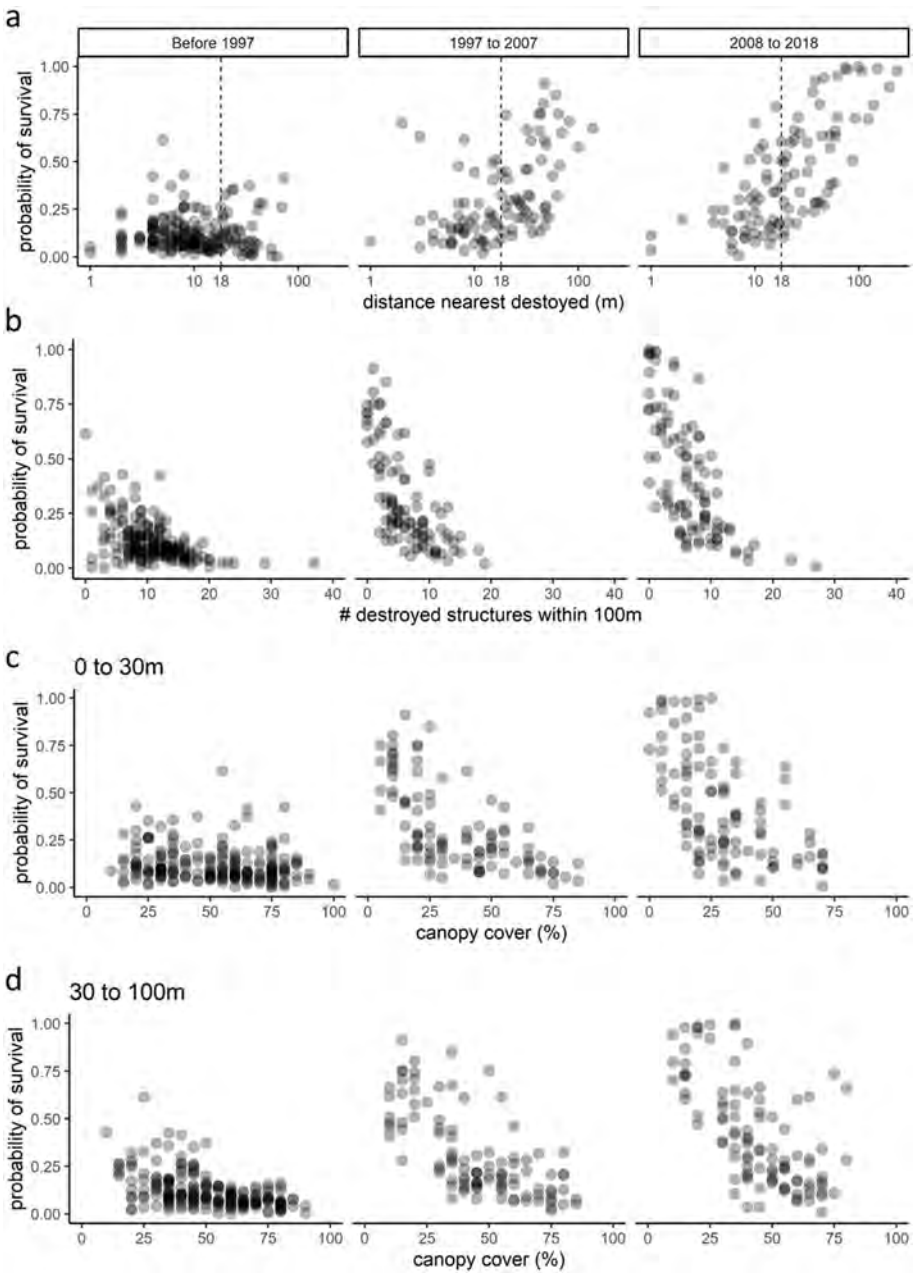


Fig. 3 Probability of home survival with **a** distance (m) to nearest destroyed structure, **b** the number of destroyed structures within a 100-m radius, **c** pre-fire overstory canopy cover within 0–30 m, and **d** pre-fire overstory canopy cover within 30–100 m, for homes built during three time periods (before 1997, 1997–2007, and 2008–2018). A vertical dotted line in **a** shows the 18-m threshold between survival and destruction identified by the regression tree analysis (Fig. 5a)

ember ignition was identified as the likely cause of damage for fewer than 6% of homes (Fig. 6a). The most common locations for embers to ignite were attached wood stairs, decking, and window trim. Counting either direct ember ignition or flame impingement due to indirect ember ignition, embers were implicated as a cause in 33% of damaged homes.

Discussion

Burning structures and wildland fuels both influence home survival

Our analysis of post-fire outcomes in the town of Paradise suggested that both the proximity to other burning structures and nearby wildland fuels factored in the probability of home survival, with several measures of

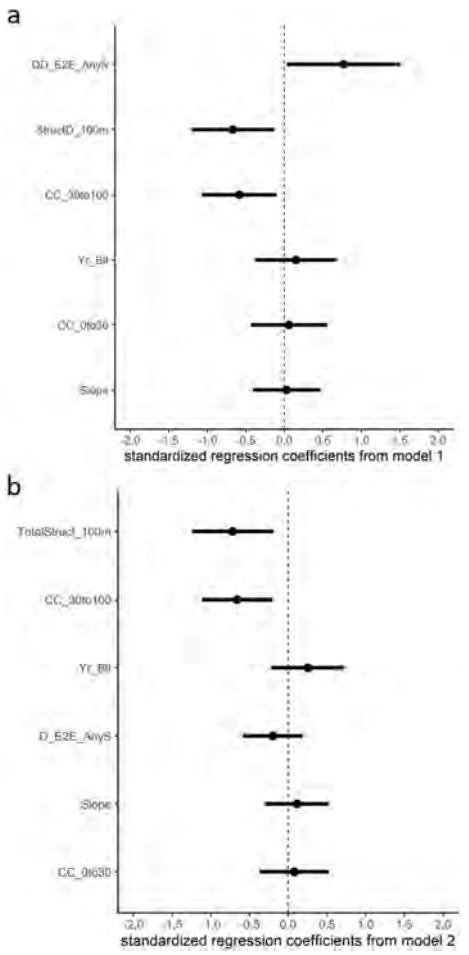


Fig. 4 Effect sizes for two logistic regression models of home survival in the town of Paradise during the 2018 Camp Fire, including continuous variables **a** present during the fire and **b** only variables present pre-fire. Regressions were based on a random sample of 400 homes

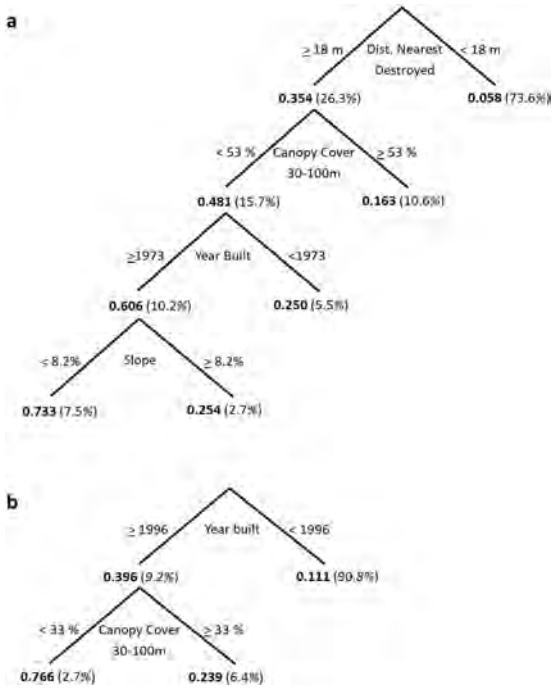


Fig. 5 Regression trees for predicting home survival in the town of Paradise in the 2018 Camp Fire, with models including continuous variables **a** present during the fire and **b** only variables present pre-fire, both based on a random sample of 400 homes. Survival proportion is listed in bold under each branch, along with the percentage of homes in Paradise that each branch applied to (in parenthesis)

distance and density of destroyed structures and nearby pre-fire overstory canopy cover emerging as significant explanatory variables. The relative importance of nearby burning home variables versus surrounding vegetation in explaining outcomes has varied among studies, with Gibbons et al. (2012) reporting canopy cover within 40m of the home to be the strongest predictor. Number of buildings within 40m was also a significant variable in their analysis. Even though nearby burning structure and vegetation variables were both included in the models in our study, interpretations about relative strength of these two sets of factors are tempered by limitations of the vegetation data, with overstory canopy cover an imperfect measure of wildland fuel hazard.

One possible clue to the relative importance of adjacent structures burning comes from the different outcomes for wildland urban intermix and interface homes. Houses built amongst wildland vegetation (intermix) survived at a higher rate (29%) than houses built in more of a subdivision arrangement with wildland fuels nearby (interface) (16%). Average pre-fire overstory canopy cover within 0–30 m was similar for intermix and interface homes (42% and 43%, respectively), but pre-fire overstory canopy cover within 30–100 m was higher for intermix than interface homes (49% vs. 42%, respectively). If proximity to wildland fuels had been the dominant driver, greater percentage losses in the wildland urban intermix would have been expected. The higher survival of intermix homes may therefore have been more a function of greater average distance to the nearest destroyed structure (24 m vs. 11 m in the intermix and interface, respectively) and lower average density (7.7 vs. 11.1 structures within 100 m in the intermix and interface, respectively). (Kramer et al. 2019) in an analysis of three-decade's worth of wildfires in California, also reported higher survival of homes in the wildland-urban intermix compared to the wildland-urban interface, and together with our results provide some additional evidence of the importance of nearby burning structures to home loss, relative to variables associated with wildland fuels. However, in our study, other factors

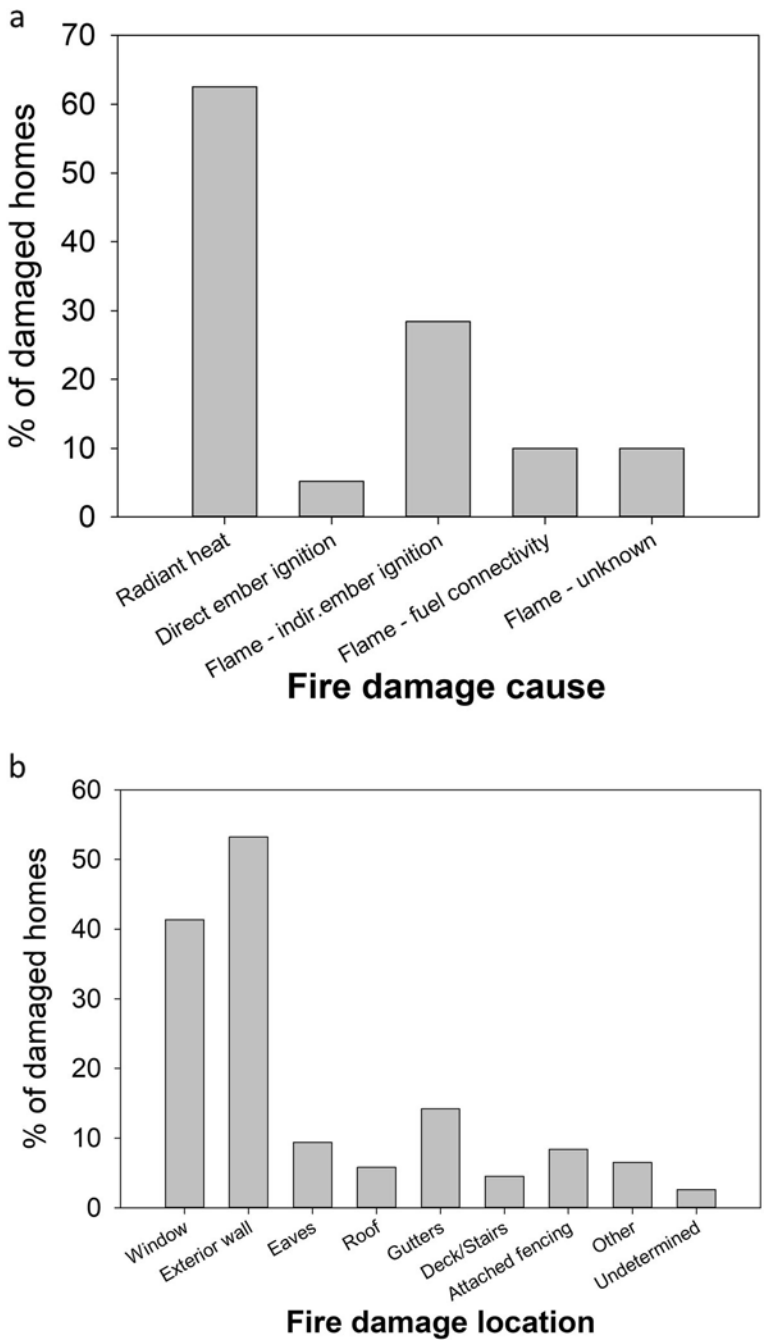


Fig. 6 Percentage of damaged but not destroyed homes in Paradise by **a** fire damage cause category and **b** fire damage location. Fire damage cause was either radiant heat, direct ember ignition, or flame impingement. Flame impingement was further subdivided into flame impingement due to indirect ember ignition, fuel continuity with the broader landscape, or unknown. Numbers were based on visual assessment of photos taken by the CAL FIRE inspectors and information in the CAL FIRE DINS (damage inspection) data. Totals exceed 100% because some homes had multiple sources of fire damage

were likely in play as well, with intermix homes being somewhat newer. In Paradise, an increasing percentage of homes were located in the intermix vs. the interface over time: 66% in time period 1, 80% in time period 2, and 88% in time period 3.

Homes as fuel

Distance to nearest destroyed structure and the total number of destroyed structures within 100 m were consistently the strongest predictors in our analyses. This makes intuitive sense because burning structures

produce a substantial amount of radiant heat, which can ignite adjacent homes or break glass in windows, allowing embers to enter the home. Nearby burning structures are also a source of embers, which can result in direct or indirect ember ignitions of nearby structures. Our visual analysis of 310 damaged homes corroborated the results of the statistical analyses, with more homes showing evidence of damage from radiant heat exposure (often from adjacent structures burning) than from flame impingement. Our findings are consistent with other analyses of destructive wildfires showing housing density to be strongly associated with home loss (Price and Bradstock 2013; Penman et al. 2019), but in contrast to Syphard et al. (2012, 2014, 2017) and Syphard and Keeley (2020), who have reported reduced probability of home loss at higher housing densities. The difference between studies likely has to do with variation in density ranges evaluated, as well as variation in vegetation type and housing arrangement. Syphard et al. (2012) sampled large fire-prone regions with shrub-dominated vegetation in southern California, ranging from outlying WUI areas to denser cities that did not burn to answer the question of housing arrangements most prone to loss in a wildfire. Since the entire scope of our analysis was within the Camp Fire perimeter, our research question differs: when burned, what factors influenced survival? In any case, the interpretation of Syphard et al. (2012, 2014, 2017) of lower loss probability with higher density development may not apply to different development patterns, including those present in Paradise. Such intermediate to low density wildland urban intermix and interface development interspersed with native (and non-native) vegetation is prevalent in foothills and lower mountainous regions of central and northern California (Hammer et al. 2007). In chaparral dominated ecosystems of southern California, high-density housing might result in more of the proximate shrub vegetation being removed, but in Paradise, overstory canopy cover within 0–30 m of the home was actually positively correlated with housing density.

At what distance an adjacent burning structure presents a vulnerability is not well studied. Our analyses identified a threshold of 18 m from the nearest destroyed structure that best differentiated surviving and destroyed homes (Fig. 5a). Price and Bradstock (2013) found the presence of houses within 50 m to be predictive of loss. Radiant heat flux, which is inversely related to distance from the flaming source, can be a factor up to 40 m from a burning structure (Cohen 2000). Cohen (2004) reported that models predicted ignition of wood walls when less than 28 m from a crown fire in forested vegetation, with actual experimental crown fires finding ignition at a 10-m distance, but not 20 m or 30 m. The radiant heat flux adjacent to burning structures is different and likely more sustained than a similar heat flux adjacent to crowning wildland vegetation.

Between home spacing has been evaluated in post-fire assessments conducted after the Witch Fire in San Diego County, California (Insurance Institute for Business and Home Safety 2008), the Waldo Canyon Fire in Colorado Springs, Colorado (Quarles et al. 2013), and the Black Bear Cub Fire in Sevier County, Tennessee (Quarles and Konz 2016). During each of these fires, home-to-home spread was observed with spacing less than 10 m. The IBHS Witch Fire report (Insurance Institute for Business and Home Safety 2008) referred to home-to-home spread as "cluster burning," which was not observed when homes were located more than 14 m apart. Our finding of an 18-m threshold is similar to the IBHS Witch Fire results. Regardless of the actual ideal home separation level, many homes in fire-prone areas of the western USA are on lot sizes that do not permit more than 18 m of separation between buildings.

Wildland fuels and defensible space actions

Pre-fire overstory canopy cover was a significant predictor of home survival in the statistical models, with the canopy cover 30–100 m away having a larger effect size than canopy cover in the immediate vicinity of the home (0–30 m) (Fig. 4a, b). This result (and other evidence, below) suggests that overstory canopy cover may only be correlated to factors that contributed to fire spread and increased the threat to homes, rather than a direct contributor. The often indirect influence of tree canopies on home survival, mediated by the litter fuels produced rather than canopy combustion, has been noted by others (Keeley et al. 2013). Wildland fire spread is dependent on surface fuels—litter, duff, and dead and down woody material, which would be expected to be most abundant and continuous under or adjacent to overstory tree canopy. The link between overstory canopy cover and surface fuel abundance may have been weaker from 0 to 30 m than distances farther removed from the home because of the greater likelihood that such surface fuels were better managed near homes, perhaps as a result of defensible space activities. In addition, the continuity of vegetative fuels is more likely to be broken up by lawns, driveways, or irrigated landscaping near the home. While vegetation abundance within 30 m has been reported to be associated home loss in southern California fires burning in shrubland vegetation types (Syphard et al. 2014, 2017), Alexandre et al. (2016) found vegetation near a building not to be a strong factor in models of loss for fires in southern California and Colorado. They theorized that the connectivity of vegetation to the home was more critical than vegetative cover.

While burning trees and associated vegetation may generate substantial flame lengths and embers which can

then threaten homes, the overstory tree canopies themselves did not appear to drive fire intensity in most cases. With the Camp Fire, many overstory trees located away from burning homes survived (Keeley and Syphard 2019; Cohen and Strohmaier 2020) (Fig. 7). Rather than tree torching directly impacting nearby structures, the torching of trees and other vegetation appeared from photographs and personal observation to frequently be caused by heat from nearby burning structures. Additionally, a substantial proportion of the canopy of native tree vegetation in Paradise at the time of the fire was comprised of California black oak (*Quercus kelloggii* Newb.), a native deciduous species that would have shed at least a portion of its leaves by the time of year when the Camp Fire burned through Paradise. Even when fully leafed out, the crowns of black oak trees are relatively open with low canopy bulk density. Deciduous oak litter breaks down faster than conifer litter, and the light fuel loads in pure black oak stands tend to promote low-intensity surface fire rather than crown fire (Skinner et al. 2006). Ponderosa pine (*Pinus ponderosa* Lawson & C. Lawson) was the other major native tree species. Leaf and needle litter can carry flames to the home or provide receptive fuels for ember ignitions and would likely have been positively correlated to pre-fire overstory tree canopy cover, especially in the fall. Embers can also ignite litter that has accumulated in gutters and roofs. High pre-fire overstory canopy cover may also indicate areas where associated vegetation and surface fuels had developed to the greatest extent in the absence of fire and active management, especially at a distance from homes. With the lands in the Paradise area having no record of fire in modern recorded history (Maranghides et al. 2021), considerable vegetative ingrowth and accumulation of dead and down surface fuels was likely, especially relative to historical amounts. Ingrowth could have included brush and smaller conifers that acted as ladder fuels, leading to torching and ember generation.

Even though our data showed a stronger association between pre-fire overstory tree cover and home survival for distances beyond which defensible space is typically mandated (100 ft or 30 m), this does not mean that vegetation modification within 30 m is any less important. For reasons described earlier, the fuel hazards contributing to outcome were likely not well captured by the overstory canopy cover variable, especially in this near-home zone. In addition, once structures become involved, defensible space vegetation modification to 30 m (100 ft) may be insufficient to mitigate ember and radiant heat exposures contributing to home loss. In an analysis of CAL FIRE DINS data over multiple fires, including the Camp Fire, Syphard and Keeley (2019) reported that defensible space was a poor predictor of outcome, with structural variables (e.g., eave construction details, numbers of windowpanes (double vs. single), vent screen size) more highly correlated with home survival. The low predictive power of defensible space may be partially due to the coarseness with which defensible space is classified in the DINS data, with broad distance categories not fully capturing spacing, composition, or flammability of the vegetation. In addition, in many destructive wildfires, a large portion of homes are lost through direct or indirect ember ignition and not flame impingement associated with the continuity with



Fig. 7 Aerial image showing a portion of Magalia just NW of Paradise, illustrating a gradient of fire damage to overstory vegetation with distance from destroyed homes. At least in some areas, burning homes may have influenced the effects to overstory vegetation more so than burning overstory vegetation influenced the outcome to homes. Photo: Owen Bettis, Deer Creek Resources

wildland fuels (Murphy et al. 2007; Cohen and Stratton 2008). With embers capable of igniting fuels over 1–2 km away, the protective effect of vegetation modification within 30 m of the house does not guarantee survival when fire-fighting resources are not present. Vegetation modifications in this zone, however, do provide access and a safer means of protecting a home when firefighting resources are available.

Our analysis relied upon aerial photo interpretation, and we could not assess surface fuels under dense tree canopies. As a result, and because of the likely indirect effect of leaf litter coming from the canopy, we caution against using cover percentages in the decision trees as forest thinning targets. Furthermore, surface and near-ground live fuels are considered the priority for altering fire behavior and influencing fire hazard (Agee and Skinner 2005). Higher canopy cover may be correlated to the rate of surface litter and woody fuel accumulation but does not necessarily directly translate to high fire hazard if these surface fuels are managed and maintained at low levels. In other words, higher overstory canopy cover can provide important amenities (e.g., shade, habitat—Gibbons et al. 2018) without undue fire hazard as long as the resulting litter and surface fuels are maintained and gutters are cleaned. Gibbons et al. 2018 also noted that patchiness and arrangement relative to prevailing winds can also reduce threat posed by near-home vegetation.

Did the adoption of Chapter 7A into the California Building Code influence survival?

While the survival rate for homes built in the 11 years after the adoption of Chapter 7A to the California Building Code in 2008 was numerically slightly higher than the survival rate of homes built in the 11 years immediately before, the difference was not statistically significant. It is possible that significance might have been found with a larger sample size, but even so, any influence of the building code update was likely overwhelmed by other factors. This was not a surprise because of the many interacting variables that affect building performance, in addition to building products rated to resist exterior fire exposures. The 2008 Chapter 7A building code update institutionalized several important and worthwhile changes to construction in high fire hazard zones, including the use of ember and flame-resistant vents. These changes may improve the probability of survival for some types of wildfire (e.g., vegetation and wind-driven fires); however, the changes were apparently not sufficient to fully protect buildings from radiant heat exposures from nearby burning structures. One of the primary mechanisms for radiant heat impact is the breaking of window glass, which can allow embers to enter the building (Penman et al. 2019). A common method for complying with Chapter 7A is through the use of tempered glass in one pane of a double-paned window. However, the magnitude of radiant heat exposure was likely still too much in many cases, or other vulnerabilities remained.

Variation in factors contributing to home loss across construction time periods

In models for predicting survival, the significant interaction of several of the potential explanatory variables with construction time period suggested that factors most strongly influencing home vulnerability differed for homes of different ages. Homes built in the most recent two 11-year periods (1997–2007 and 2008–2018) survived at a significantly higher rate than homes built prior to 1997. Factors potentially contributing to this increase include trends towards a longer average distance to the nearest structure and nearest destroyed structure, and a larger average lot size. Newer homes had lower pre-fire overstory canopy cover in the immediate vicinity (0–30m), whereas the older homes tended to be concentrated near the center of Paradise, where pre-fire overstory tree cover was higher. The two most recent construction time periods also saw changes in building construction including roofing materials having longer periods of robust performance (i.e., 30–50 years of service life), double-pane windows (as a result of changes to the energy code), and increased use of noncombustible fiber-cement siding. Many of these improvements, which potentially make newer homes less vulnerable to wildfire exposures, occurred well before the 2008 Chapter 7A update to the building code. Older homes may also have developed vulnerabilities resulting from overdue home maintenance. We speculate that with a higher proportion of newer homes surviving the ember onslaught, outcome then depended to a greater extent on degree of radiant heat exposure from nearby burned structures. This hypothesis is supported by the much stronger influence of distance to nearest burned structure and the number of structures burned within 100 m for newer (1997 and after) than older <1997) homes. A substantially lower proportion of older homes survived regardless of the distance to or density of nearby burned structures, suggesting other vulnerabilities (such as maintenance issues). Another factor that may have increased the survival probability of newer homes was simply less time for occupants to accumulate combustible items on their properties (e.g., sheds, stored objects, wood piles, play structures). The difference between distance to nearest home and distance to nearest structure was much greater for older than newer homes (data not shown), indicative of structures such as sheds, detached garages, or other outbuildings being added to properties over time. Our summary of damage location and cause

for damaged homes as well as first-hand accounts (Maranghides et al. (2021); N. Wallingford, personal communication) indicated such non-vegetative items were frequently ignited by embers and the reason for a flame impingement exposure.

Difficulties in post-wildfire interpretation

A primary challenge in determining the potential causes for building survival after wildfire can be the variation in fire behavior experienced. The Camp Fire was no exception, with considerable observed differences in fire spread rates driven by ember-ignited spot fires, along with complex topography and local variation in wind speed (Maranghides et al. 2021). However, the Camp Fire burning through Paradise in 1 day may still have provided a more homogenous burn environment than present in many other post-fire evaluations of home survival, most of which combined data across multiple fires in different geographic locations and years (e.g., Syphard et al. 2012, 2017; Alexandre et al. 2016; Penman et al. 2019; Syphard and Keeley 2019)). Another factor that can often complicate interpretation is variation in the extent of firefighter intervention (McNamara et al. 2019). In the case of the Camp Fire, with the focus of first responders initially on evacuation, relatively few homes experienced defensive action by firefighters or civilians (according to the DINS assessment, defensive action was noted for only seven of the 400 randomly selected homes (1.7%), six of which survived). More broadly, while similar factors as those analyzed in this study may be pertinent in other wildfires, it is important to recognize that the variables identified here were specific to the housing, vegetation, and topographic conditions found in Paradise and may not apply elsewhere.

Determining pre-fire structural characteristics post-fire is difficult and availability of such data is generally limited (Syphard and Keeley 2019). Details about near-home vegetation, especially within the first 1.5 m of the structure, which has been shown to be an especially vulnerable location for ember ignition, were not available. We were also not able to quantify the presence and distance to small sheds and other storage structures, the age and condition of the roofing, or individual residents' maintenance practices. The DINS data (e.g., extent of vegetation clearing for defensible space, siding type, type of window glass (single or multi-pane), deck construction, and presence of attached fencing) have value, but missing data and lack of information for structures not damaged or destroyed limit the utility for some analyses. We instead focused on variables that could be consistently evaluated on every home, such as pre-fire overstory canopy cover and distance to the nearest destroyed structure. Our vegetation variables were, however, coarse, and likely missed factors that contributed to home survival.

Lastly, for the damaged home cause and area of damage summary, it is important to acknowledge that the vulnerabilities may differ for damaged and destroyed homes. With evidence for what contributed to loss no longer available for destroyed homes, damaged homes provide a picture of the different vulnerabilities, but the relative contribution of factors involved may not be the same.

Conclusions

The results of this study support the idea that both proximities to neighboring burning structures and surrounding vegetation influence home survival with wildfire. Denser developments, built to the highest standards, may protect subdivisions against direct flame impingement of a vegetation fire, but density becomes a detriment once buildings ignite and burn. Recent examples of losses in areas of higher density housing include the wind-driven 2017 Tubbs Fire in northern California, where house-to-house spread resulted in the loss of over 1400 homes in the Coffey Park neighborhood (Keeley and Syphard 2019), and the wind-driven 2020 Almeda Fire in southern Oregon, which destroyed nearly 2800 structures, many in denser areas in the towns of Talent and Phoenix (Cohen and Strohmaier 2020). Once fire becomes an urban conflagration, proximity to nearby burned structures becomes especially important because occupied structures contain significant quantities of fuel, produce substantial heat when burned, and are a source of additional embers. For density to be protective, home and other structure ignitions would need to be rare. Fifty-six percent of homes in Paradise built during or after 2008 did not survive, illustrating that much improvement is needed in both current building codes and how we live in wildfire prone WUI areas before proximity to nearby structures becomes a benefit rather than a vulnerability. The threat posed by nearby burning structures as well as our finding of an apparent strong influence of vegetation 30–100 m from the home—a distance that in most cases encompasses multiple adjacent properties—demonstrates that neighbors need to work together to improve the overall ability of homes and communities to resist wildfire exposures.

To maximize survivability, homes need to be designed and maintained to minimize the chance of a direct flame contact, resist ember ignition, and survive extended radiant heat exposure. Our analyses demonstrating the strong influence of nearby burning structures on home survival suggests improvements to resist radiant heat exposures may be warranted in the California Building Code—i.e., increasing the standards for buildings within a certain minimum distance of other structures. Some possible improvements might include noncombustible siding with rating minimums tied to proximity to other

structures, both panes in windows consisting of tempered glass, or installation of deployable non-combustible shutter systems. Additionally, certain options for complying with Chapter 7A are better for resisting radiant heat and flame contact exposures and could minimize fire spread to other components. Whereas the International Code Council's Wildland Urban Interface Building Code (International Code Council 2017) provides three ignition-resistant construction classes to allow for material restrictions as a function of exposure level, Chapter 7A consists of one level, so is binary in nature in that a building either needs to comply, or it does not. The Australian building code for construction in bushfire prone areas, AS 3959 (Standards Australia 2018), incorporates six different construction classes based on anticipated radiant heat, flame, and ember exposure levels. Interaction between components, for example, siding, window, and the undereave area on an exterior wall, is not considered.

Our summary of damaged but not destroyed homes in Paradise was in line with other reports showing a high proportion of home ignitions indirectly resulting from embers (Mell et al. 2010). Embers frequently ignited near home combustibles such as woody mulch, fences, and receptive vegetative fuels with flames and/or associated radiant heat then impacting the home itself, supporting awareness of the importance of combustibles within the first 1.5 m (5 ft) of the building on home survival. A re-interpretation of defensible space fuel modifications is needed to increase the building's resistance and exposure to embers and direct flame contact, especially in the area immediately around a building and under any attached deck or steps. This does not diminish the value of defensible space fuel modifications 9 to 30 m (30 to 100 ft) away from the home, which not only reduces fuel continuity and the probability of direct flame contact to the home, but also provides firefighters a chance to intervene.

While our data show a relationship between home loss and vegetative fuels (high pre-fire overstory canopy cover likely associated with a greater litter and woody fuel abundance, as well as other wildland understory vegetation) that can contribute to fire intensity and ember generation, the WUI fire loss issue has been described as home ignition problem more so than a wildland fire problem (Cohen 2000; Calkin et al. 2014). The damaged home data were in line with this view, with few homes showing evidence of continuity with wildland fuels that would contribute to flame impingement, but numerous homes with near home fuels, both from manmade and natural sources, that led to direct or indirect ember ignitions.

California's Mediterranean climate will continue to challenge its residents with regular wildfire exposure throughout the state. Whether through modifying the nearby surface and vegetative wildland fuels or the home itself, adapting to wildfire will take time. The good news is that the trend in survival is improving with newer construction practices. However, with 56% of houses built after 2008 still succumbing to the Camp Fire, much room for improvement remains. Our data suggest it is possible to build (and maintain) buildings that have a high probability of surviving a worst-case scenario type of wildfire, even in fire-prone landscapes such as the Paradise area. Newer homes built after 1972, where the nearest burning structure was >18 m away, and fuels associated with vegetation 30–100 m from the home kept at moderate and lower levels (<53% canopy cover) had a 61% survival rate—an approximately 5-fold improvement over the Paradise housing population as a whole. Survival percentages substantially higher still are potentially possible if all components of risk, including ember generation in nearby wildland fuels, continuity of wildland and other fuels on the property, and home ignitability are sufficiently mitigated.

Abbreviations

DINS: Damage inspection; WUI: Wildland urban interface

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s42408-021-00117-0.

Additional file 1: S1 Table. Raw data for the random sample of 400 single-family homes in Paradise.

Additional file 2: S2 Table. Summary of fire damage cause and damage location for damaged by not destroyed single-family homes in Paradise.

Additional file 3: S3 Text. Metadata for the two data tables used in the analyses for this paper.

Acknowledgements

C Abbott quantified many of the variables used in the analyses of the 400-home sample. Insightful comments by two peer reviewers improved the manuscript. N Wallingford (CAL FIRE), who was assigned to the Camp Fire and managed the post-fire damage inspection (DINS) team, kindly reviewed an earlier draft. Stacey Weller translated the abstract into Spanish. We also thank Z Lunder, who gave us the tour of Paradise shortly after the fire, which inspired the questions this paper sought to address.

Authors' contributions

EK, YV, and SQ developed the research questions and designed the study, with statistical guidance provided by NJ. Statistical analyses were performed by NJ and EK. All authors contributed to writing the manuscript. The authors read and approved the final manuscript.

Funding

Analysis and writing of this article were performed without any additional funding, other than the salaries of the authors.

Availability of data and materials

All data generated or analyzed during the study are included in the published article and its supplementary information files.

Declarations

Ethics approval and consent to participate
Not applicable.

Consent for publication
Not applicable.

Competing interests
The authors declare that they have no competing interests.

Author details
[1]U.S. Forest Service, Pacific Southwest Research Station, 3644 Avtech Parkway, Redding, California 96002, USA. [2]University of California Cooperative Extension, 5630 South Broadway, Eureka, California 95503, USA. [3]University of California Cooperative Extension (Emeritus), Mill Valley, California, USA. [4]U.S. Forest Service, Pacific Southwest Research Station, 800 Buchanan Street, Albany, California 94710, USA.

Received: 31 May 2021 Accepted: 18 August 2021
Published online: 04 October 2021

References
Agee, J.K., and C.N. Skinner. 2005. Basic principles of forest fuel reduction treatments. *Forest Ecology and Management* 211 (1-2): 83–96. https://doi.org/10.1016/j.foreco.2005.01.034.

Alexandre, P.M., S.I. Stewart, M.H. Mockrin, N.S. Keuler, A.D. Syphard, A. Bar-Massada, M.K. Clayton, and V.C. Radeloff. 2016. The relative impacts of vegetation, topography and spatial arrangement on building loss to wildfires in case studies of California and Colorado. *Landscape Ecology* 31 (2): 415–430. https://doi.org/10.1007/s10980-015-0257-6.

Breiman, L. 1998. *Classification and regression trees, Repr*. Boca Raton: Chapman & Hall [u.a.].

Brewer, M.J., and C.B. Clements. 2019. The 2018 Camp Fire: meteorological analysis using in situ observations and numerical simulations. *Atmosphere* 11 (1): 47. https://doi.org/10.3390/atmos11010047.

Calkin, D.E., J.D. Cohen, M.A. Finney, and M.P. Thompson. 2014. How risk management can prevent future wildfire disasters in the wildland-urban interface. *Proceedings of the National Academy of Sciences* 111 (2): 746–751. https://doi.org/10.1073/pnas.1315088111.

Caton, S.E., R.S.P. Hakes, D.J. Gorham, A. Zhou, and M.J. Gollner. 2017. Review of pathways for building fire spread in the wildland urban interface part I: exposure conditions. *Fire Technology* 53 (2): 429–473. https://doi.org/10.1007/s10694-016-0589-z.

Cohen, J., and R. Stratton. 2008. *Home destruction evaluation: Grass Valley Fire, Lake Arrowhead, California*. Vallejo: U. S. Department of Agriculture, Forest Service, Pacific Southwest Region Tech. Paper R5-TP-026b.

Cohen, J., and D. Strohmaier. 2020. Community destruction during extreme wildfires is a home ignition problem. In *Wildfire Today* https://wildfiretoday.com/2020/09/21/community-destruction-during-extreme-wildfires-is-a-home-ignition-problem/. Accessed 10 Feb 2021.

Cohen, J.D. 2000. Preventing disaster: home ignitability in the wildland-urban interface. *Journal of Forestry* 98: 15–21.

Cohen, J.D. 2004. Relating flame radiation to home ignition using modeling and experimental crown fires. *Canadian Journal of Forest Research* 34 (8): 1616–1626. https://doi.org/10.1139/x04-049.

Conard, S.G., and D.R. Weise. 1998. Management of fire regime, fuels, and fire effects in southern California chaparral: lessons from the past and thoughts for the future. In *Fire in ecosystem management: shifting the paradigm from suppression to prescription. Tall Timbers Fire Ecology Conference Proceedings, No. 20*, ed. T.L. Pruden and L.A. Brennan, 342–350. Tallahassee: Tall Timbers Research Station.

Gibbons, P., A.M. Gill, N. Shore, M.A. Moritz, S. Dovers, and G.J. Cary. 2018. Options for reducing house-losses during wildfires without clearing trees and shrubs. *Landscape and Urban Planning* 174: 10–17. https://doi.org/10.1016/j.landurbplan.2018.02.010.

Gibbons, P., L. van Bommel, A.M. Gill, G.J. Cary, D.A. Driscoll, R.A. Bradstock, E. Knight, M.A. Moritz, S.L. Stephens, and D.B. Lindenmayer. 2012. Land management practices associated with house loss in wildfires. *PLoS ONE* 7 (1): e29212. https://doi.org/10.1371/journal.pone.0029212.

Hakes, R.S.P., S.E. Caton, D.J. Gorham, and M.J. Gollner. 2017. A review of pathways for building fire spread in the wildland urban interface part II: response of components and systems and mitigation strategies in the United States. *Fire Technology* 53 (2): 475–515. https://doi.org/10.1007/s10694-016-0601-7.

Hammer, R.B., V.C. Radeloff, J.S. Fried, and S.I. Stewart. 2007. Wildland - urban interface housing growth during the 1990s in California, Oregon, and Washington. *International Journal of Wildland Fire* 16 (3): 255–265. https://doi.org/10.1071/WF05077.

Insurance Institute for Business & Home Safety. 2008. *MEGA FIRES: the case for mitigation*. Tampa. https://ibhs.org/wp-content/uploads/wpmembers/files/Mega-Fires-The-Case-for-Mitigation-Executive-Summary.pdf.

International Code Council. 2003. *International urban-wildland interface code 2003*. Country Club Hills: International Code Council.

International Code Council (2017) International codes.

Kramer, H.A., M.H. Mockrin, P.M. Alexandre, and V.C. Radeloff. 2019. High wildfire damage in interface communities in California. *International Journal of Wildland Fire* 28: 641–650.

Keeley, J.E., and A.D. Syphard. 2019. Twenty-first century California, USA, wildfires: fuel-dominated vs. wind-dominated fires. *Fire Ecology* 15 (1): 24. https://doi.org/10.1186/s42408-019-0041-0.

Keeley, J.E., A.D. Syphard, and C.J. Fotheringham. 2013. The 2003 and 2007 wildfires in southern California. In *Natural Distasters and Adaptation to Climate Change*, ed. S. Boulter, J. Palutikof, D.J. Karoly, and D. Guitart, 42–52. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511845710.007.

Koo, E., P.J. Pagni, D.R. Weise, and J.P. Woycheese. 2010. Firebrands and spotting ignition in large-scale fires. *International Journal of Wildland Fire* 19 (7): 818–843. https://doi.org/10.1071/WF07119.

Leiberg, J.B. 1902. *Forest conditions in the northern Sierra Nevada, California*. Washington, DC: U.S. Department of the Interior, U.S. Geological Survey, Professional paper No. 8, Series H, Forestry 5.

Lumly, T. 2020. *Survey: analysis of complex survey samples*.

Maranghides, A., E. Link, W.R. Mell, S. Hawks, M. Wilson, W. Brewer, C. Brown, B. Vihnaneck, and W.D. Walton. 2021. *A case study of the camp fire – fire progression timeline*. Gaithersburg: National Institute of Standards and Technology.

McCullagh, P., and J.A. Nelder. 1989. *Generalized linear models*. London: Chapman and Hall. https://doi.org/10.1007/978-1-4899-3242-6.

McNamara, D., W. Mell, and A. Maranghides. 2019. Object-based post-fire aerial image classification for building damage, destruction, and defensive actions at the 2012 Colorado Waldo Canyon Fire. *International Journal of Wildland Fire* 29 (2): 174–189. https://doi.org/10.1071/WF19041.

Mell, W.E., S.L. Manzello, A. Maranghides, D. Butry, and R.G. Rehm. 2010. The wildland - urban interface fire problem - current approaches and research needs. *International Journal of Wildland Fire* 19 (2): 238–251. https://doi.org/10.1071/WF07131.

Murphy, K., T. Rich, and T. Sexton. 2007. *An assessment of fuel treatment effects on fire behavior, suppression effectiveness, and structure ignition on the Angora Fire*. Vallejo: U.S. Department of Agriculture, Forest Service, Pacific Southwest Region, Technical Paper, R5-TP-025.

Penman, S.H., O.F. Price, T.D. Penman, and R.A. Bradstock. 2019. The role of defensible space on the likelihood of house impact from wildfires in forested landscapes of south eastern Australia. *International Journal of Wildland Fire* 28 (1): 4–14. https://doi.org/10.1071/WF18046.

Price, O., and R. Bradstock. 2013. Landscape scale influences of forest area and housing density on house loss in the 2009 Victorian Bushfires. *PLoS ONE* 8 (8): e73421. https://doi.org/10.1371/journal.pone.0073421.

Quarles, S., and L. Konz. 2016. *Black Bear Cub Fire, Sevier County, Tennessee*. Richburg: Insurance Institute for Business & Home Safety.

Quarles S, Leschak P, Cowger R, Worley K, Brown RPE, Iskowitz C (2013) Lessons learned from Waldo Canyon: Fire Adapted Communities Mitigation Assessment Team findings. Fire Adapted Communities Coalition.

Quarles, S.L., Y. Valachovic, G.M. Nakamura, G.A. Nader, and M.J. de Lasaux. 2010. *Home survival in wildfire-prone areas: building materials and design considerations*. University of California, Agriculture and Natural Resources, Publication Number 8393. https://doi.org/10.3733/ucanr.8393.

R Core Team. 2020. *A language and environment for statistical computing*. Vienna: R Foundation for Statistical Computing.

Radeloff, V.C., R.B. Hammer, S.I. Stewart, J.S. Fried, S.S. Holcomb, and J.F. McKeefry. 2005. The wildland-urban interface in the United States. *Ecological Applications* 15 (3): 799–805. https://doi.org/10.1890/04-1413.

Radeloff, V.C., D.P. Helmers, H.A. Kramer, M.H. Mockrin, P.M. Alexandre, A. Bar-Massada, V. Butsic, T.J. Hawbaker, S. Martinuzzi, A.D. Syphard, and S.I. Stewart. 2018. Rapid growth of the US wildland-urban interface raises wildfire risk. *Proceedings of the National Academy of Sciences USA* 115 (13): 3314–3319. https://doi.org/10.1073/pnas.1718850115.

Skinner, C.N., A.H. Taylor, and J.K. Agee. 2006. Klamath Mountains bioregion. In *Fire in California's Ecosystems*, ed. N.G. Sugihara, J.W. van Wagtendonk, K.E. Shaffer, J. Fites-Kaufman, and A.E. Thode, 170–194. Berkeley and Los Angeles: University of California Press. https://doi.org/10.1525/california/9780520246058.003.0009.

Standards Australia. 2018. *Construction of buildings in bushfire-prone areas*, AS3959.

Steel, Z.L., H.D. Safford, and J.H. Viers. 2015. The fire frequency-severity relationship and the legacy of fire suppression in California forests. *Ecosphere* 6 (1): Article 8.

Stephens, S.L., R.E. Martin, and N.E. Clinton. 2007. Prehistoric fire area and emissions from California's forests, woodlands, shrublands, and grasslands. *Forest Ecology and Management* 251 (3): 205–216. https://doi.org/10.1016/j.foreco.2007.06.005.

Sugihara, N.G., T. Keeler-Wolf, and M.G. Barbour. 2018. Chapter 1. Introduction: Fire and California vegetation. In *Fire in California's Ecosystems*, ed. J.W. van Wagtendonk, N.G. Sugihara, S.L. Stephens, A.E. Thode, K.E. Shaffer, and J. Fites-Kaufman, 2nd ed., 1–8. Berkeley and Los Angels: University of California Press.

Syphard, A.D., T.J. Brennan, and J.E. Keeley. 2014. The role of defensible space for residential structure protection during wildfires. *International Journal of Wildland Fire* 23 (8): 1165–1175. https://doi.org/10.1071/WF13158.

Syphard, A.D., T.J. Brennan, and J.E. Keeley. 2017. The importance of building construction material relative to other factors affecting structure survival during wildfire. *International Journal of Disaster Risk Reduction* 21: 140–147. https://doi.org/10.1016/j.ijdrr.2016.11.011.

Syphard, A.D., and J.E. Keeley. 2019. Factors associated with structure loss in the 2013–2018 California wildfires. *Fire* 2 (3): 49. https://doi.org/10.3390/fire2030049.

Syphard, A.D., and J.E. Keeley. 2020. Why are so many structures burning in California? *Fremontia* 47 (2): 28–35.

Syphard, A.D., J.E. Keeley, A.B. Massada, T.J. Brennan, and V.C. Radeloff. 2012. Housing arrangement and location determine the likelihood of housing loss due to wildfire. *PLoS ONE* 7 (3): e33954. https://doi.org/10.1371/journal.pone.0033954.

Therneau, T., and B. Atkinson. 2019. *rpart: recursive partitioning and regression trees*.

Van de Water, K.M., and H.D. Safford. 2011. A summary of fire frequency estimates for California vegetation before Euro-American settlement. *Fire Ecology* 7 (3): 26–58. https://doi.org/10.4996/fireecology.0703026.

Westerling, A.L., H.G. Hidalgo, D.R. Cayan, and T.W. Swetnam. 2006. Warming and earlier spring increase western U.S. forest wildfire activity. *Science* 313 (5789): 940–943. https://doi.org/10.1126/science.1128834.

Wickham, H. 2016. *ggplot2: elegant graphics for data analysis*. Vol. 2016. 2nd ed. Cham: Springer International Publishing : Imprint: Springer.

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Submit your manuscript to a SpringerOpen journal and benefit from:

- ► Convenient online submission
- ► Rigorous peer review
- ► Open access: articles freely available online
- ► High visibility within the field
- ► Retaining the copyright to your article

Submit your next manuscript at ► springeropen.com

NBER WORKING PAPER SERIES

MANDATED VS. VOLUNTARY ADAPTATION TO NATURAL DISASTERS: THE CASE OF U.S. WILDFIRES

Patrick W. Baylis
Judson Boomhower

Working Paper 29621
http://www.nber.org/papers/w29621

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
December 2021

We are grateful to seminar participants at the NBER EEE Spring Meeting, the UC Environment and Energy seminar, Georgetown University, and the Ostrom Workshop. Richard Carson, Julie Cullen, Meredith Fowlie, Rebecca Fraenkel, Josh Graff Zivin, Andrew Plantinga, Matt Wibbenmeyer, and Amy Work provided helpful input, and Kate Dargan, Scott Witt, and numerous county assessors and CAL FIRE staff provided guidance and helped us access data. Kevin Winseck and Wesley Howden provided excellent research assistance. Property data were provided by Zillow through the Zillow Transaction and Assessment Dataset (ZTRAX). More information on accessing the data can be found at http://www.zillow.com/ztrax. The results and opinions are those of the authors and do not reflect the position of the Zillow Group or the National Bureau of Economic Research.

NBER working papers are circulated for discussion and comment purposes. They have not been peer-reviewed or been subject to the review by the NBER Board of Directors that accompanies official NBER publications.

© 2021 by Patrick W. Baylis and Judson Boomhower. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

Mandated vs. Voluntary Adaptation to Natural Disasters: The Case of U.S. Wildfires
Patrick W. Baylis and Judson Boomhower
NBER Working Paper No. 29621
December 2021
JEL No. H12,H23,K32,Q54,Q58

ABSTRACT

Despite escalating disaster losses and predicted increases in weather-related catastrophes, takeup of protective technologies and behaviors appears limited by myopia, externalities, and other factors. One response to such frictions is to mandate adaptive investment. We measure the effect of California's wildfire building codes on own- and neighboring structure survival using administrative damage and assessment data for most US homes experiencing wildfires since 2000. Differences across jurisdictions and vintages reveal remarkable resilience effects of building codes initially prompted by the deadly 1991 Oakland Firestorm. Codes also benefit neighbors. We use the results to estimate net social benefits of wildfire building standards.

Patrick W. Baylis
Vancouver School of Economics
University of British Columbia
6000 Iona Drive
Vancouver, BC V6T1L4
Canada
patrick.baylis@ubc.ca

Judson Boomhower
Department of Economics
University of California at San Diego
9500 Gilman Drive #0508
La Jolla, CA 92093
and NBER
jboomhower@ucsd.edu

A data appendix is available at http://www.nber.org/data-appendix/w29621

Worldwide natural disaster losses averaged $218 billion per year during 2016–2020, a 60% increase in real terms over the preceding 30 years.[1] This trend is predicted to accelerate under future climate change. Efficient investment in adaptation is essential in the face of these escalating risks. Yet takeup of protective technologies and behaviors appears to be hindered by a constellation of market frictions. Homeowners misperceive disaster risks and thus the value of protective investments (Hallstrom and Smith 2005; Donovan, Champ, and Butry 2007; Gallagher 2014; McCoy and Walsh 2018; Bakkensen and Barrage, Forthcoming). Monitoring costs and other insurance market imperfections mean that mitigation behaviors may not be accurately reflected in property insurance prices (Kunreuther and Michel-Kerjan 2011; California Department of Insurance 2018; Wagner, Forthcoming). Public disaster spending programs may reduce private incentives for property protection (Kousky, Luttmer, and Zeckhauser 2006; Deryugina 2017; Baylis and Boomhower 2019). And in some settings, spatial externalities across neighboring properties lead to diverging private and social benefits of mitigation (Shafran 2008; Costello, Quérou, and Tomini 2017).

One widely-adopted approach to these market failures is to provide information and subsidies to increase voluntary takeup.[2] A more controversial but increasingly common alternative is to *mandate* investments in resilience.[3] Mandatory standards ensure wider adoption. However, if the regulator misjudges the effectiveness of the required actions, the level of the hazard, or individual risk

1. Loss data are from Munich RE and are in 2020 dollars.

2. Examples in the U.S. include the Ready campaign and Ready.gov website; the Community Rating System under the National Flood Insurance Program; the StormReady, Hurricane Protection Week, and National Tsunami Hazard Mitigation programs; the Firewise USA program; and the Community Wildfire Protection Plan program.

3. Florida has construction standards for hurricane winds, and codes also exist in various regions for winter storms and non-weather disasters such as earthquakes and tsunamis (Federal Emergency Management Agency 2020). In flood-prone areas, U.S. federal rules require homes to be elevated and some localities have imposed even stricter requirements. California, Utah, Nevada, and Pennsylvania have statewide wildfire building standards while in other states, notably Colorado, wildfire codes have been adopted at the local level (Insurance Institute for Business and Home Safety 2019). Australia, New Zealand, France, and Italy also have wildfire building codes (Intini et al. 2020).

preferences, some individuals may be compelled to make costly investments they would have preferred to avoid even if fully informed and fully accountable. Implementing mandatory standards is also more politically challenging.[4] Despite the important differences between these instruments, there is little empirical evidence about outcomes under a mandated resilience regime compared to a counterfactual of purely voluntary takeup.

In this paper, we consider the case of wildfire building codes in California. California has suffered over $40 billion dollars in wildfire property damages in the past 5 years. The state also has among the strictest wildfire building codes in the world. We provide the first comprehensive evaluation of the effect of these codes on own-structure survival as well as neighbor spillovers via structure to structure fire spread. We then embed these empirical estimates in an economic model to calculate net social benefits of wildfire building codes as a function of local wildfire hazard and number of close neighbors.

This analysis takes advantage of a new dataset that includes property-level data for almost all U.S. homes exposed to wildfire between 2000 and 2020. We compiled the data by requesting post-incident damage censuses from numerous emergency management agencies and individual county assessors. We merged these lists of damaged homes to assessor data for the universe of (destroyed and surviving) homes inside wildfire burn areas. The data show that even during catastrophic wildfires, more than 50% of exposed homes survive. One of the key advantages of the new data is the ability to observe and learn from these surviving homes. The property-level loss information also distinguishes the wildfire data from floods and other disasters where loss data are typically available at the zip code or Census tract level. In addition to the new loss data, the empirical work also leverages emerging tools in spatial analysis, including high-resolution aerial imagery and precise "rooftop" geocoding of structure locations.

The empirical design leverages rich variation in building code requirements

4. For example, efforts to adopt statewide wildfire building standards in Oregon and Colorado have failed politically (Sommer 2020).

across space and over time. The complex nature of building regulation in California creates a patchwork of wildfire standards across localities. We also observe fires in other states that do not have wildfire building codes. In all of these places, we observe homes built before and after changes in California's codes. This identifying variation yields credible counterfactual predictions for how homes would have performed in the absence of California's standards. Our preferred statistical model is a fixed effects regression that compares the likelihood of survival for homes of different vintages on the same residential street during the same wildfire event. These street fixed effects allow us to compare groups of homes that experience essentially identical wildfire exposures.

We find remarkable vintage effects for California homes subject to the state's wildfire standards. A 2008 or newer home is about 16 percentage points (40%) less likely to be destroyed than a 1990 home experiencing an identical wildfire exposure. There is strong evidence that these effects are due to state and local building code changes - first after the deadly 1991 Oakland Firestorm, and again with the strengthening of wildfire codes in 2008. The observed vintage effects are highly nonlinear, appearing immediately for homes built after building code changes. There are no similar effects in areas of California not subject to these codes or in other states that lack wildfire codes.

We also find that code-induced mitigation benefits neighboring homes, consistent with reduced structure-to-structure spread. These neighbor effects are in keeping with anecdotal reports of home-to-home spread as a factor in urban conflagrations (Cohen 2000; Cohen and Stratton 2008; Cohen 2010).[5] Our results imply that, all else equal, code-induced mitigation by a neighbor located less than 10 meters away (within the distance fire experts refer to as the home ignition zone) reduces a home's likelihood of destruction during a wildfire by about 2.5 percentage points (6%). This benefit is even larger when homes have multiple close neighbors.

5. We are also aware of at least one insurance company which will not sell homeowners insurance to homes located next to a home with a wood roof in high-risk areas (Allstate Indemnity Company 2018).

Finally, we embed our estimates of building code benefits in an economic model and calculate the approximate net social benefits of such a policy for a random sample of California homes in wildfire hazard areas. Like other disaster risks, many homeowners are only partially insured (or in the extreme, wholly uninsured) against the full cost of replacing a structure destroyed by wildfire (Klein 2018; California Department of Insurance 2018). This means that the benefits of building codes include not only reductions in expected losses but also additional insurance value due to reduced household exposure to uninsured risk. Our calculations find that wildfire building codes deliver unambiguously positive benefits in the most fire-prone areas of the state, especially where homes are clustered closely together and thus create large risk spillovers. In areas with more moderate wildfire risk, building standards for new homes can also be justified given reasonable assumptions about household risk aversion, future increases in wildfire hazard, and/or co-benefits of building codes (such as reductions in public expenditures on wildland firefighting). On the other hand, the costs of retrofitting existing homes to meet current wildfire building standards are substantial and our analysis suggest full retrofits are only economic in areas with extreme wildfire hazard.

These results are broadly relevant to natural disaster management. In this important setting, a standards-based approach achieved substantially greater compliance with risk mitigation practices. The policy nearly halves loss risk when structures are exposed to the hazard. Moreover, a cost-benefit calculation implies that low takeup in the absence of standards is likely driven by market failures as opposed to a lack of cost-effectiveness. These facts can inform policies to mitigate other risks like floods, hurricanes, tornadoes, and heat waves, where voluntary takeup of adaptation investments also appears to be limited.

This work also has immediate implications for wildfire policy. Our results imply there are gains to be realized from strengthening building codes in other states and countries to match California's. This evidence is relevant to current

proposals in Oregon, Washington, and other states.[6] Meanwhile, California is moving to expand the geographic coverage of designated wildfire hazard zones and reduce the ability of local jurisdictions to opt out of recommended standards.[7] Separately, new California legislation from 2020 provides financial incentives for retrofits of existing homes in wildfire-prone areas.[8] The law specifically calls for support of "cost effective" retrofits, a concept for which the evidence in this study is essential. Additionally, policymakers are confronting pressing issues of insurance rate reform in response to mounting wildfire losses. One key debate is the degree to which individual investments improve structure survival and should thus be rewarded through regulated insurance discounts (California Department of Insurance 2018). This paper's evidence on the effectiveness of such investments during real wildfires bears directly on this question.

Our work builds on previous studies of natural hazard mitigation. For wildfires, a number of engineering and forestry studies describe the effects of construction materials and vegetation management on structure resilience (Gibbons et al. 2012; Syphard et al. 2012; Syphard, Brennan, and Keeley 2014; Alexandre et al. 2016; Syphard, Brennan, and Keeley 2017; Kramer et al. 2018; Syphard and Keeley 2019). Our paper focuses on the effects of a mandatory mitigation policy, while these previous studies measure technology effectiveness (i.e., survival of homes whose owners did vs. did not choose to take mitigation measures). Two studies on the related topic of hurricanes do consider building codes, with conflicting results. Dehring and Halek (2013) is a small case study of several hundred homes during Hurricane Charley in 2004. Simmons, Czajkowski, and Done (2018) study aggregate zip-code level data on annual insurance claims by homes built in different decades to infer benefits of hurricane building codes in Florida. In contrast, our study uses highly

6. See, e.g., Profita, Cassandra. "The Labor Day Fires Burned Towns and Homes. Oregon Has a Plan to Avoid a Repeat." Oregon Public Broadcasting, September 7, 2021.

7. S.B. 63, 2021–2022, California. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220SB63.

8. A.B. 38, 2019–2020, California. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB38.

granular property- and event-level loss data for a large sample of wildfires covering several states. Across a range of natural hazards, a parallel engineering literature attempts to calculate the value of building codes through modeling and simulation (e.g. Federal Emergency Management Agency 2020). Finally, our work is methodologically related to a separate literature in economics on building codes and household energy consumption (Jacobsen and Kotchen 2013; Levinson 2016).

This study makes five contributions. First, we provide the first comprehensive evaluation of the effects of wildfire building codes on structure survival. Beyond the wildfire context, this result improves our understanding of disaster resilience under standards-based vs. voluntary policies. Second, we provide the first empirical estimates of the spillover benefits of wildfire mitigation investments to neighboring properties. Third, we compile a comprehensive dataset of structure-level outcomes in wildfires across several states that, to our knowledge, is the most complete accounting in existence. This new dataset will enable future work on the economics of catastrophic wildfire risk. Fourth, we approach the topic in a causal framework with an explicit empirical design, where previous work is primarily descriptive or relies on regression adjustment. Finally, we embed the empirical estimates in an economic model to calculate net social benefits that account for local hazard, neighbor externalities, and household risk aversion.

The rest of the paper proceeds as follows. Section 1 discusses structure survival in wildfires and California's history of building code updates. Section 2 describes the data and spatial analysis. Section 3 outlines the empirical strategy, and Section 4 presents the results. Section 5 develops the model of net social benefits and Section 6 concludes.

1 Wildfire Building Codes in California and Other States

> *"Unlike a flash flood or an avalanche, in which a mass engulfs objects in its path, fire spreads because the requirements for com-*

> *bustion are satisfied at locations along the path... A wildland fire cannot spread to homes unless the homes and their adjacent surroundings meet those combustion requirements."* Jack D. Cohen, *Journal of Forestry*, 2000.

Established forestry and engineering evidence supports the importance of the so-called home ignition zone in determining structure resilience to wildfires. The home ignition zone includes the design of the home itself as well as an imagined area extending 30 meters away from the structure. Fire scientists emphasize the elimination of flammable materials inside this zone (e.g., Cohen 2000, 2010; Calkin et al. 2014). This guidance applies to both vegetation around the home ("defensible space") and the construction of the home itself, especially the roof.

Among U.S. states, California has gone the furthest in mandating takeup of wildfire resilience investments by property owners. However, the application of these codes varies throughout the state. In areas where CAL FIRE provides firefighting services (State Responsibility Area or SRA), the state directly determines building standards. Within incorporated cities and other areas with their own fire departments (Local Responsibility Area or LRA), local governments have historically had greater control over code requirements.

The development of the modern standards began with the Oakland Hills Firestorm of 1991, which killed 25 people and caused $1.5 billion in property damage. The tragedy led to a series of legislative actions during the mid-1990s that required more fire-resistant roofing and maintenance of vegetation immediately adjacent to the home. The first of these was the so-called Bates Bill of 1992 (Assembly Bill 337). Among other changes, the Bates Bill encouraged stronger building standards in LRA areas by requiring CAL FIRE to produce maps of recommended Very High Fire Hazard Severity Zones (VHFHSZ). In LRA areas, local governments could then choose whether or not to adopt these recommended hazard maps (and thus the accompanying building standards). This designation process unfolded over several years, with hundreds of local governments adopting or rejecting CAL FIRE's proposed VHFHSZ maps at

different times. According to Troy 2007, 151 of 208 local governments (73%) either adopted the VHFHSZ regulations or claimed to have promulgated equally strong existing rules.[9]

On the heels of the Bates Bill, Assembly Bill 3819 of 1994 increased requirements for ignition-resistant roofs. These requirements applied in all SRA areas and in the subset of LRA areas where local governments had adopted recommended VHFHSZs. Roofing materials are rated Class A, B, C, or unrated.[10] Starting in 1995, the law required Class B roofs on newly-constructed or reroofed homes in regulated areas. In 1997, the requirement increased to Class A roofs in high-hazard areas (a substantial improvement in fire resistance). Finally, Assembly Bill 423 in 1999 simplified enforcement of the new roofing codes by outlawing the use of unrated roofing materials throughout the state.

The collective effect of these mid-1990s building code reforms was to substantially increase the fire resistance of roofs on newly-constructed homes in regulated areas after about 1997. The roofing requirements also applied to existing homes, but only at the time of roof replacement. Any homeowner in a regulated area who replaced more than 50% of the roof surface in a single year was in principle obligated to comply. The defensible space provisions also applied to existing and new homes. However, in practice, the primary point of enforcement for these codes was at the time of new construction; enforcement effort for existing homes was limited (see e.g., Maclay 1997).

California strengthened its wildfire codes again in 2008 with the so-called Chapter 7A standards of the California Building Code. These requirements apply to all homes built in 2008 or later in SRA areas and in LRA areas where proposed VHFHSZ designations have been accepted. The codes apply to many dimensions of new homes. Roofs must be rated class A or B, eaves

9. For a detailed qualitative study of the determinants of local VHFHSZ adoption decisions, see Miller, Field, and Mach (2020).

10. These ratings are earned through laboratory testing; for example, the Class A test involves placing a 12-inch by 12-inch burning brand on the roof material under high wind conditions. The material must not ignite for 90 minutes.

and exterior siding must be fire resistant, vents must covered by a fine wire mesh to resist ember intrusion, windows and doors must resist fire for at least 20 minutes, and decks and other building appendages must be built of non-combustible materials. Chapter 7A also includes additional requirements for defensible space.

The damage data collected for this study also include wildfires in Arizona, Colorado, Oregon, and Washington. None of these had statewide wildfire building standards at the time of the included fires (Insurance Institute for Business and Home Safety 2019). Some local governments – particularly in Colorado – have adopted local standards that include a diverse mix of rules about roofs, other construction materials, and/or defensible space. Our empirical analysis excludes a small number of fires in the comparison states that overlap areas known to have local wildfire building standards.[11]

While the non-California homes in this study are not subject to mandatory standards, they are targeted by a range of information and incentive programs that seek to increase voluntary home hardening. Programs active in these states include FireWise USA (National Fire Protection Association), the Community Wildfire Protection Plan program (United States Forest Service and Department of Interior), the Fire Adapted Communities Coalition (numerous public agencies and NGOs), the Ready, Set, Go! program (International Association of Fire Chiefs), and numerous other initiatives.

2 Data and Spatial Analysis

This section describes the construction of the database of wildfire damages, property tax assessment information, and structure locations.

11. These are the 2012 Waldo Canyon Fire, 2013 Black Forest Fire, and 2018 Mile Marker 117 Fire in El Paso County, Colorado (Quarles et al. 2013) and the 2012 High Park Fire and 2020 Cameron Peak Fire in Larimer County, Colorado (Larimer County 2020).

2.1 Homes and Damage Data

Damage Inspection Data

We sought to assemble as comprehensive a database as possible of administrative records for homes destroyed or damaged by wildfire in the United States. For recent wildfires in California, this information is managed by CAL FIRE. For earlier California fires and for fires in other states, we contacted individual county assessors (who track these damages in order to update property tax assessments) and other agencies to request historical records of structure damages. To our knowledge, the resulting database is the most complete accounting that exists of U.S. homes lost to wildfire.

California 2013–2020: In California, the CAL FIRE Damage Inspection (DINS) database is a census of destroyed and damaged homes following significant wildfire incidents during 2013–2020. The data include street address and assessor parcel number (APN); limited structure characteristics; and for some fires, an additional sample of undamaged homes. The damage variable has four levels: destroyed ($>$ 50% damage), major (26–50%), minor (10–25%), and affected (1%–9%). Of these, "destroyed" is the most commonly reported damage category and the only category that appears consistently across all fires. The lack of partially-destroyed structures is consistent with case study observations in Cohen (2000) and subsequent research. We thus follow the literature and focus on "destroyed" as our primary outcome.

California 2003–2013: Data for pre-2013 wildfires in California come from two sources. For the 2003 and 2007 San Diego fire storms, we received damage assessment data from San Diego County. For other counties, CAL FIRE staff provided us with a large collection of unformatted historical damage assessment reports that we compiled and standardized to be usable for research.

Other States: Using ICS-209 incident reports, we identified the 15 counties in states other than California with the greatest number of structures lost to wildfire since 2010. We then contacted county assessors in each of these

counties to request damage data. We have successfully received structure-level damage data from 11 of these 15 counties.

Appendix Table 6 includes the full list of wildfires in the dataset.

Property Tax Assessment Data

We merge the damage records to comprehensive assessment data for all U.S. homes from the Zillow ZTRAX database. The ZTRAX data include information on year built, effective year built (in the case of remodels), building square footage, and other property characteristics. The merge from damage data to ZTRAX uses assessor parcel numbers, and we validate the accuracy of this merge by comparing street addresses across the two datasets. We restrict the data to include only single family homes, which account for most properties inside the wildfire perimeters in our sample. For each incident, we merge the damage data to the most recent historical assessment data from the pre-fire period. In other words, we merge to the population of single family homes that existed immediately prior to the start of the fire. Appendix Table 6 shows the number of single family homes inside of each wildfire perimeter and the share destroyed.

2.2 Spatial Analysis and Dataset Construction

Identifying Structure Rooftop Locations

This study uses the physical locations of the homes in the data in two ways. First, homes must be spatially assigned to building code jurisdictions and to wildfire burned areas. Second, the measurement of spillovers across properties requires precise distances between neighboring structures. The street address-based geocoding methods typically used in academic research are not sufficiently detailed for this second purpose, which requires accurate structure locations at a meter scale. We solved this challenge by combining several spatial datasets to identify precise rooftop locations. First, we limit the population of ZTRAX homes to all homes in zip codes where at least one home was destroyed. We then merge these ZTRAX records to parcel boundary maps

from county assessors using assessor parcel numbers. This yields a parcel polygon for each home. We then use comprehensive building footprint maps from Microsoft to identify the largest structure overlaying each parcel.[12] We call this location the "footprint location." Figure 1 shows an example for Redding, California in the area of the 2018 Carr Fire. Gray lines are parcel boundaries from the Shasta County Assessor. Blue polygons are building footprints. The purple and yellow markers show the assigned rooftop locations for each structure. Yellow markers show homes that are reported as destroyed in the damage data.

This rooftop geocoding method generates highly accurate locations, but it is dependent on the availability of high-quality parcel boundary GIS data. In areas where such data are not available (representing 13% of homes in the final analysis dataset), we instead geocode home locations using the ESRI StreetMap Premium geolocator, a commercially-available address-based product. Our quality checking shows that these locations (henceforth "address-based locations") are generally reliable to the parcel level but not always to the structure rooftop level. Appendix Section C describes the geocoding in more detail.

Validating Locations and Damage Reports

We quality check the calculated property locations and the damage report data using high-resolution aerial imagery from NearMap. The base image in Figure 1 shows an example. The detailed imagery allows us to manually confirm the accuracy of structure locations, which closely coincide with the blue building footprints in the figure. In addition, the NearMap imagery includes post-fire surveys for many of the incidents in our database. Figure 1 illustrates how destroyed properties are readily visible in these surveys, which allows us to confirm the accuracy and completeness of the damage data. Appendix Table 4 reports accuracy rates in a random sample of homes. For damage reports, 99%

12. The Microsoft U.S. Building Footprints Database is publicly available at https://github.com/microsoft/USBuildingFootprints.

of reported outcomes match the ground truth imagery. For rooftop locations, 98% of the assigned structure locations are on top of the structure rooftop in the ground truth imagery (with 99%+ accuracy in densely developed areas). Locations that rely on street address based geocoding tended to be accurate to the parcel but not always to the actual structure rooftop – about 75% of these assigned locations are on top of the structure rooftop in the ground truth imagery.

Spatial Merge to Wildfire Perimeters and Code Jurisdictions

We restrict the dataset to homes located within final wildfire perimeters (plus a 20-meter buffer). Depending on the state and time period, these digital perimeter maps come from the California Forest and Range Assessment Program (FRAP), the Monitoring Trends in Burn Severity (MTBS) dataset, or the National Interagency Fire Center (NIFC). We merge the homes data to spatial data on fire protection responsibility (SRA vs. LRA) and designated fire hazard (FHSZ) that together determine building codes in a given location in California. We use historical GIS maps provided by CAL FIRE to assign homes to code regimes according to the codes in effect when the home was built.[13]

Calculating Distances Between Neighboring Homes

We construct two measures of distance between homes. The first is the minimum distance between the building footprint polygons associated with the two structures (henceforth the "wall-to-wall" distance). This measure is only available for homes where we assign locations based on building footprints. The second metric uses the distance between assigned point locations, which are available for all homes in the dataset. We call this metric the "centroid to centroid" distance because these points are meant to correspond to the center of the roof. The wall to wall distance is our preferred measure because it more

13. For SRA/LRA boundaries, the historical map data include updates in 1990, 1996, 2003, 2005, and annually from 2010–2020. For FHSZ, the historical map data include updates in 1985, 1998, 2007, and 2008.

accurately captures space between homes and because the footprint-geocoded locations are more accurate than the address-based location points (Appendix Table 4). Our main estimates of neighbor spillovers use the restricted sample of homes for which wall to wall distances are available. For robustness, we also show specifications that use centroid to centroid distances and the full sample of homes.

We identify up to 15 nearest neighbors within one kilometer for each home in the final dataset. Panel (b) of Figure 1 shows two examples. Each image shows wall-to-wall distances (in meters) from the structure marked "0". Appendix Table 2 summarizes the distribution of number of neighbors at various distances.

Data Summary

The final dataset includes 55,408 single family homes exposed to 112 wildfires in California, Arizona, Colorado, Oregon, and Washington between 2003 and 2020. Thirty-nine percent of these were destroyed. Appendix Figure 1 shows the distribution of year built and fraction destroyed by year built for the full dataset. Appendix Table 6 reports the number of exposed and destroyed homes for each fire.

3 Empirical Strategy

This section describes the empirical design used to measure the effect of wildfire building codes on structure survival. To fix ideas, Figure 2 provides an example of the merged dataset for the 2018 Woolsey Fire in Los Angeles County. The green and purple markers indicate locations of surviving and destroyed single family homes inside the final fire perimeter. The street map data give a sense of development density. The intensity of losses varies significantly within the burned area. Near Malibu, a large share of affected homes were lost. Further north, however, there are several areas where most homes inside the fire perimeter escaped destruction. These differences reflect varying fire

conditions, firefighter response times, landscape vulnerability, structure characteristics, and potentially numerous other factors. This heterogeneity adds noise to empirical analysis of structure survival. It may also introduce bias if year built or other structure traits vary similarly within burned areas. We address these challenges using an empirical design that compares the likelihood of survival for homes of different vintages on the same residential street during the same wildfire. We attribute these vintage effects to building codes by comparing vintage effects across jurisdictions with and without wildfire building codes.

3.1 Treatment Groups

Throughout the rest of the paper, we consider three types of jurisdiction. The first is SRA, where compliance with California building codes was mandatory. The second is LRA areas that were ever recommended by CAL FIRE as VHFHSZ areas (henceforth, "LRA-VHFHSZ"). To be clear, this group includes all proposed VHFHSZ regardless of whether local governments accepted the designation. There is no centralized database that records local VHFHSZ adoption decisions, but Troy (2007) reports high rates of adoption.[14] The final treatment group is areas without wildfire building codes (henceforth, "no-codes"). This includes LRA areas in California that were never recommended for consideration as VHFHSZ, as well as fires in areas of Arizona, Colorado, Oregon, and Washington without any state or local wildfire building codes. Appendix Table 1 reports the number of homes in each treatment group.

14. In addition, historical news accounts show that cities that rejected the official VHFHSZ designation often still adopted the underlying code requirements in the recommended areas. This seems to have been an attempt to achieve the state-recommended resilience requirements while avoiding the VHFHSZ label due to fears about property values (Sullivan 1995; Snyder 1995; Stewart 1995; Yost 1996; Grad 1996). One state fire official's response: "We didn't care if they called it a nuclear-free zone, as long as they adopted the regulations" (Maclay 1997).

3.2 Own-structure survival

Event study figures

We begin the regression analysis with the following event study-style model for home i on street s exposed to wildfire incident f. We estimate this model separately for the SRA, LRA-VHFHSZ, and no-codes groups.

$$1[Destroyed]_{isf} = \sum_{v=v_0}^{v=V} \beta_v D_i^v + \gamma_{sf} + X_i\alpha + \epsilon_{isf} \tag{1}$$

The outcome variable is equal to one for destroyed homes and zero otherwise. The V variables $D_i^{v_0}, ..., D_i^V$ are indicator variables equal to one if house i's year built falls into bin v. The main parameters of interest are the coefficients β that correspond to these vintage bins. These give the effect of each vintage on probability of survival when exposed to wildfire. The street fixed effects γ_{sf} include separate indicator variables for each street name-zip code combination within fire perimeter f. These fixed effects sweep away arbitrary patterns of damage across streets within the fire perimeter, so that the model is identified by average differences in survival between homes of different vintages on the same street. We also estimate models with finer and coarser fixed effects, including models with incident instead of street fixed effects.

The additional control variables X_i include controls for wildfire vulnerability at the home site. These include ground slope, aspect, and vegetation type from LANDFIRE (Rollins 2009). Some specifications also include property characteristics (lot size, building square footage, number of bedrooms).

Difference in differences

We summarize the overall effects of the wildfire building standards using a difference-in-differences (DiD) model that pools jurisdictions and time periods. We divide the sample into 3 time periods: before 1998; 1998–2007; and 2008 onwards. The latter two periods correspond to the end of the mid-1990s roofing

reforms and the introduction of the Chapter 7A requirements.

3.3 Structure to structure spread

To measure the effect of code-driven mitigation on likelihood of structure-to-structure spread, we estimate the effect of building vintage on likelihood of survival for neighboring homes. Our regression models are of the form,

$$1[Destroyed]_{isf} = \sum_{j=1}^{J} \rho_j NoCode_j + \sum_{j=1}^{J} \phi_j Code_j + \sum_{v=v_0}^{V} \beta_v D_i^v + \gamma_{sf} + X_i\alpha + \epsilon_{isf} \tag{2}$$

Like Equation (1), this specification controls for own year of construction and street-by-incident fixed effects. The additional regressors $NoCode_j$ and $Code_j$ are the number of neighbors within various distance bins j that were built before and after wildfire building codes. Homes are considered post-code in 1998 in SRA areas and in the year the area was first recommended as a VHFHSZ in LRA VHFHSZ areas. The coefficients ρ_j and ϕ_j for $j = 1, ..., J$ give the effect of these neighbors on own-structure survival. Our preferred specification uses 10-meter bins of wall-to-wall distance. For robustness, we also estimate a specification using centroid to centroid distances. With this latter measure, we define the closest bin as 0-30 meters because 30 meters roughly corresponds to 10 meters of wall-to-wall distance.[15] We apply some additional sample exclusions when estimating Equation 2: The sample is restricted to California since we can only reliably calculate footprint locations for California homes. We further drop condominiums and townhomes to focus on detached single family homes.

This regression identifies the causal effect of code-induced mitigation by neighboring homes if the code regime for neighboring homes is uncorrelated with other determinants of structure- and neighborhood-level risk. This assumption is bolstered by the street fixed effects, which focus on highly local variation.

15. The median building footprint area in the sample is 260 m^2. A hypothetical circular roof would thus have a radius of 9.1 meters and the centroid-to-centroid distance between two such homes would be 18.2 + wall-to-wall distance.

Intuitively, this specification compares homes on the same street during the same wildfire whose nearest neighbors were built in different years. One might still worry, however, that even within these narrow comparisons and even after controlling for own age, the age of a home's neighbors may still be correlated with other wildfire risk factors. We address this concern by exploring estimates for homes located slightly further away as a placebo check. Properties located 50 to 100 meters away are outside of the 30-meter home ignition zone and so present more limited direct ignition threat, but should otherwise be subject to the same potential omitted variables as directly adjacent homes.

4 Results and Discussion

4.1 Own-structure survival

4.1.1 Graphical Evidence

Figure 3 shows the raw mean of *Destroyed* for State Responsibility Area homes according to year of construction. About 35% of exposed homes built prior to the mid-1990s were destroyed. These destruction probabilities begin to fall for homes built after the mid-1990s, decreasing quickly to about 20%. This sharp improvement in resilience corresponds in time to the post-Oakland Firestorm building reforms.

There is also some evidence in Figure 3 that homes built before about 1980 may be less likely to be destroyed than homes built just prior to the roof requirements. This may reflect the fact these older homes are more likely to have been re-roofed at least once after the mid-1990s and complied with the requirement for ignition-resistant materials at roof replacement. This pattern would imply a replacement cycle of about 30-40 years. Actual data on roof service lifetimes is scarce, but this period is within the range proposed by the National Association of Home Builders and other sources (National Association of Home Builders 2007). To the extent that some pre-building code homes may be re-roofed with code-compliant materials, our estimates of building code effects are conservative.

Appendix Figure 2 shows that homes built before and after the building code changes are otherwise comparable. There are no meaningful changes in site-level predictors of fire risk, like ground slope, or in structure characteristics such as building square footage.

Figure 4 presents the event study estimates from Equation (1). The top panel shows homes in SRA, where WUI building codes are mandatory. The markers show estimates and 95% confidence intervals for two-year vintage bins. The omitted bin is 1987-1988, so that these estimates can be interpreted as percentage-point differences in likelihood of destruction relative to a 1987 home. The vintage effects are flat prior to about 1993, and then begin to decrease clearly during the 1995–1999 period. The point estimates suggest additional reductions in loss probability following the adoption of the Chapter 7A codes in 2008, although the small number of homes in those bins leads to somewhat noisy vintage estimates. The overall difference in loss probability between a 1987 home and a 2008+ home is about 15 percentage points.

The middle panel shows homes in LRA areas that CAL FIRE recommended for Very High Fire Hazard Severity Zone designation. These areas again show flat trends in resilience prior to the 1991 Oakland Firestorm and subsequent Bates Bill. After the Bates Bill takes effect, the figure shows steady improvements that persist for about 12 years. The slope of these improvements appears more gradual than in SRA areas, which would be consistent with varied timing of adoption of the recommended codes across hundreds of individual municipalities. The post-2008 estimates are again noisy but imply further improvements in resilience following adoption of the Chapter 7A bulding codes.

Finally, the bottom panel of Figure 4 shows vintage effects for homes in areas not subject to California's codes. This includes fires in areas of Arizona, Colorado, Oregon, and Washington with no state or local wildfire building codes. It also includes LRA areas in California that were never recommended as Very High Fire Hazard Severity Zones. There are relatively few homes in these groups (Appendix Table 1), so we pool them together and use wider ten-year vintage bins to increase precision. Unlike the top two panels, there

is little evidence of improved resilience for homes built since the mid 1990s in areas without wildfire building codes.

4.1.2 Difference-in-Differences Estimates and Robustness Checks

The regression estimates in Table 1 summarize the effects of building code regimes on structure resilience. We show estimates for SRA, LRA-VHFHSZ, and no-codes areas. The various group by time period estimates can be interpreted as percentage point differences in likelihood of destruction relative to the reference category, which is pre-1998 homes in no-code areas. Column (1) shows the results with street by fire fixed effects. The near-zero coefficient on SRA $*$ Before 1998 implies that SRA homes built before the end of the mid-1990s building codes reforms perform similarly to homes of the same vintage in no-code areas. In contrast, SRA homes built during 1998–2007 or 2008–2016 perform 11.2 percentage points and 15.9 percentage points better, respectively. Differencing the pre-post differences across code areas yields a DiD estimate of 13.1 percentage points. The same pattern exists for LRA VHFHSZ areas, with no difference before 1998 and substantial improvements in the post-code periods. The DiD estimate for LRA VHFHSZ areas is 12.2 percentage points. Lastly, these improvements are smaller or absent in the no-codes comparison group, where homes built in the latter two time periods show only minor improvements that are not statistically distinguishable from zero. This is further evidence that the improvements in the code areas are due to building codes as opposed to other time-varying factors. The regression also includes controls for topography and vegetation. As expected, slope steepness at the home site increases vulnerability. A home on a 10 degree slope would be six percentage points less likely to survive than an otherwise-identical home on flat ground. This specification also includes fixed effects for the dominant vegetation type in the area of the home.[16]

The remaining columns of Table 1 explore alternative specifications. Col-

16. We assign vegetation types as the most common fuel model in a 25-meter radius around the home.

umn (2) adds building characteristics from the assessor data. Building square footage, number of bedrooms, and lot size do not appear to have meaningful effects on survival after controlling for year built and street. Home characteristics data are missing for about 20% of homes, which shrinks the sample in this third column. The final three columns show different sets of fixed effects. Column (3) includes separate fixed effects for each group of 100 adjacent homes on each street (ordered by house number). This specification addresses a potential concern that some streets in the sample include many hundreds of homes. The more granular fixed effects do not materially change the estimates. Column (4) groups homes on the same street and side of the street, assuming that house numbers follow the convention of odd and even numbers on opposite sides. This specification also does not change the results. Finally, Column (5) omits the street fixed effects and instead uses incident fixed effects. These incident dummies absorb fire-specific severity and arbitrary time trends in preparedness, but unlike the street fixed effects they do not adjust for differences between exposed homes within the same wildfire incident. The point estimates are slightly larger in SRA areas and slightly smaller in LRA VHFHSZ areas. Notably, the R^2 with incident fixed effects is smaller than with street fixed effects (0.39 vs 0.63). This difference implies that the street fixed effects remove variation in fire severity and other factors within incidents that might otherwise threaten identification. Nevertheless, the estimates are broadly stable across specifications. None of the estimated effects in Columns (2) through (5) are statistically different from those in Column (1).

In principle, the street fixed effects design could underestimate the effect of building codes due to the spillover benefits that we document in the next section. If code-induced investments also benefit nearby pre-code homes, the difference in outcomes between post-code and pre-code homes will understate the true effect of codes on survival.[17] This attenuation could be exacerbated by street fixed effects, which by construction are focused on homes located relatively close to each other. Such reasoning might lead one to prefer incident

17. This is a violation of the Stable Unit Treatment Value Assumption, or SUTVA (Rubin 1980).

fixed effects. In practice, as we show in the next section, spillovers are highly localized and are small compared to the own-resilience effects. In the spirit of exhaustiveness, Appendix Table 3 investigates the quantitative significance of SUTVA concerns by controlling directly for the number of pre- and post-code near neighbors in the street fixed effects regression. Ultimately, the differences in the estimated building code effects across these approaches – street fixed effects, incident fixed effects, and street fixed effects directly controlling for spillovers – are small enough that the various results are not statistically different.

4.2 Spillovers to neighboring properties

This section discusses the spillover benefits of code-induced mitigation to neighboring homes. Figure 5 shows regression results for Equation (2). The top panel shows effects of the presence of pre-code neighbors at various wall-to-wall distances. One or more pre-code neighbors within 0-10 meters increases own-structure loss probability during a wildfire by about 3 percentage points. These effects attenuate with distance, going to zero at 30-40 meters. Notably, this is the distance that wildfire managers consider to be the home ignition zone - the distance within which flammable material presents a risk of structure ignition (Cohen 2000, 2010; Calkin et al. 2014). The near-zero estimates beyond 40 meters bolster the validity of our research design. If our estimates for the nearest neighbors were biased by omitted predictors of resilience that co-vary within neighborhoods, one would expect that bias to also appear in estimates for homes another few dozen meters away (Figure 1b provides a useful illustration of these small distances).

The bottom panel shows the estimates for post-code neighbors. The confidence intervals for these estimates are wider since we observe fewer post-code homes. However, the point estimates suggest that the presence of close neighbors built under WUI building codes does not increase own-structure loss probability. There is also no implied effect of further-away post-code neighbors on own survival, offering additional placebo evidence to support the identifying

assumptions behind this regression.

Table 2 reports regression estimates for near neighbors that allow effects to vary with the number of neighbors. Column (1) considers neighbors at a wall-to-wall distance of less than 10 meters. A single pre-code neighbor increases own-structure loss risk by 2 percentage points. Two or more pre-code near neighbors increases the effect to 3.1 percentage points. This latter category mostly represents the effect of homes with two neighbors, given that very few homes have more than two neighbors within 10 meters (Appendix Table 2). The estimated effects of nearby post-code neighbors are close to zero. Column (2) shows the same regression using a restricted sample of areas where our measured distances between homes are likely to be particularly accurate. This sample includes denser areas (homes with at least 10 neighbors within a 200 meter radius; see Appendix Table 4) and fires since 2013 (for older incidents, it is more likely that parcel boundaries have changed since the fire). The estimated risk posed by pre-code neighbors is slightly larger in this specification, perhaps due to measurement error in wall-to-wall distances in the full sample. The estimates for post-code neighbors are again zero. As another robustness check, Columns (3) and (4) present similar results based on the centroid-to-centroid distance measure. One pre-code neighbor within 30 meters of centroid distance – roughly equivalent to 10 meters of wall distance – increases own loss risk by 2.6 percentage points, and two or more increases risk by 5 percentage points. Again, the point estimates for post-code neighbors are much smaller and close to zero.

5 Net Social Benefits of Building Standards

The empirical results show that compared to reliance on voluntary action alone, California's wildfire building codes substantially reduced average structure loss risk during a wildfire. They also reduced the risk to a close neighbor's home. Having documented these large resilience benefits, we now embed the results in a simple economic model in order to benchmark the approximate net social benefits of wildfire building codes. We use our estimates to explore

the minimum annual disaster probability at which universal mitigation investment is welfare-improving, given various values of neighborhood density and household risk aversion. This exercise is intentionally simple and abstracts from many theoretical and practical details that warrant investigation in future work.[18]

5.1 An Empirical Model of Hazard Mitigation

N identical individuals own homes in a neighborhood with an annual probability p^F of a disaster. In the event of a disaster, each home i's baseline probability of destruction is p_0^D. Up-front investment in a binary mitigation measure with cost m by homeowner i reduces own loss risk during a disaster by τ_{ii} and also reduces loss risk by τ_{ji} for a subset of neighbors $j \neq i$ (for example, in our application τ_{ji} is non-zero for neighbors within some distance of home i and zero for the remaining homes). Mitigation benefits are additive so that a home's destruction probability during a disaster is $p_i^D = p_0^D - M_i\tau_{ii} - \sum_{j\neq i} M_j\tau_{ij}$, where $M_i \in \{0, 1\}$ is the homeowner's binary mitigation decision. We capture myopia with perceived disaster probabilities $\hat{p}_i^F \leq p^F$. These perceived probabilities vary across households.

Consistent with stylized facts (e.g., Klein (2018)), disaster losses are partially insured: destruction of the home imposes insured losses L^I for the insurer and uninsured losses L^U for the homeowner. We initially assume frictionless property insurance markets that offer coverage at actuarially fair annual premia $k_i = p^F p_i^D L^I$. The coexistence of uninsured risk exposure and actuarially fair premiums reflects uninsurable losses (for example, mental and emotional distress) and/or household myopia. The exposition in this section uses a static model with no discounting. Our actual calculations assume that households discount future costs and benefits at a 5% annual rate.

We define two potential measures of net benefit, *risk-neutral cost effectiveness* and *expected utility benefit*. Risk-neutral cost effectiveness is simply the

18. A more detailed theoretical treatment of private risk mitigation can be found in Costello, Quérou, and Tomini (2017).

difference in expected cost with and without mitigation. Expected utility benefit accounts for additional benefits from reduced exposure to uninsured risk. Appendix Section D presents a sketch of the expected utility model. Actually calculating expected utility requires strong assumptions about households' risk aversion, permanent income, ability to smooth across time periods, and other factors. We focus the derivation in this section on risk-neutral cost effectiveness (hereafter, "cost effectiveness"). We note that cost effectiveness is a lower bound on net benefits as long as homeowners are not risk-loving.

Total expected cost across households is,

$$\sum_{i=1}^{N}[p^F(p_0^D - \sum_{j=1}^{N} M_j\tau_{ij})(L^I + L^U) + M_i m] \tag{3}$$

The social benefit of mitigation by a homeowner is the sum of private and external benefits (reduced loss probability) minus mitigation costs,

$$p^F(\tau_{ii} + \sum_{j\neq i}\tau_{ji})(L^I + L^U) - m \tag{4}$$

In contrast, a homeowner's perceived change in private expected losses with mitigation is,

$$\hat{p}_i^F\tau_{ii}(L^I + L^U) - m \tag{5}$$

The presence of internalities ($\hat{p}_i^F$) and externalities (τ_{ji}) means that Expression (5) is weakly less than Expression (4). If households minimize perceived private expected cost, the voluntary takeup rate will be,

$$\mu = \frac{1}{N}\sum_{i=1}^{N}\mathbb{1}[\hat{p}_i^F\tau_{ii}(L^I + L^U) \geq m] \tag{6}$$

which depends on the distribution of perceived probabilities. Assuming $\hat{p}_i^F$ is independently distributed, total actual expected costs under voluntary takeup are $\sum_{i=1}^{N}[p^F(p_0^D - \sum_{j=1}^{N}\mu\tau_{ij})(L^I + L^U) + \mu m]$.

Now consider a policy requiring mitigation by all households. Total expected

cost is given by setting $M_i = 1$ for all households in Expression (3). The difference in expected cost under the mandate vs. the voluntary regime is,

$$(1-\mu)\Big[p^F[\sum_{i=1}^{N}\sum_{j=1}^{N}\tau_{ij}(L^I + L^U)] - Nm\Big] \tag{7}$$

The Samuelson (1954)-style expression inside the outer brackets is the sum of private and external mitigation benefits minus total mitigation costs. The factor of $(1-\mu)$ reflects takeup by a fraction μ of the population without the mandate. A mandate weakly reduces total expected cost if the social value of mitigation (Expression 4) is positive and strictly increases expected cost if the social value of mitigation is negative.

Before proceeding, it is worth noting some restrictions in this model. We assume additive mitigation benefits. There is some support for this in the data - for example, the approximate linearity of risk spillovers for one vs. two near neighbors in Table 2. A more complex model could instead allow the benefits of mitigation to vary with mitigation effort by others, so that mitigation becomes a strategic game between homeowners.[19] We also assume identical homes and homeowners within the neighborhood and independently distributed perceived disaster probabilities. We explore heterogeneity in fire risk and neighborhood density across neighborhoods (zip codes) in the empirical implementation. Expanding the model to allow for greater heterogeneity within neighborhoods would allow a more nuanced exploration of the distribution of net benefits. We see these extensions as useful areas for future work, but prefer this simple and transparent model for the purposes of benchmarking approximate net benefits.

5.2 Implementation

We implement the model for a random sample of 100,000 homes in 424 California zip codes in wildfire hazard areas. Each zip code is modeled as a separate

19. Shafran (2008) develops such a model for vegetation maintenance in wildfire areas.

neighborhood with its own fire probability and number of close neighbors affected by risk spillovers.

Mitigation Benefits

The empirical results in Section 4 allow us to estimate τ_{ii} and τ_{ij}. The reduced form estimates of the effect of building codes on structure survival can be seen as intent-to-treat estimates of the effect of mitigation investment. Given a rate of voluntary takeup for the bundle of mitigation measures in the building code, the standard Wald estimator gives τ_{ii} and τ_{ij} as the ratio of the reduced form estimates and the difference in takeup rates in the codes and no-codes areas.[20] In the theoretical model, voluntary takeup μ depends on beliefs about fire risk and might thus be expected to vary between neighborhoods. In practice, survey data on voluntary mitigation is scarce and the available data do not allow us to calculate neighborhood-specific voluntary takeup rates. Our base calculation uses a voluntary takeup rate of one-third. Appendix Section E describes how we calculate this takeup rate based on CAL FIRE inspections of destroyed and surviving homes for a sample of recent California wildfires, including caveats about limitations of the data (which is nevertheless the best existing survey evidence for our purposes).

Our reduced form estimate for own survival benefit for SRA homes implies a value of τ_{ii} of 0.195 ($\frac{.13.1}{1-0.33} = 0.195$). For τ_{ij}, our reduced form estimate of neighbor benefits in Table 2 is 2.3 percentage points for neighbors up to 10 meters away in wall-to-wall distance (and close to zero beyond 10 meters). The effect also appears approximately linear in number of neighbors that mitigate, at least over the limited range of number of neighbors that we can observe in the data. Thus, our estimate of τ_{ij} is 0.034 for each neighbor within 10 meters ($\frac{-.0.023}{1-0.33} = -0.034$) and zero for all further-away neighbors.[21]

20. See e.g., Angrist and Pischke (2009) p. 127-133. This calculation assumes perfect compliance by homes subject to codes and a homogeneous effect of mitigation on structure survival.

21. In principle, mitigation at further-away homes also benefits home i through potential "domino effects": a near neighbor becomes less likely to ignite due to action by that neighbor's neighbor. Our estimates imply that these effects are small on average (on the order of

Sampling at-risk homes

Unlike the empirical analysis of building code effects, which uses homes located inside historical wildfire perimeters, the net benefits calculation considers a group of homes sampled randomly from *all* California homes in fire hazard areas. To construct this sample, we start from all California homes in designated wildfire severity zones (SRA or LRA) and filter out zip codes containing fewer than 100 homes. We then randomly draw $min(n, 250)$ homes from each remaining zip code where n is the number of homes in the zip code. This yields a sample of 100,230 homes subject to wildfire building codes in 424 zip codes.

We identify each home's annual wildfire exposure probability p^F using data from the United States Forest Service (USFS) Wildfire Risk to Communities project. This measure captures the annual probability of moderate to severe wildfire exposure (Scott et al. 2020).[22] We also identify each home's number of neighbors within 30 meters of centroid to centroid distance. This roughly corresponds to the number of neighbors within 10 meters of wall-to-wall distance (see footnote 15) and is less demanding to calculate in this new random sample of homes.

Costs and Losses

Our main estimates of mitigation costs come from Headwaters Economics (2018). That study uses construction estimating tools from R.S. Means to calculate the additional cost to build a home that complies with California's Chapter 7A wildfire code. Overall, that study reports zero cost difference between code-compliant and standard designs. This counter-intuitive result arises because one aspect of code-compliant construction (exterior siding) is substantially *less* expensive than standard designs. These savings offset increased costs for roofing, landscaping, and other areas. Our main estimate of

0.034^2).

22. We use the product of Burn Probability (the total annual wildfire probability) and Flame Length Exceedance Probability 4 (conditional on any fire, the probability that the fire will reach moderate or greater threat status).

code compliance costs ignores savings from code-compliant siding on the theory that owners would make this choice even without standards. This gives a cost estimate of $15,660. We also report results using alternative cost estimates from the National Association of Home Builders. Their estimated wildfire code compliance costs for newly-built California homes include a low scenario of $7,868 and a high scenario of $29,429 (Home Innovation Research Labs 2020).[23] Finally, we show a "retrofit" scenario based on Headwaters Economics' estimate of $62,760 to fully replace roofing and exterior walls on an existing home.

Our assumed losses for a home destroyed by wildfire include rebuilding costs, belongings and contents of the home, alternative living costs while the home is rebuilt, and costs for debris removal and hazardous waste cleanup. Rebuilding, contents, and alternative living arrangements costs come from the FEMA Hazus model (Federal Emergency Management Agency 2021). We match as closely as possible the characteristics of the model home used to estimate code compliance costs in Headwaters Economics (2018).[24] We regionally adjust these costs to California using geographic adjustment factors from R.S. Means provided in the Hazus model. The resulting cost of reconstruction and contents losses is $766,725. The Hazus cost for alternative living arrangements and disruption (e.g., moving costs) for 24 months is $61,696. For debris removal (which is borne by homeowners) and hazardous waste cleanup (borne by governments), we add a total of $150,000.[25]

We assume that mitigation investments have a protective lifetime of 40 years.

23. These are costs to meet the International Wildland Urban Interface Code, which is similar to the Chapter 7A code. In the low scenario, we ignore $3,839 of gross savings from code-compliant siding as we do for Headwaters Economics (2018).

24. The model home in Headwaters Economics (2018) is a 2,500 square-foot single-story home with 2-car garage constructed in Montana for $140 per square foot. We use Hazus cost estimates for the same size, number of stories, and garage in the "custom" construction class, the closest corresponding cost category.

25. For cleanup and debris removal costs, see Klein (2018); Lewis, Sukey, "Cleaning Up: Inside the Wildfire Debris Removal Job That Cost Taxpayers $1.3 Billion." *The California Report*, July 19, 2018; and Bizjak, Tony, "State's Effort to Clean Up After the Camp Fire is Off to a Rocky Start", *Sacramento Bee*, January 13, 2019.

In the absence of mitigation investment, the probability of loss when exposed to wildfire for a home with no close neighbors is 44%.[26] Households discount future costs and benefits at 5% per year.

5.3 Results of Net Benefit Calculation

Figure 6 illustrates the results of this calculation. The scatter plot shows zip code-level averages of annual wildfire hazard and number of near neighbors. The wildfire hazard reaches strikingly high levels: several zip codes face annual event probabilities above 2% per year, implying a significant wildfire exposure every 50 years on average. The color scale shows the social benefit of mitigation investment in each zip code following Expression (4). The dashed black line shows a threshold for positive net benefits of building standards. Homes to the right of this line have lower expected costs with mitigation investments than without. The threshold bends to the left as the average number of neighbors increases due to the spillover benefits of mitigation across properties. For a home with zero near neighbors, the break-even annual wildfire hazard is about 0.45%. The break-even annual hazard for a home with 1 near neighbor is 0.39% and for a home with 4 near neighbors it is 0.27%.

These cost effectiveness estimates are a lower bound on the net benefits of universal mitigation. One important reason for this is that many homeowners are substantially underinsured for natural disaster losses. Mitigation investments yield additional welfare benefits by reducing exposure to uninsured risk. Even for properties covered by homeowners insurance, Klein (2018) reports that coverage limits for wildfire-destroyed properties are often up to 50% below actual losses. Table 3 reports break-even annual wildfire probabilities for a home with 1.2 near neighbors (the sample mean) based on the expected utility model in Appendix Section D. Although this model requires additional strong assumptions, these back-of-the-envelope numbers depict how risk aversion might affect program benefits. For example, if code compliance costs $15,660, a homeowner

26. The approximate destruction probability for SRA homes under current codes is $0.4 - .156 = .244$ (Table 1). Combined with the own-structure mitigation effect, this gives the implied loss probability in the absence of mitigation: $.244 + .195 = 0.44$.

with a coefficient of relative risk aversion of 5 and an insurance policy covering two thirds of total losses would be better off investing in mitigation wherever the annual probability of a damaging wildfire exceeds 0.33%.[27]

Table 3 also reports results using other estimates of mitigation cost. The zero net cost estimate from Headwaters Economics (2018) leads to positive benefits for any level of hazard. The two additional estimates from Home Innovation Research Labs (2020) bracket the main cost estimate. Finally, the estimated retrofit cost of $62,760 results in much higher break-even hazard levels for existing homes. This kind of full retrofit to existing homes appears to generate positive benefits only for a handful of areas with extreme fire hazard.

Beyond risk aversion, WUI building codes likely have additional benefits that are not included in our calculations. These include reductions in public expenditures on firefighting during large wildfires (Baylis and Boomhower 2019), reduced demand for public assistance among fire victims (Deryugina 2017), avoided emotional and mental distress, and less need for public safety power shutoffs that interrupt electricity service during high fire-risk periods.[28] Moreover, if imperfections in property insurance markets cause premiums to systematically exceed expected damages, then mitigation becomes more attractive because it reduces the risk which must be insured in the imperfect insurance market. Scientists also agree that annual wildfire probabilities are increasing throughout North America such that net benefits of WUI building codes will grow in the future. On the other hand, a more detailed analysis would need to consider possible heterogeneity in household net benefits. If some individuals have very high perceived private costs of choosing fire resistant materials and landscaping (perhaps due to strong aesthetic preferences), building standards could be costly for these households.

27. Studies of the property insurance market generally report high implied levels of relative risk aversion. Cohen and Einav (2007) and Sydnor (2010) examine deductible choices in auto and homeowners insurance respectively and find double-digit values for the mean household across a variety of specifications. Evidence from other markets suggests values closer to the low single digits (e.g., Gertner 1993; Chetty 2006).

28. For a systematic review of catastrophic wildfire costs, see Feo et al. (2020).

In summary, our empirical estimates and model calculations suggest that wildfire building codes yield unambiguous benefits in the most fire-prone areas of California, especially when homes are clustered closely together such that there are large risk spillovers. For areas with lower fire risk, the sign of net benefits is more sensitive to modeling choices and the assumed co-benefits of building codes. Further work on the cost-effectiveness of wildfire mitigation measures in low- and moderate-risk areas is an important area for additional research.

6 Conclusion

Efficient investment in adaptation is essential in the face of rapidly accelerating disaster losses. Yet takeup of protective technologies and behaviors is thought to be constrained by misperception of risk, insurance market failures, spatial externalities, and other frictions. The pressing question facing researchers and policymakers is how to best respond to these market barriers. One suite of policies focuses on increasing voluntary takeup through information or subsidies. Another option is to override individual decisions and mandate certain investments in hazard areas. These policies may differ substantially in their effects and their political acceptability.

This study contributes evidence on the effects and net economic benefits of a mandatory adaptation policy. We provide the first comprehensive empirical evaluation of California's strict wildfire building codes. The analysis uses a new dataset of property-level data on U.S. homes destroyed by wildfire that was created for this study. The new data combine nationwide property characteristics information with post-fire damage assessment records collected from numerous local and state agencies. This resource has three important advantages: it collects and harmonizes previously disparate damage data; it contains a complete record of homes that survive as well as homes that are destroyed; and unlike data for floods and other losses, it is reported at the individual property level. Beyond this study, the new data will enable additional important research on disaster losses.

The empirical analysis in this study is bolstered by our ability to observe differences in building code regimes over time, across jurisdictions within California, and between California and other states. The empirical strategy isolates the effect of building code changes using a fixed effects design that compares outcomes for pre- and post-code homes on the same residential street. This approach narrows the comparison to homes experiencing essentially identical wildfire exposures.

The results show that compared to reliance on voluntary action alone, California's wildfire building codes reduced average structure loss risk during a wildfire by 16 percentage points, or about a 40% reduction. They also reduced the risk to a close neighbor's home by about 2 percentage points or 6%. These striking results imply materially different levels of resilience in communities with and without such codes. Moreover, the spatial externalities provide a classic rationale for public policy intervention even if homeowners were fully informed and rational about wildfire risk.

Having documented these large resilience benefits, we then show how the empirical results can be embedded in an economic model that accounts for mitigation costs, spatial spillovers, and risk preferences. We use our results and other values from the literature to provide a back-of-the-envelope approximation of the minimum annual wildfire risk at which universal mitigation generates positive net benefits. In the most fire-prone areas of California, the calculation shows large net benefits of building codes for new homes. Given the high cost of fully retrofitting existing homes to modern standards, full retrofits do not pass a benefit-cost test in most areas. An important task for future research is to identify individual low-cost investments that can cost-effectively improve the resilience of existing homes in high hazard areas.

In summary, the data show that an adaptation mandate substantially improved resilience to wildfires and a cost-benefit approximation suggests that low takeup without standards is more likely driven by market failures than by fully-informed individual decisionmaking. These results are immediately applicable to policy debates in the U.S., Canada, Australia, the European

Union, and other jurisdictions that are seeking to respond to escalating wildfire risk. More broadly, these facts should be of interest to policymakers and researchers confronting other hazards like floods, hurricanes, and heat waves where voluntary takeup of self-protective investments seems to be constrained by similar barriers. As climate change continues to increase disaster losses, this type of research on the role of public policy and market incentives in shaping adaptation is increasingly urgent.

References

Alexandre, Patricia M, Susan I Stewart, Nicholas S Keuler, Murray K Clayton, Miranda H Mockrin, Avi Bar-Massada, Alexandra D Syphard, and Volker C Radeloff. 2016. "Factors Related To Building Loss Due To Wildfires In The Conterminous United States." *Ecological Applications* 26 (7): 2323–2338.

Allstate Indemnity Company. 2018. *California Homeowner's Insurance Rate Filing 18-2993.* California Department of Insurance.

Angrist, Joshua D., and Jörn-Steffen Pischke. 2009. *Mostly Harmless Econometrics: An Empiricist's Companion.* Princeton University Press.

Bakkensen, Laura, and Lint Barrage. Forthcoming. "Going Under Water? Flood Risk Belief Heterogeneity And Coastal Home Price Dynamics." *The Review Of Financial Studies.*

Baylis, Patrick, and Judson Boomhower. 2019. *Moral Hazard, Wildfires, And The Economic Incidence Of Natural Disasters.* NBER Working Paper No. 26550.

California Department of Insurance. 2018. *The Availability And Affordability Of Coverage For Wildfire Loss In Residential Property Insurance In The Wildland-Urban Interface And Other High Risk Areas Of California.* Technical report.

Calkin, David E., Jack D. Cohen, Mark A. Finney, and Matthew P. Thompson. 2014. "How Risk Management Can Prevent Future Wildfire Disasters In The Wildland-Urban Interface." *Proceedings Of The National Academy Of Sciences* 111 (2): 746–751.

Chetty, Raj. 2006. "A New Method of Estimating Risk Aversion." *American Economic Review* 96, no. 5 (December): 1821–1834.

Cohen, Alma, and Liran Einav. 2007. "Estimating Risk Preferences from Deductible Choice." *American Economic Review* 97, no. 3 (June): 745–788.

Cohen, J.D., and R. Stratton. 2008. *Home Destruction Examination: Grass Valley Fire.* US Department of Agriculture, Forest Service, Report R5-TP-026b.

Cohen, Jack D. 2000. "Preventing Disaster: Home Ignitability In The Wildland-Urban Interface." *Journal Of Forestry* 98 (3): 15–21.

———. 2010. "The Wildland-Urban Interface Fire Problem." *Fremontia* 38 (2-3): 16–22.

Costello, Christopher, Nicolas Quérou, and Agnes Tomini. 2017. "Private Eradication Of Mobile Public Bads." *European Economic Review* 94:23–44.

Dehring, Carolyn A, and Martin Halek. 2013. "Coastal Building Codes And Hurricane Damage." *Land Economics* 89 (4): 597–613.

Deryugina, Tatyana. 2017. "The Fiscal Cost of Hurricanes: Disaster Aid versus Social Insurance." *American Economic Journal: Economic Policy* 9, no. 3 (August): 168–98.

Donovan, Geoffrey, Patricia Champ, and David Butry. 2007. "Wildfire Risk And Housing Prices: A Case Study From Colorado Springs." *Land Economics* 83 (2): 217–233.

Federal Emergency Management Agency. 2020. *Building Codes Save: A Nationwide Study,* November.

———. 2021. *Hazus Inventory Technical Manual,* February.

Feo, Teresa J., Samuel Evans, Amber J. Mace, Sarah E. Brady, and Brie Lindsey. 2020. *The Costs Of Wildfire In California: An Independent Review Of Scientific And Technical Information.* California Council on Science and Technology.

Gallagher, Justin. 2014. "Learning about an Infrequent Event: Evidence from Flood Insurance Take-Up in the United States." *American Economic Journal: Applied Economics* 6, no. 3 (July): 206–33.

Gertner, Robert. 1993. "Game Shows And Economic Behavior: Risk-Taking On "Card Sharks"." *The Quarterly Journal Of Economics* 108 (2): 507–521.

Gibbons, Philip, Linda Van Bommel, A Malcolm Gill, Geoffrey J Cary, Don A Driscoll, Ross A Bradstock, Emma Knight, Max A Moritz, Scott L Stephens, and David B Lindenmayer. 2012. "Land Management Practices Associated With House Loss In Wildfires." *Plos One* 7 (1): e29212.

Grad, Shelby. 1996. "O.C. Stopped Warning Of 'High-Hazard' For Fire Area." *Los Angeles Times* (October).

Hallstrom, Daniel G., and V. Kerry Smith. 2005. "Market Responses To Hurricanes." *Journal Of Environmental Economics And Management* 50 (3): 541–561.

Headwaters Economics. 2018. *Building A Wildfire-Resistant Home: Codes And Costs,* November.

Home Innovation Research Labs. 2020. *Cost Impact Of Building A House In Compliance With IWUIC.* Report No. CR1328-2 12302020, December.

Insurance Institute for Business and Home Safety. 2019. *Wildfire Codes & Standards: State-By-State Reference Guide.*

Intini, Paolo, Enrico Ronchi, Steven Gwynne, and Noureddine Bénichou. 2020. "Guidance On Design And Construction Of The Built Environment Against Wildland Urban Interface Fire Hazard: A Review." *Fire Technology* 56:1853–1883.

Jacobsen, Grant, and Matthew Kotchen. 2013. "Are Building Codes Effective At Saving Energy? Evidence From Residential Billing Data In Florida." *The Review Of Economics And Statistics* 95 (1): 34–49.

Klein, Kenneth S. 2018. "Minding The Protection Gap: Resolving Unintended, Pervasive, Profound Homeowner Underinsurance." *Connecticut Insurance Law Journal* 15.

Kousky, Carolyn, Erzo F. P. Luttmer, and Richard J. Zeckhauser. 2006. "Private Investment And Government Protection." *Journal Of Risk And Uncertainty* 33 (1): 73–100.

Kramer, H Anu, Miranda H Mockrin, Patricia M Alexandre, Susan I Stewart, and Volker C Radeloff. 2018. "Where Wildfires Destroy Buildings In The US Relative To The Wildland–Urban Interface And National Fire Outreach Programs." *International Journal Of Wildland Fire* 27 (5): 329–341.

Kunreuther, Howard C., and Erwann O. Michel-Kerjan. 2011. *At War With The Weather: Managing Large-Scale Risks in a New Era of Catastrophes.* MIT Press.

Larimer County. 2020. *Residential Requirements: A Guide For The General Contractor Or Home Builder.* Larimer County Community Development Division, June.

Levinson, Arik. 2016. "How Much Energy Do Building Energy Codes Save? Evidence from California Houses." *American Economic Review* 106, no. 10 (October): 2867–94.

Maclay, C.K. 1997. "State Fire Prevention Law Fizzles." *Contra Costa Times* (August).

McCoy, Shawn J., and Randall P. Walsh. 2018. "Wildfire Risk, Salience And Housing Demand." *Journal Of Environmental Economics And Management* 91:203–228.

Miller, Rebecca K, Christopher B Field, and Katharine J Mach. 2020. "Factors Influencing Adoption And Rejection Of Fire Hazard Severity Zone Maps In California." *International Journal Of Disaster Risk Reduction,* 101686.

National Association of Home Builders. 2007. *Study Of Life Expectancy Of Home Components,* February.

Quarles, Stephen, Pam Leschak, Rich Cowger, Keith Worley, Remington Brown, and Candace Iskowitz. 2013. *Lessons Learned From Waldo Canyon.* Insurance Institute for Business & Home Safety.

Rollins, Matthew G. 2009. "LANDFIRE: a nationally consistent vegetation, wildland fire, and fuel assessment." *International Journal of Wildland Fire* 18 (3): 235–249.

Rubin, Donald B. 1980. "Randomization Analysis Of Experimental Data: The Fisher Randomization Test Comment." *Journal Of The American Statistical Association* 75 (371): 591–593.

Samuelson, Paul A. 1954. "The Pure Theory Of Public Expenditure." *The Review Of Economics And Statistics* 36 (4): 387–389.

Scott, Joe H, Julie W Gilbertson-Day, Christopher Moran, Gregory K Dillon, Karen C Short, and Kevin C Vogler. 2020. *Wildfire Risk To Communities: Spatial Datasets Of Landscape-Wide Wildfire Risk Components For The United States.* Forest Service Research Data Archive.

Shafran, Aric P. 2008. "Risk Externalities And The Problem Of Wildfire Risk." *Journal Of Urban Economics* 64 (2): 488–495.

Simmons, Kevin M, Jeffrey Czajkowski, and James M Done. 2018. "Economic Effectiveness Of Implementing A Statewide Building Code: The Case Of Florida." *Land Economics* 94 (2): 155–174.

Snyder, Tom. 1995. "New Fire Safety , Roof Regulations Considered - City To Discuss Guidelines Oct. 3." *The Orange County Register* (September).

Sommer, Lauren. 2020. "Rebuilding After A Wildfire? Most States Don't Require Fire-Resistant Materials." *National Public Radio* (November).

Stewart, George. 1995. "North Tustin Spared From Fire Map." *The Orange County Register* (December).

Sullivan, Julie Fate. 1995. "City Spares Area From Fire Hazard Designation." *Los Angeles Times* (October).

Sydnor, Justin. 2010. "(Over)Insuring Modest Risks." *American Economic Journal: Applied Economics* 2 (4): 177–199.

Syphard, Alexandra D, Teresa J Brennan, and Jon E Keeley. 2014. "The Role Of Defensible Space For Residential Structure Protection During Wildfires." *International Journal Of Wildland Fire* 23 (8): 1165–1175.

———. 2017. "The Importance Of Building Construction Materials Relative To Other Factors Affecting Structure Survival During Wildfire." *International Journal Of Disaster Risk Reduction* 21:140–147.

Syphard, Alexandra D, and Jon E Keeley. 2019. "Factors Associated With Structure Loss In The 2013–2018 California Wildfires." *Fire* 2 (3): 49.

Syphard, Alexandra D, Jon E Keeley, Avi Bar Massada, Teresa J Brennan, and Volker C Radeloff. 2012. "Housing Arrangement And Location Determine The Likelihood Of Housing Loss Due To Wildfire." *Plos One* 7 (3): e33954.

Troy, Austin. 2007. "A Tale Of Two Policies: California Programs That Unintentionally Promote Development In Wildland Fire Hazard Zones." *Living On The Edge (Advances In The Economics Of Environmental Resources, Volume 6). Emerald Group Publishing Limited,* 127–140.

Wagner, Katherine R. H. Forthcoming. "Adaptation And Adverse Selection In Markets For Natural Disaster Insurance." *American Economic Journal: Economic Policy.*

Yost, Walt. 1996. "Accord Douses Controversy On Fire Protection." *Sacramento Bee* (October).

Figure 1: Building and Validating the Dataset

(a) Roof Locations and Damage Reports

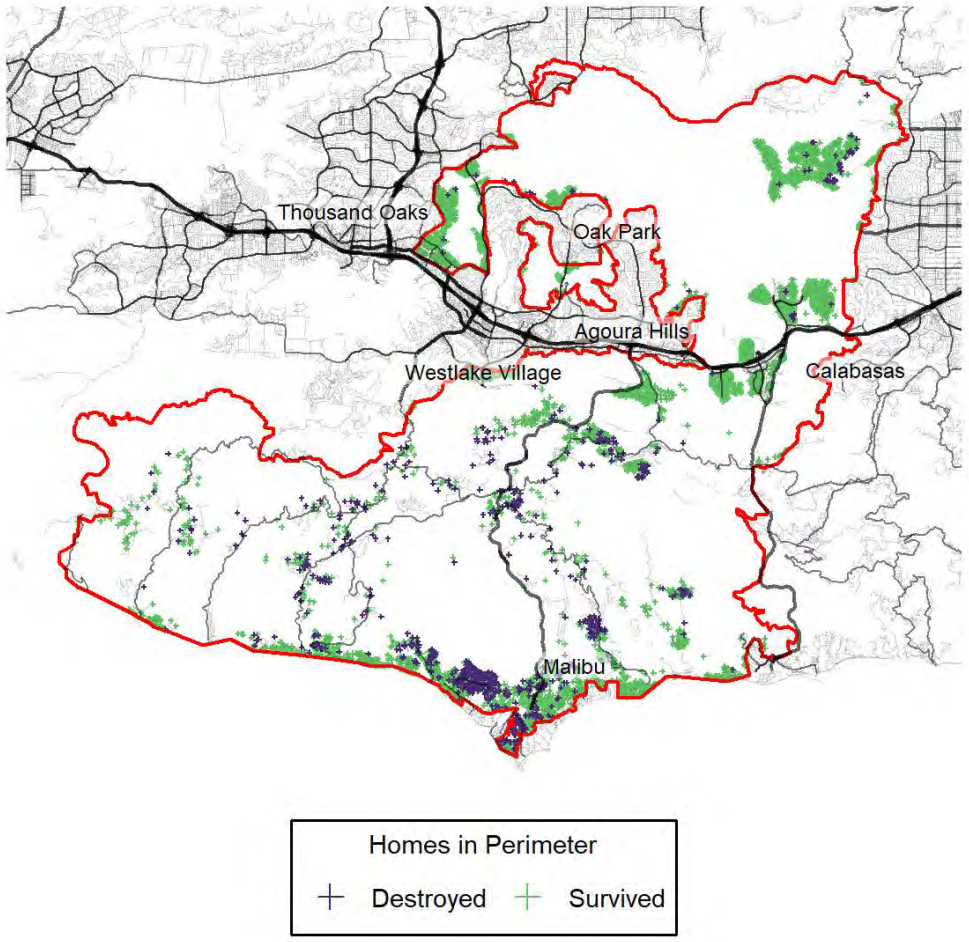


(b) Distance Between Structures



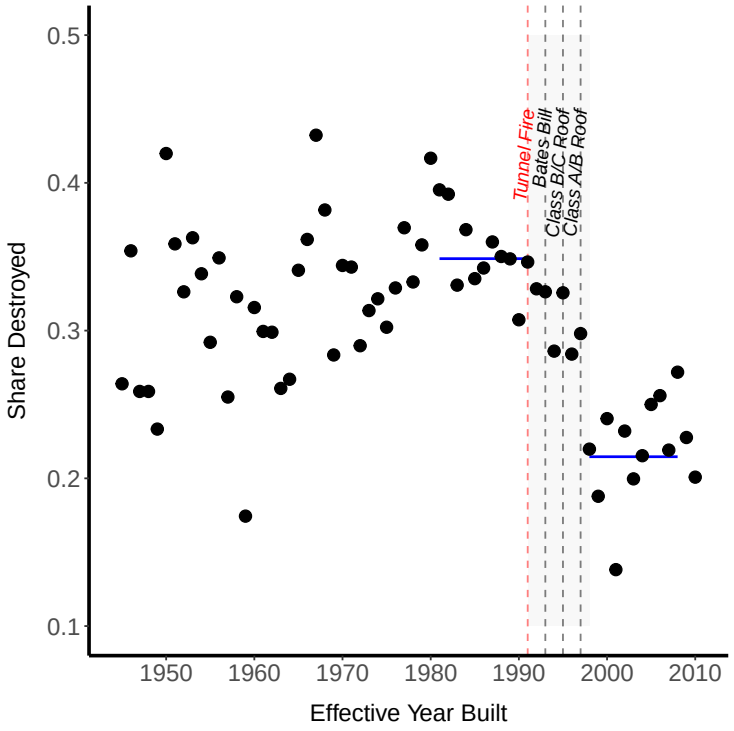
Notes: Best viewed in color. **(Panel a)** Homes affected by the Carr Fire (2018). Markers are geocoded structure locations. Green square markers are structures reported as destroyed in the damage inspection data; yellow circular markers are all other homes in the data. The background image is aerial imagery before and after the Carr Fire from NearMap. Blue building shapes and gray parcel outlines are the building footprint data and assessor parcel boundary data used to identify structure locations (see text for details). **(Panel b)** Examples of calculated distances between structure walls. Images are pre-fire aerial imagery of homes affected by the Thomas Fire (2017) and Tubbs Fire (2017). Figure shows the wall-to-wall distance from the structure marked '0' to the other homes.

Figure 2: Merged data example: Structure-level outcomes in the Woolsey Fire



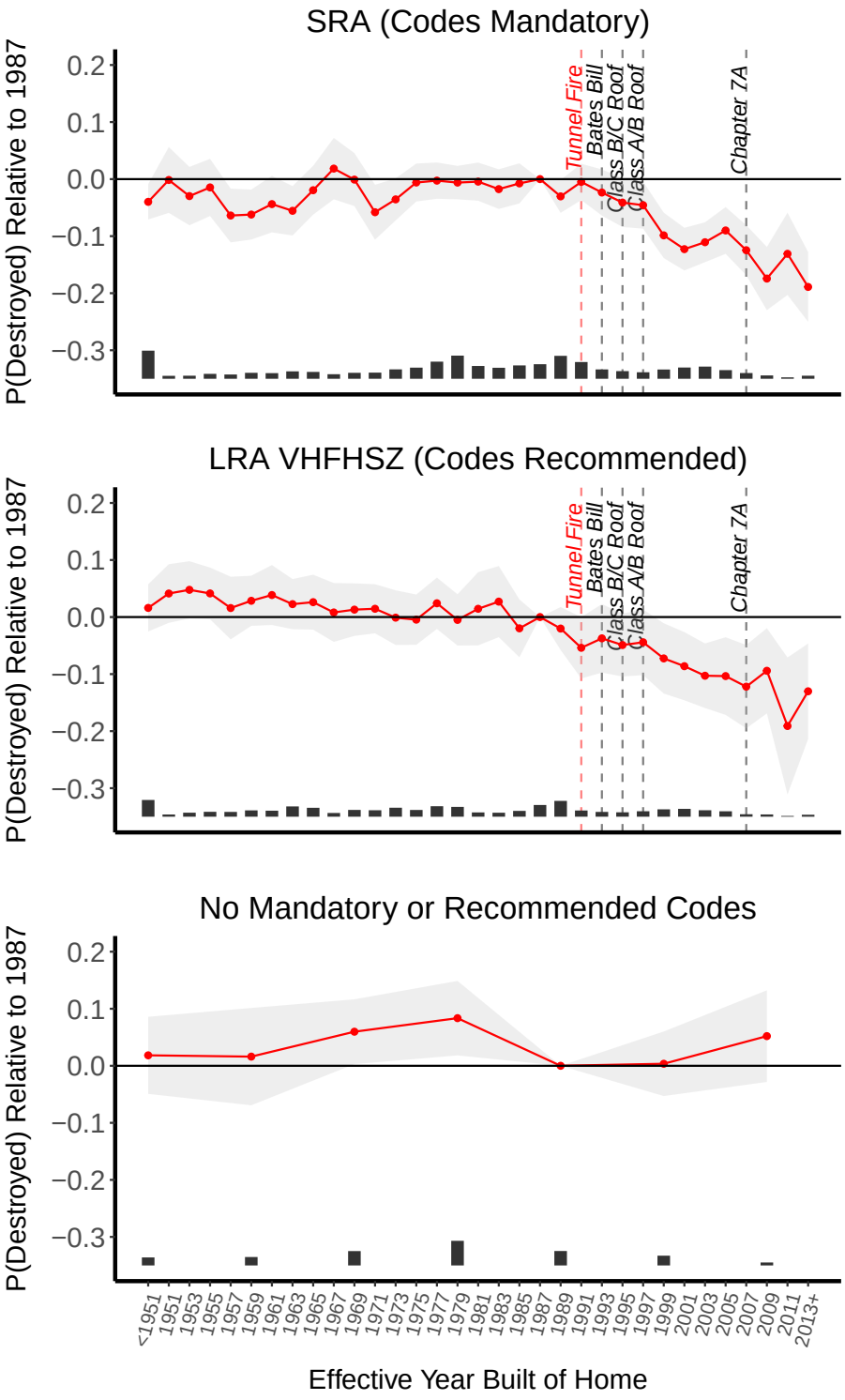
Notes: Best viewed in color. Example of merged inspection, assessor, and fire perimeter data for one fire in our dataset. Markers indicate the locations of single family homes inside the final Woolsey Fire perimeter (shown in red). Purple homes are reported destroyed in damage inspection data; green homes are all remaining homes in the ZTRAX assessment data. Street map data are from Open Street Map.

Figure 3: Share Destroyed by Year Built in Mandatory Code Areas



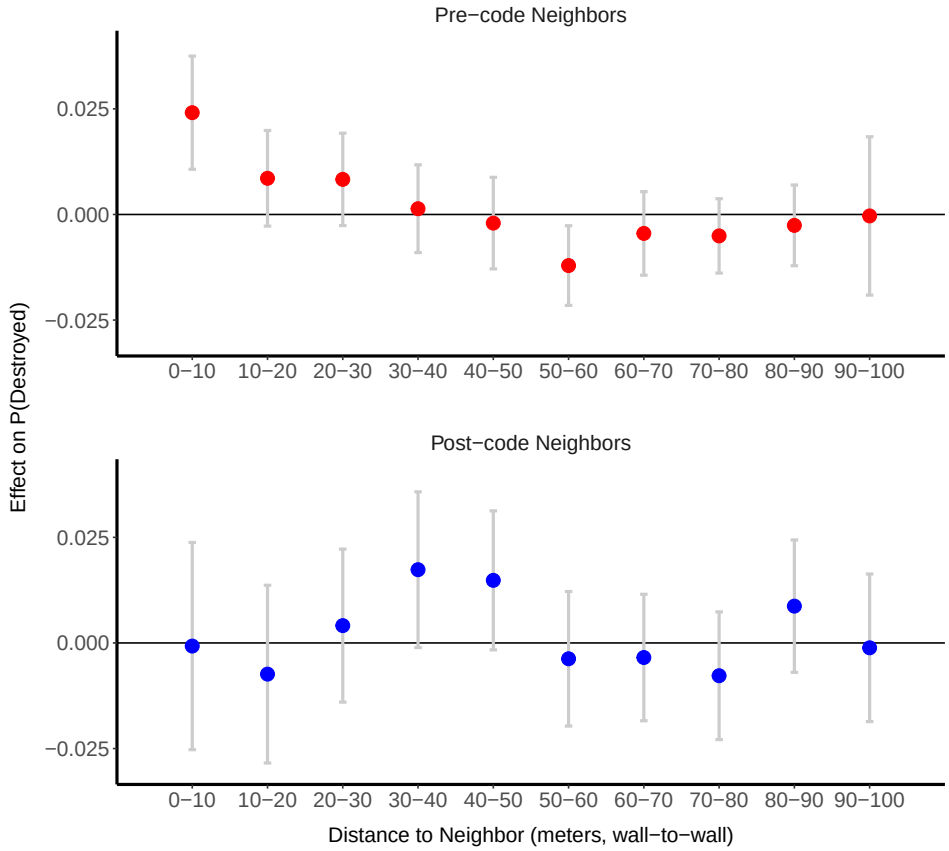
Notes: This figure shows the share of homes inside wildfire perimeters that were destroyed, according to the year that the home was built. The sample is limited to homes in State Responsibility Area. The blue lines show ten-year averages.

Figure 4: Estimated Vintage Effects by Building Code Jurisdiction



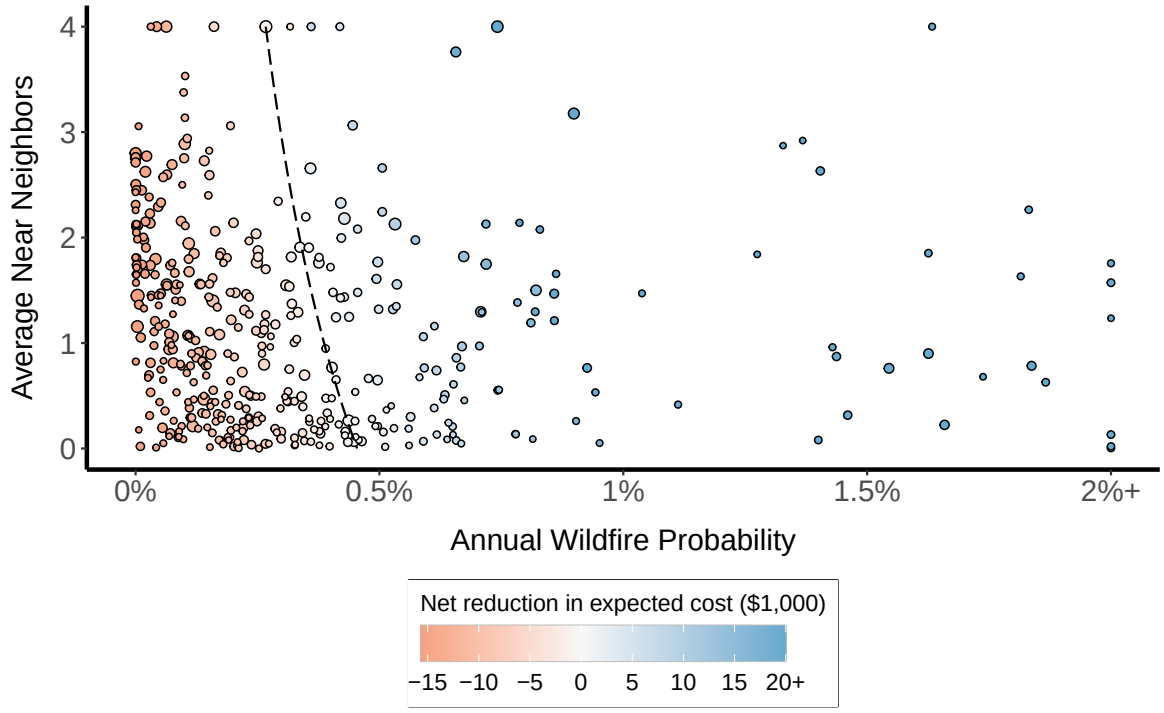
Notes: Figure plots point estimates and 95% confidence intervals from 3 separate OLS regressions of an indicator for Destroyed on bins of effective year built. Each regression includes street by incident fixed effects and other controls described in the text. Panel (a) shows homes in state responsibility area (SRA). Panel (b) shows homes in local responsibility area (LRA) inside state-recommended Very High Fire Hazard Severity Zones (VHFSZ). Panel (c) shows homes in states without wildfire building codes (AZ, CO, OR, WA) and LRA areas in California outside of state-recommended VHFHSZ. Standard errors are clustered by street. The histogram below each panel shows the relative number of observations in each bin.

Figure 5: The effect of neighboring homes on survival



Notes: Figure shows coefficients and 95% confidence intervals from a single OLS regression of "Destroyed" on the presence of pre- and post-code neighbors at various distances. The top panel shows estimates for indicator variables for the presence of one or more neighbors built without wildfire building codes. The bottom panel shows estimates for indicator variables for the presence of one or more neighbors built after wildfire building codes. The regression also includes own year built (in four year bins), street by incident fixed effects, and topographic controls. Distance to neighboring home is wall-to-wall distance. See text for details.

Figure 6: Lower-bound Net Benefits by Fire Hazard and Number of Neighbors



Notes: This figure plots the annual probability of a damaging wildfire and average number of close neighbors for a random sample of 100,230 California homes in areas subject to the Chapter 7A building codes. Markers represent zip-code averages. Marker color indicates average net benefits in the zip code using the cost-effectiveness measure, which is a conservative lower bound on total net benefits. Annual wildfire hazard is from Scott et al. (2020) and represents a snapshot as of 2014. Number of neighbors is the number of homes within a 30-meter centroid to centroid distance. Marker size is proportional to number of homes in the zip code. The dashed line shows a threshold for zero net reduction in expected cost. See text for discussion and alternative scenarios.

Table 1: Regression estimates of building code effects on own survival

	(1)	(2)	(3)	(4)	(5)
SRA * Before 1998	-0.022	-0.045	-0.027	-0.021	-0.029
	(0.033)	(0.041)	(0.029)	(0.037)	(0.020)
SRA * 1998–2007	-0.112***	-0.138***	-0.117***	-0.113***	-0.160***
	(0.034)	(0.043)	(0.031)	(0.039)	(0.022)
SRA * 2008–2016	-0.159***	-0.190***	-0.164***	-0.151***	-0.204***
	(0.036)	(0.044)	(0.033)	(0.041)	(0.027)
LRA VHFHSZ * Before 1998	-0.031	-0.048	-0.038	-0.028	-0.005
	(0.033)	(0.050)	(0.030)	(0.037)	(0.021)
LRA VHFHSZ * 1998–2007	-0.121***	-0.142***	-0.126***	-0.127***	-0.095***
	(0.034)	(0.048)	(0.032)	(0.038)	(0.025)
LRA VHFHSZ * 2008–2016	-0.159***	-0.178***	-0.162***	-0.163***	-0.130***
	(0.037)	(0.050)	(0.035)	(0.041)	(0.030)
No Codes * 1998–2007	-0.038	-0.029	-0.045*	-0.044*	-0.035
	(0.025)	(0.026)	(0.026)	(0.024)	(0.030)
No Codes * 2008–2016	-0.006	0.035	0.012	-0.010	-0.071
	(0.033)	(0.040)	(0.041)	(0.033)	(0.044)
Ground slope (degrees)	0.006***	0.005***	0.006***	0.006***	0.005***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Lot size (acres)		-0.000			
		(0.000)			
Building square feet		-0.000			
		(0.000)			
Bedrooms		0.001			
		(0.003)			
Street FE	✓	✓			
Fuel model FE	✓	✓	✓	✓	✓
Street X 100 homes FE			✓		
Street X side of street FE				✓	
Incident FE					✓
Observations	48,843	38,991	48,843	48,843	48,843
R^2	0.62	0.63	0.63	0.66	0.39
Dep. Var. Mean	0.41	0.46	0.41	0.41	0.41

Notes: Table shows estimates and standard errors from five separate OLS regressions. The outcome variable is an indicator for Destroyed. Street fixed effects includes separate dummies for each street-by-incident. Incident fixed effects are dummies for each wildfire. Fuel model fixed effects are dummies for Anderson fire behavior fuel models. Standard errors are clustered by street.

Table 2: Neighbor Effects

	Destroyed			
	(1)	(2)	(3)	(4)
1 pre-code nearby homes	0.020***	0.023***	0.026***	0.027***
	(0.007)	(0.007)	(0.007)	(0.007)
2+ pre-code nearby homes	0.031***	0.039***	0.050***	0.051***
	(0.009)	(0.010)	(0.009)	(0.009)
1 post-code nearby home	0.001	0.002	0.010	0.001
	(0.013)	(0.013)	(0.012)	(0.013)
2+ post-code nearby homes	-0.001	0.001	0.003	-0.009
	(0.016)	(0.018)	(0.018)	(0.021)
Own Year Built	✓	✓	✓	✓
Topography	✓	✓	✓	✓
Street FE	✓	✓	✓	✓
Observations	38,226	23,564	44,923	26,842
R^2	0.64	0.68	0.63	0.68
Distances	Walls	Walls	Centroids	Centroids
Subsample		✓		✓
Dep. Var. Mean	0.40	0.49	0.40	0.51

Notes: Table shows estimates and standard errors from 4 separate OLS regressions. The outcome variable is an indicator for Destroyed, and each regression also includes dummy variables for own year built (in four year bins) and street-by-incident fixed effects. Columns (1) and (2) use wall-to-wall distances to assign neighbors, while Columns (3) and (4) use the centroid-to-centroid distance measure. Columns (1) and (3) use the full sample of single family homes, while columns (2) and (4) use a subsample in areas where our distance measures are likely to be particularly accurate. See text for details. Standard errors are clustered by street.

Table 3: Break-even Hazard under Risk Aversion and Alternative Costs

	Insured %	100	67		33	
			$\gamma = 2$	$\gamma = 5$	$\gamma = 2$	$\gamma = 5$
Cost Estimate	Source					
New Home						
\$ 0	*HE-Low*	0	0	0	0	0
\$ 4,029	*NAHB-Low*	0.10%	0.09%	0.08%	0.08%	0.05%
\$15,660	*HE*	0.38%	0.36%	0.33%	0.30%	0.20%
\$29,429	*NAHB-High*	0.71%	0.68%	0.63%	0.58%	0.41%
Retrofit						
\$62,760	*HE*	1.50%	1.46%	1.40%	1.33%	1.15%

Notes: Table shows estimated minimum annual wildfire probability for which building standards yield positive net benefits under various assumptions about cost, share of losses insured, and risk aversion. Probabilities are reported as percentages (e.g., 0.32% per year). For partial insurance scenarios, γ is the coefficient of relative risk aversion. Calculations assume 1.2 near neighbors. See text for details of these calculations. Source code HE represents Headwaters Economics (2018) and NAHB represents Home Innovation Research Labs (2020).

Forest Ecology and Management
Volume 444, 15 July 2019, Pages 163-173

Roadside vegetation planning and conservation: New approach to prevent and mitigate wildfires based on fire ignition potential

J.R. Molina, A. Lora, C. Prades, F. Rodríguez y Silva

Show more
+ Add to Mendeley Share Cite

https://doi.org/10.1016/j.foreco.2019.04.034

Get rights and content

Highlights

- Wildfires on roadsides are a growing problem due to the higher ignition probability.
- Distance to roads and distance to settlements are the most meaningful variables in fire ignition.
- Wildfire risk is rarely taken into account by road design and road maintenance projects.
- The best method to mitigate the likelihood of fire ignition is to decrease the roadside flammability.

Abstract

Wildfires in urban landscapes spreading into forested landscapes are a growing problem due to socioeconomic and climate changes. Fire ignition and flame spread depend on meteorological and environmental conditions and the physicochemical tr[illegible] of the fuel. In this approach, environmental variables and geostatistical techniques (maximum entropy model) identify distance to roads (37.9% of importance) and distance to settlements (18.4% of importance) as the most meaningful variables explaining fire ignition potential at a regional scale. Hence, the assessment of the ignition potential of roadside vegetation may play a cornerstone role in fire prevention management.

In this research, our aim was to identify the fire ignition potential on roadsides according to fire ignition likelihood and the flammability of the main species at particle level. The flammability of 14 species found on Spanish roadsides was studied at the bench-scale using flammability categories classification, combustion index and flammability index. *Nerium oleander*, *Tamarix gallica* and *Washingtonia filifera* limited the potential to fire spread based on ability to start a fire. *Chamaerops humilis*, *Pistacia lentiscus*, *Olea europaea* var. *sylvestris*, *Retama shaerocarpha* and *Spartium junceum* would be useful due to their less severe fire spreading in order to improve the landscape and biodiversity components of the road projects. Due to the global importance of human risk (road presence) in fire occurrence, this approach should be a suitable tool for planning the construction and maintenance of roads, from the perspective of fire prevention and fire impacts mitigation.

Previous article in issue

Next article in issue

Keywords

Roadside planning; Roadside maintenance; Vegetation flammability: fire prevention; Fuel-break design; Maximum entropy

Rapid growth of the US wildland-urban interface raises wildfire risk

Volker C. Radeloff[a,1], David P. Helmers[a], H. Anu Kramer[a], Miranda H. Mockrin[b], Patricia M. Alexandre[a,2], Avi Bar-Massada[c], Van Butsic[d], Todd J. Hawbaker[e], Sebastián Martinuzzi[a], Alexandra D. Syphard[f], and Susan I. Stewart[a]

[a]SILVIS Lab, Department of Forest and Wildlife Ecology, University of Wisconsin–Madison, Madison, WI 53706; [b]Northern Research Station, US Department of Agriculture Forest Service, Baltimore, MD 21228; [c]Department of Biology and Environment, University of Haifa–Oranim, 36006 Kiryat Tivon, Israel; [d]Department of Environmental Science, Policy, and Management, University of California, Berkeley, CA 94720; [e]Geosciences and Environmental Change Science Center, US Geological Survey, Denver, CO 80225; and [f]Conservation Biology Institute, Corvallis, OR 97333

Edited by Janet Franklin, University of California, Riverside, CA, and approved February 6, 2018 (received for review October 28, 2017)

The wildland-urban interface (WUI) is the area where houses and wildland vegetation meet or intermingle, and where wildfire problems are most pronounced. Here we report that the WUI in the United States grew rapidly from 1990 to 2010 in terms of both number of new houses (from 30.8 to 43.4 million; 41% growth) and land area (from 581,000 to 770,000 km^2; 33% growth), making it the fastest-growing land use type in the conterminous United States. The vast majority of new WUI areas were the result of new housing (97%), not related to an increase in wildland vegetation. Within the perimeter of recent wildfires (1990–2015), there were 286,000 houses in 2010, compared with 177,000 in 1990. Furthermore, WUI growth often results in more wildfire ignitions, putting more lives and houses at risk. Wildfire problems will not abate if recent housing growth trends continue.

wildfires | housing growth | sprawl | development | fragmentation

The wildland-urban interface (WUI), defined as the area where houses are in or near wildland vegetation, is the area where wildfires pose the greatest risk to people due to the proximity of flammable vegetation (1). Wildfires frequently burn houses in the WUI (2, 3), and are most difficult to fight there. Furthermore, the WUI is where people often ignite wildfires (4), and the vast majority of fires are human-caused (5). While fires are an integral part of many ecosystems and the Earth system as a whole (6), humans have changed fire regimes globally (7) and throughout the United States (5), and climate change will increase fire frequency in the future, including in the WUI (8).

The close proximity of houses and wildland vegetation does more than increase fire risk (9). As houses are built in the WUI, native vegetation is lost and fragmented (10); landscaping introduces nonnative species and soils are disturbed, causing nonnatives to spread (11); pets kill large quantities of wildlife (12); and zoonotic disease, such as Lyme disease, are transmitted (13). Thus, understanding WUI patterns and WUI growth is important with respect to wildfires and many other environmental problems.

The WUI is widespread in the United States (1, 14) and in many other parts of the world (15, 16), including Argentina (17), Australia (18), France (19), and South Africa (20). Furthermore, both the annual area burned (8, 21, 22) and fire suppression costs (23) have rapidly increased in the United States. The area burned annually nearly doubled, from an average of 18,000 km^2/y in 1985–94 to 33,000 km^2 in 2005–14 (22). Concomitantly, federal wildfire suppression expenditures tripled from $0.4 billion/y to $1.4 billion/y (23), and exceeded $2 billion in 2017.

While there is ample evidence that houses in the WUI pose problems, it is not clear how fast the WUI is growing. Overall, the US population grew by 60 million people and 29.2 million homes from 1990 to 2010, but how much of that growth occurred in the WUI is uncertain. Previous assessments of WUI growth (24, 25) analyzed only housing data up to 2000, and did not account for changes in wildland vegetation. Post-2000 housing data are important, because the United States entered a recession after 2008, accompanied by a strong downturn in the housing market. Similarly, without data on vegetation change, the major cause of WUI growth is unclear. Areas where forests are regrowing on abandoned farmland, such as in the New England states (26), could see WUI growth without any additional houses. Fundamentally, two processes can create new WUI: construction of new homes in or near existing wildland vegetation, and an increase in wildland vegetation within and near previously developed areas. The prevalence of each process is unclear.

Knowing how the WUI is growing, and why, is essential when evaluating management and policy responses (3, 8). In the United States, federal wildfire management policy prioritizes fuel treatments and the promotion of fire-adapted communities in the WUI. Local jurisdictions use a variety of land use planning tools to limit the environmental impacts of housing growth in the WUI. The importance of the WUI for the environment and for national policy, accompanied by the lack of information about WUI growth in the most recent decade, highlight the need to both assess WUI growth and identify its causes. Thus, we addressed three major questions: (*i*) how much has the WUI in the conterminous United States grown from 1990 to 2010; (*ii*) whether WUI growth is caused mainly by housing growth or by vegetation growth; and (*iii*) how much WUI growth has occurred within recent wildfire perimeters.

The lack of consistent, fine-resolution longitudinal housing data has been the biggest impediment to a nationwide assessment

Significance

When houses are built close to forests or other types of natural vegetation, they pose two problems related to wildfires. First, there will be more wildfires due to human ignitions. Second, wildfires that occur will pose a greater risk to lives and homes, they will be hard to fight, and letting natural fires burn becomes impossible. We examined the number of houses that have been built since 1990 in the United States in or near natural vegetation, in an area known as the wildland-urban interface (WUI), and found that a large number of houses have been built there. Approximately one in three houses and one in ten hectares are now in the WUI. These WUI growth trends will exacerbate wildfire problems in the future.

Author contributions: V.C.R., M.H.M., P.M.A., A.B.-M., V.B., T.J.H., S.M., A.D.S., and S.I.S. designed research; V.C.R., D.P.H., and H.A.K. performed research; V.C.R., D.P.H., H.A.K., V.B., T.J.H., and S.M. analyzed data; and V.C.R., H.A.K., M.H.M., P.M.A., A.B.-M., T.J.H., S.M., A.D.S., and S.I.S. wrote the paper.

The authors declare no conflict of interest.

This article is a PNAS Direct Submission.

Published under the PNAS license.

[1]To whom correspondence should be addressed. Email: radeloff@wisc.edu.

[2]Present address: Forest Research Center, School of Agriculture, University of Lisbon, 1349-017 Lisbon, Portugal.

This article contains supporting information online at www.pnas.org/lookup/suppl/doi:10.1073/pnas.1718850115/-/DCSupplemental.

Published online March 12, 2018.

Downloaded from https://www.pnas.org by 98.117.199.11 on September 13, 2022 from IP address 98.117.199.11.

of WUI growth. The decennial US Census provides fine-resolution housing data for 1990, 2000, and 2010, but the boundaries of the smallest units for which housing units are reported (i.e., census blocks) often shift between decades, precluding direct change analyses (27). We have developed algorithms to convert the decennial Census data at census block resolution into a consistent dataset on housing growth across the conterminous United States (*Methods*), which we combined with 1992, 2001, and 2011 National Land Cover Data (NLCD) on wildland vegetation: forests (classes 41–43), shrublands (classes 51 and 52), grasslands (class 71), and woody wetlands (class 90). We mapped decadal WUI change from 1990 to 2010 within 2010 census block boundaries, based on the WUI definitions in the *Federal Register* and our previously developed WUI mapping algorithms (1, 14), and conducted several robustness checks of our new dataset (*Supporting Information*). Because of concerns about housing growth and wildfire management, we calculated housing growth for 1990–2010 within WUI burned areas identified in Landsat imagery between 1990 and 2015 (22).

We found that the WUI was widespread in 2010, covering 9.5% of the conterminous United States (Fig. 1), and that the WUI grew rapidly from 1990 to 2010 in all its aspects (Fig. 2).

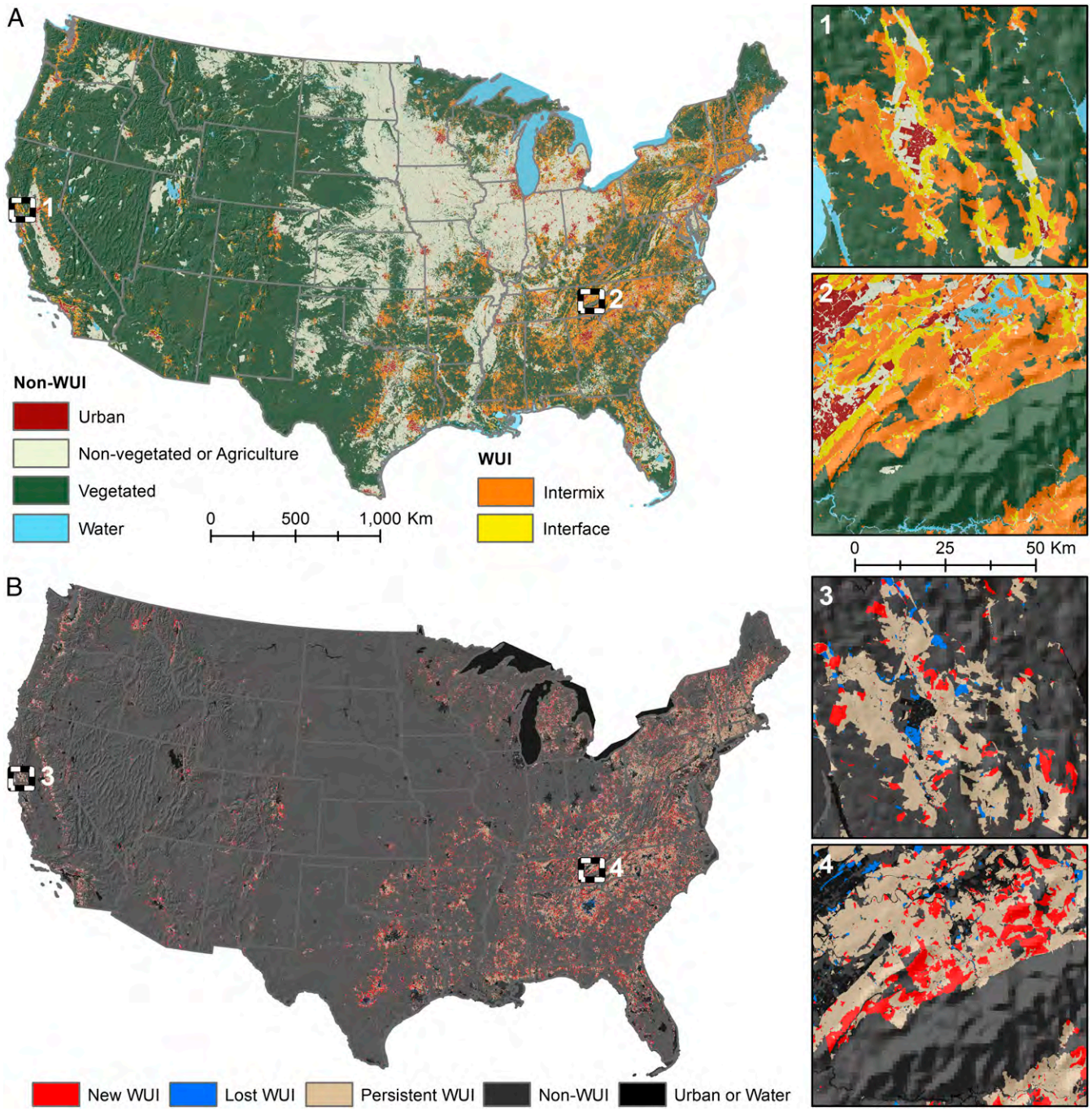


Fig. 1. The WUI in the United States was widespread in 2010 (*A*), as were changes in WUI area (*B*), for example, in and around Santa Rosa, California (1, 3), and Gatlinburg, Tennessee (2, 4), areas where wildfires destroyed many homes in 2017 and 2016, respectively.

Downloaded from https://www.pnas.org by 98.117.199.11 on September 13, 2022 from IP address 98.117.199.11.

The number of housing units ("houses" hereinafter) in the WUI grew fastest, followed by the number of people in the WUI and then WUI area (Fig. 2*B* and Table S1). New WUI area totaled 189,000 km^2, an area larger than Washington State. At 33%, WUI area growth is faster than that of any of the level I land cover categories included in the NLCD (28). Increases in houses and people were also strong, with 12.7 million more houses and 25 million more people in the WUI in 2010 compared with 1990. The overall combination of more WUI area (7.2% of the conterminous United States in 1990 vs. 9.5% in 2010; Fig. 2*C*) and higher growth rates for both houses and people in the WUI, compared with the nationwide averages (Table S1), increased the percentage of houses (from 30.3% to 33.2%) and people (from 29.4% to 31.9%) in the WUI from 1990 to 2010 (Fig. 2*C*). Even though the WUI occupies less than one tenth of the land area of the conterminous United States, 43% of all new houses were built there, and 61% of all new WUI homes were built in areas that were already in the WUI in 1990 (and remained in the WUI in 2010) (Tables S1 and S2).

There are two main types of WUI: intermix WUI, the area where houses and wildland vegetation directly intermingle, and interface WUI, where settled areas abut wildland vegetation (1). We found that intermix WUI was both more extensive and expanded much more rapidly in area (from 5.6% to 7.5% of the conterminous United States from 1990 to 2010) than interface WUI (from 1.6% to 2.0%). However, interface WUI had higher housing growth rates (43% from 1990 to 2010) than intermix WUI (38%) and non-WUI areas (23%; Table S1). In absolute numbers, there were 4.7 million more houses in the intermix WUI and 8.0 million more in the interface WUI in 2010 than in 1990.

Regional differences in WUI growth were striking (Fig. 3). The highest absolute gains in WUI area occurred in the East, whereas high gains in houses and people in the WUI were most common in the South and Southwest. Absolute gains are most relevant for management agencies, because they indicate how much area and how many people and houses may require management actions; however, rapid growth often garners the most attention. Across the United States there is an interesting dichotomy in that states in the East had large absolute gains, but relatively low WUI growth rates, largely because WUI was already so widespread in 1990. In contrast, states in the northern Rockies saw much smaller absolute gains in WUI area and houses, but rapid WUI growth rates.

New WUI areas arise either when new houses are built in or near wildland vegetation or when wildland vegetation regrows in or near settled areas. Between these two possible causes, housing growth was unambiguously the main cause for new WUI areas, with increases in vegetation contributing minimally. Of all new WUI areas, 97% were caused by housing growth in sparsely settled areas, pushing these areas over the threshold of 1 house per 40 acres (6.17 homes/km^2). Only 2% of new WUI area was due to vegetation growth alone, and 1% was due to the combination of both housing and vegetation growth (Table S2). Similarly, new houses were the cause of >80% of WUI growth in all states except Delaware, the District of Columbia, Maryland, and New Jersey (Fig. S1).

Among areas that were WUI in 1990, the vast majority were still WUI in 2010, and both homes and population increased in those areas over that time (Table S2). A small proportion (6%) of the 1990 WUI areas dropped out of the WUI by 2010. Among all WUI changes (i.e., gains and losses combined), 13% of the changes in WUI area and 23% of the changes in WUI houses from 1990 to 2010 were losses. In terms of the causes of WUI area loss, reduced housing density was the most important (65.0%), whereas the loss of vegetation accounted for 32.6%. Housing density may have declined due to actual removal of housing units, or possibly due to enumeration errors in the Census data. Loss of vegetation was the dominant driver of loss of homes from the WUI (65.0%), which occurred largely in densely settled areas where additional housing development, deforestation, or fuel management may have removed wildland vegetation.

The number of houses within burned areas in the different decades is a strong indication of how much WUI growth can exacerbate wildfire problems. In 1990, there were 177,000 houses within the perimeters of the fires that occurred in the subsequent 25 y. By 2010, there were 286,000 housing units in the same fire perimeters, i.e., 109,000 more, which corresponds to 62% growth (far outpacing the average US housing growth rate of 29%). Of these new houses, those built before the wildfires occurred complicated firefighting because more houses had to be protected and more residents had to be evacuated. Similarly, houses built after fires occurred are of concern because new development in areas that burned recently, and thus are known to have a high fire risk, suggests that there is little adaptation to fire risk (2).

Our results provide compelling evidence that the WUI in the United States has grown rapidly, despite the risks that wildfires pose to homes and lives (3) and despite the other environmental problems caused by housing development in or near wildland vegetation (9). Our findings are generally in alignment with previous studies that found rapid previous WUI growth (24) and widespread potential for future WUI growth (25, 29), even though absolute numbers are not comparable because of differences in WUI definitions, datasets, and time periods (30). Furthermore, the WUI is not unique to the United States, but is widespread in many other countries as well (15, 16, 18–20). Rampant WUI growth demonstrates that the social and economic factors that together propel WUI growth are strong. WUI areas are attractive places to live because of affordability and ready access to natural settings and recreation (31). As WUI areas attract new residents, the number of houses per capita often increases as well, due to increasing rates of seasonal homeownership and declining family size (32). Indeed, despite the economic downturn after 2008, the absolute number of

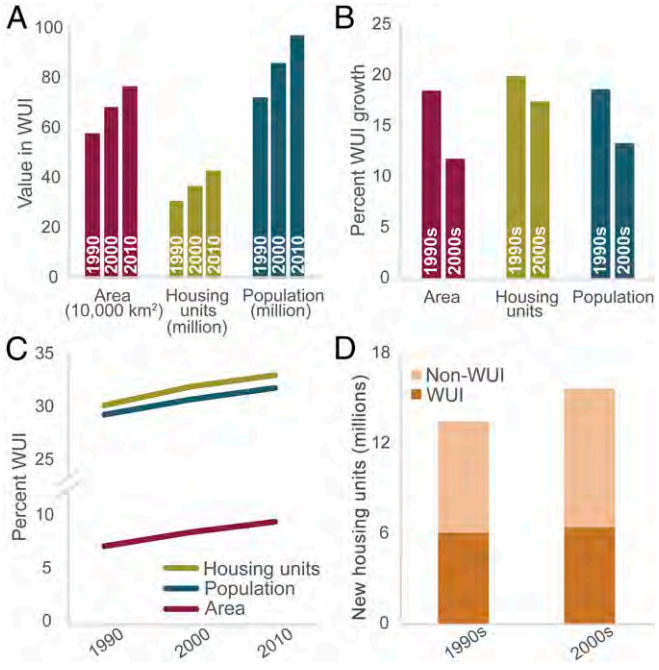


Fig. 2. WUI growth was rapid in terms of the absolute numbers of the area, houses, and people in the WUI in 1990, 2000, and 2010 (*A*); WUI growth rates during the 1990s and the 2000s (*B*); the proportion of all houses and people, as well as the land area in the WUI in 1990, 2000, and 2010 (*C*); and the absolute number of all new housing units within and outside the WUI during the 1990s and 2000s (*D*).

Downloaded from https://www.pnas.org by 98.117.199.11 on September 13, 2022 from IP address 98.117.199.11.

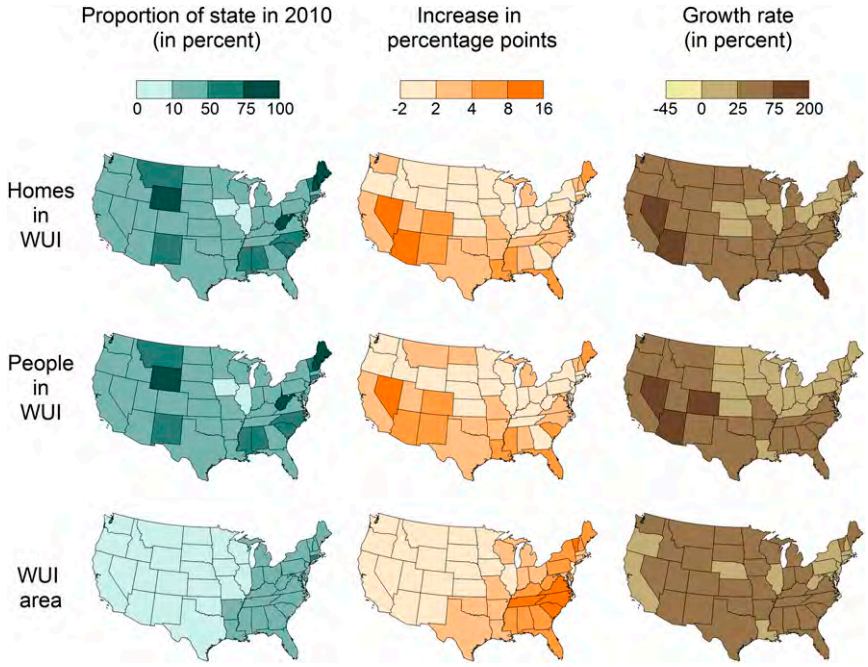


Fig. 3. WUI growth differed greatly among states, especially in the Southwest versus the Southeast, in terms of houses in the WUI, people in the WUI, and WUI area, calculated as the percentage of the state total in 2010, change in the WUI percentage from 1990 to 2010, and the growth rate (in percent) of the WUI from 1990 to 2010. Only the District of Columbia had negative absolute growth in the WUI (homes, people, and area). Fig. S2 summarizes these metrics at the county level.

houses built in the WUI, and in the United States as a whole, was higher between 2000 and 2010 than between 1990 and 2000 (Table S1). Demographic trends do not suggest slower future WUI growth. Furthermore, climate change projections indicate that conditions favorable for wildfires will occur more frequently in the future (8). Thus, increased wildfire ignition rates due to WUI expansion will initiate more wildfires in vegetation that is more susceptible to fire spread, leading to more widespread fires and possibly more severe fire behavior (33). This suggests that WUI growth and climate change together will compound the existing problems with wildfires in the WUI.

As WUI growth continues, there are many management options and policy tools to consider for addressing both wildfire and other environmental problems. Just as WUI-related problems involve actors (e.g., homeowners, community leaders) at many levels, so too must their solutions involve actors at multiple levels (i.e., local, regional, state, and national) (3, 8). Homeowners can reduce their individual fire risk by removing vegetation directly adjacent to their house (i.e., the home ignition zone; refs. 3 and 34), changing roofing and building materials, and following additional Firewise recommendations (35). To limit some of the other environmental problems associated with living in the WUI, homeowners can keep cats inside and dogs on a leash, limit fertilizer and pesticide use, and landscape with native plants (9). To reduce wildfire impacts, communities can coordinate fuel reduction efforts, educate homeowners, train firefighters, and establish wildfire management plans. Insurance companies can offer reduced premiums for communities taking mitigation action to incentivize community-level efforts to reduce wildfire losses. Communities and local jurisdictions could anticipate wildfires and environmental impacts more explicitly when planning future land use to avoid housing expansion in high-risk wildfire areas and other environmentally sensitive areas (36). State and federal agencies typically do not regulate development directly, but can allocate resources to areas experiencing rapid WUI growth, support local and regional planning efforts, and provide important research data and information to help communities adapt to fire-prone environments. Agencies managing public lands could consider targeted purchases of private inholdings to limit future housing growth within the administrative boundaries of public lands, which has been particularly rapid (37). In summary, there are many concrete management actions and policy responses that can limit the negative effects of WUI growth on wildfire risk and other environmental problems, but changes will require efforts at all levels by homeowners and community leaders, local and county governments, and state and federal agencies.

Housing development in the WUI greatly exacerbates wildfire problems and other environmental issues in the United States (1, 5, 8), and globally (16, 18–20). Our results highlight the magnitude and rapid rates of WUI growth in the US, underscoring the urgency of identifying what can be done to address WUI growth and its associated wildfire challenges (3). Past federal fire policy has focused largely on fighting and preventing wildfires and on fuel reduction, public outreach campaigns, and other actions (38). Although laudable, such efforts are unlikely to be successful by themselves, because housing growth is clearly the dominant cause of WUI growth, as well as a major factor contributing to wildfire occurrence and cost. As long as WUI growth is unchecked, wildfire problems will likely worsen. On a more hopeful note, to the extent that WUI growth reflects an affinity for nature, the evident consequences and costs of growth could prompt discussions on how to sustain those highly valued ecosystems in which so many people have chosen to live.

Materials and Methods

Our WUI definition is based on the definition published by the US government in the *Federal Register* (39) and that has been widely used for WUI assessments in the past (1, 14, 40). It specifies two types of WUI, intermix and interface. Intermix WUI is where houses and wildland vegetation intermingle, with both a housing density of >1 house per 40 acres (6.17 houses/km^2) and >50% of the area in wildland vegetation. Interface WUI represents settled areas that have <50% vegetation, but lie within

Downloaded from https://www.pnas.org by 98.117.199.11 on September 13, 2022 from IP address 98.117.199.11.

1.5 miles (2.4 km) of a densely vegetated area (at least 75% wildland vegetation) that is at least 5 km^2 in size (so that settlements near small urban parks are not included in the WUI).

Our WUI assessment was based on two main datasets: US Census data, which provided housing data (TIGER shape files for block boundaries, plus Census summary files for attribute data), and the US Geologic Survey's NLCD, which provided information on wildland vegetation. We derived housing data from the US Decennial Censuses for 1990, 2000, and 2010 at its finest resolution, the census block level. However, a major obstacle to conducting change analyses is that census block boundaries frequently change from one decade to the next, preventing direct change analyses (27). Indeed, 62% of all blocks changed their boundaries from 1990 to 2000, and 56% changed from 2000 to 2010, invalidating any housing density change analysis that does not account for these boundary changes. We used additional information available from the US Census Bureau as relationship files that details for each decade which blocks of the starting date were at least partly contained by which block in the second decade, and vice versa, to calculate the number of 1990 and 2000 housing units for the boundaries for each 2010 census block.

Based on the Census Bureau relationship files, we first allocated 1990 housing units to 2000 block boundaries by identifying the type of relationship for each 1990 block to 2000 block(s), classifying the relationship as one-to-one, one-to-many, many-to-one, or many-to-many. For one-to-one and many-to-one relationships, 1990 housing units were allocated directly to corresponding 2000 blocks. For one-to-many relationships, 1990 housing units were allocated proportionally based on the number of housing units in the 2000 blocks. For many-to-many relationships, we identified the least common denominator of polygons that fully contained groups of both 1990 and 2000 blocks. For each least common denominator polygon, we then summed the 1990 housing units and allocated them based on the proportion of the 2000 housing units. To minimize instances of many-to-many relationships and maximize direct relationships, we removed blocks that were classified as water in 1990 and as vacant in 2000, as well as all 1990 and 2000 blocks that intersected by <1% of their area. Once 1990 housing units were allocated to 2000 census block geometry, we repeated the process using the 2000–2010 relationship files to allocate 2000 housing units to 2010 block boundaries. We then joined the 1990 housing units allocated to 2000 block boundaries with the 2000–2010 relationship files, and repeated the process to allocate 1990 housing units to 2010 block boundaries. The end result of our algorithms are 1990 and 2000 housing units allocated to the 2010 block geometry across the conterminous United States, i.e., a dataset that permits valid analyses of housing growth across the United States at fine spatial resolution and that minimizes erroneous changes due to changing census block boundaries.

We further refined census block boundaries by integrating them with information on the boundaries of protected areas. The boundaries of protected areas were provided by the Protected Area Database, version 2. Where protected areas intersected census block boundaries, we assumed that the houses in that block were located in nonprotected areas only. However, where census blocks with houses were entirely within a protected area, we made no changes, and assumed a uniform housing density throughout the block.

The 30-m resolution NLCD provided us with data on wildland vegetation. We analyzed both the 1992/93–2001 and the 2001–2011 land cover change products and calculated the percentage of each NLCD land cover class within each census block after refinement by the protected area boundaries. We included forest and grass/shrub land cover classes as wildland vegetation and excluded open water, urban, barren, wetlands, and ice/snow.

For each decade, we mapped the WUI separately, by combining 1990 Census data with 1992/93 data from the 1992/93–2001 land cover change product, and 2000 and 2010 Census data with 2001 and 2011 data from the 2001–2011 land cover change product. We first identified all intermix WUI areas based on the housing and vegetation thresholds. We then identified contiguous vegetation areas that were at least 5 km^2 in size and had >75% wildland vegetation, selecting areas within 2.4 km that were above the housing threshold (but below the 50% vegetation threshold), and labeling these as interface WUI. When census blocks were only partly within this distance, we split them.

The NLCD change products are not fully consistent, in that the 2001 land cover in the 1992/93–2001 change product differs from the 2001 land cover in the 2001–2011 change product. Thus, we conducted a sensitivity analysis and mapped the 2001 WUI twice, based on the two representations, and then compared the resulting WUI maps. The differences between the two WUI maps were very minor.

To calculate the number of homes within fire perimeters over time, we analyzed all fire perimeters of fires that burned between 1990 and 2015 according to the Monitoring Trends in Burn Severity (MTBS) dataset, which includes all fires >404 ha (1,000 ac) in the West and 202 ha (500 ac) in the East. We then assessed which census blocks were at least partially within these fire perimeters and calculated an area-weighted estimate of the number of housing units within the fire perimeters in 1990 (177,000), 2000 (210,000), and 2010 (286,000). We note that this is a conservative estimate of the number of houses affected by wildfires because the MTBS dataset does not include small fires.

ACKNOWLEDGMENTS. We thank J. Diffendorfer and J. Slate for providing valuable feedback on an earlier version of this manuscript. Support for this research was provided by the US Forest Service Northern Research Station, the interagency Joint Fire Sciences program, the Land Change Science Program in the US Geological Survey Climate and Land Use Mission Area, and PhD fellowships from the Fulbright Exchange program and the Foundation for Science and Technology of Portugal (to P.M.A.).

1. Radeloff VC, et al. (2005) The wildland-urban interface in the United States. *Ecol Appl* 15:799–805.
2. Alexandre PM, Mockrin MH, Stewart SI, Hammer RB, Radeloff VC (2015) Rebuilding and new housing development after wildfire. *Int J Wildland Fire* 24:138–149.
3. Calkin DE, Cohen JD, Finney MA, Thompson MP (2014) How risk management can prevent future wildfire disasters in the wildland-urban interface. *Proc Natl Acad Sci USA* 111:746–751.
4. Syphard AD, et al. (2007) Human influence on California fire regimes. *Ecol Appl* 17: 1388–1402.
5. Balch JK, et al. (2017) Human-started wildfires expand the fire niche across the United States. *Proc Natl Acad Sci USA* 114:2946–2951.
6. Bowman DM, et al. (2009) Fire in the earth system. *Science* 324:481–484.
7. Bowman DM, et al. (2011) The human dimension of fire regimes on Earth. *J Biogeogr* 38:2223–2236.
8. Schoennagel T, et al. (2017) Adapt to more wildfire in western North American forests as climate changes. *Proc Natl Acad Sci USA* 114:4582–4590.
9. Bar Massada A, Radeloff VC, Stewart SI (2014) Biotic and abiotic effects of human settlement in the wildland-urban interface. *Bioscience* 64:429–437.
10. Gonzalez-Abraham CE, et al. (2007) Patterns of houses and habitat loss from 1937 to 1999 in northern Wisconsin, USA. *Ecol Appl* 17:2011–2023.
11. Gavier-Pizarro GI, Radeloff VC, Stewart SI, Huebner CD, Keuler NS (2010) Housing is positively associated with invasive exotic plant species richness in New England, USA. *Ecol Appl* 20:1913–1925.
12. Loss SR, Will T, Marra PP (2013) The impact of free-ranging domestic cats on wildlife of the United States. *Nat Commun* 4:1396.
13. Larsen AE, MacDonald AJ, Plantinga AJ (2014) Lyme disease risk influences human settlement in the wildland-urban interface: Evidence from a longitudinal analysis of counties in the northeastern United States. *Am J Trop Med Hyg* 91:747–755.
14. Martinuzzi S, et al. (2015) *The 2010 Wildland-Urban Interface of the Conterminous United States* (US Forest Service, Newtown Square, PA), p 123.
15. Syphard AD, Radeloff VC, Hawbaker TJ, Stewart SI (2009) Conservation threats due to human-caused increases in fire frequency in Mediterranean-climate ecosystems. *Conserv Biol* 23:758–769.
16. Modugno S, Balzter H, Cole B, Borrelli P (2016) Mapping regional patterns of large forest fires in wildland-urban interface areas in Europe. *J Environ Manage* 172: 112–126.
17. Argañaraz JP, et al. (2017) Assessing wildfire exposure in the wildland-urban interface area of the mountains of central Argentina. *J Environ Manage* 196:499–510.
18. Buxton M, Haynes R, Mercer D, Butt A (2011) Vulnerability to bushfire risk at Melbourne's urban fringe: The failure of regulatory land use planning. *Geogr Res* 49: 1–12.
19. Lampin-Maillet C, et al. (2010) Mapping wildland-urban interfaces at large scales integrating housing density and vegetation aggregation for fire prevention in the south of France. *J Environ Manage* 91:732–741.
20. van Wilgen BW, Forsyth GG, Prins P (2012) The management of fire-adapted ecosystems in an urban setting: The case of Table Mountain National Park, South Africa. *Ecol Soc* 17:8.
21. Abatzoglou JT, Williams AP (2016) Impact of anthropogenic climate change on wildfire across western US forests. *Proc Natl Acad Sci USA* 113:11770–11775.
22. Hawbaker TJ, et al. (2017) Mapping burned areas using dense time-series of Landsat data. *Remote Sens Environ* 198:504–522.
23. National Interagency Fire Center (2017) Historical wildland fire information: suppression costs, 1985-2016. Available at https://www.nifc.gov/fireInfo/fireInfo_documents/SuppCosts.pdf. Accessed February 16, 2018.
24. Hammer RB, Radeloff VC, Fried JS, Stewart SI (2007) Wildland-urban interface housing growth during the 1990s in California, Oregon, and Washington. *Int J Wildland Fire* 16:255–265.
25. Theobald DM, Romme WH (2007) Expansion of the US wildland-urban interface. *Landsc Urban Plan* 83:340–354.
26. Drummond MA, Loveland TR (2010) Land-use pressure and a transition to forest-cover loss in the eastern United States. *Bioscience* 60:286–298.

Downloaded from https://www.pnas.org by 98.117.199.11 on September 13, 2022 from IP address 98.117.199.11.

27. Syphard AD, et al. (2009) Assessing housing growth when census boundaries change. *Int J Geogr Inf Sci* 23:859–876.
28. Homer C, et al. (2015) Completion of the 2011 National Land Cover Database for the conterminous United States: Representing a decade of land cover change information. *Photogramm Eng Remote Sens* 81:345–354.
29. Gude P, Rasker R, van den Noort J (2008) Potential for future development on fire-prone lands. *J For* 106:198–205.
30. Stewart SI, et al. (2009) Wildland-urban interface maps vary with purpose and context. *J For* 107:78–83.
31. Abrams JB, Gosnell H, Gill NJ, Klepeis PJ (2012) Re-creating the rural, reconstructing nature: An international literature review of the environmental implications of amenity migration. *Conserv Soc* 10:270–284.
32. Bradbury M, Peterson MN, Liu JG (2014) Long-term dynamics of household size and their environmental implications. *Popul Environ* 36:73–84.
33. Flannigan MD, Krawchuk MA, de Groot WJ, Wotton BM, Gowman LM (2009) Implications of changing climate for global wildland fire. *Int J Wildland Fire* 18:483–507.
34. Cohen JD (2000) Preventing disaster: Home ignitability in the wildland-urban interface. *J For* 98:15–21.
35. Syphard AD, Brennan TJ, Keeley JE (2014) The role of defensible space for residential structure protection during wildfires. *Int J Wildland Fire* 23:1165–1175.
36. Syphard AD, Bar Massada A, Butsic V, Keeley JE (2013) Land use planning and wildfire: Development policies influence future probability of housing loss. *PLoS One* 8: e71708.
37. Radeloff VC, et al. (2010) Housing growth in and near United States protected areas limits their conservation value. *Proc Natl Acad Sci USA* 107:940–945.
38. Schoennagel T, Nelson CR, Theobald DM, Carnwath GC, Chapman TB (2009) Implementation of National Fire Plan treatments near the wildland-urban interface in the western United States. *Proc Natl Acad Sci USA* 106:10706–10711.
39. USDA; USDI (2001) Urban wildland interface communities within vicinity of federal lands that are at high risk from wildfire. *Fed Regist* 66:751–777.
40. Bar-Massada A, Stewart SI, Hammer RB, Mockrin MH, Radeloff VC (2013) Using structure locations as a basis for mapping the wildland urban interface. *J Environ Manage* 128:540–547.

Downloaded from https://www.pnas.org by 98.117.199.11 on September 13, 2022 from IP address 98.117.199.11.

fire

MDPI

Article

Multiple-Scale Relationships between Vegetation, the Wildland–Urban Interface, and Structure Loss to Wildfire in California

Alexandra D. Syphard [1,2,*], Heather Rustigian-Romsos [2] and Jon E. Keeley [3,4]

1 Vertus Wildfire, Jacksonville, FL 32216, USA
2 Conservation Biology Institute, Corvallis, OR 97333, USA; heather@consbio.org
3 U.S. Geological Survey, Three Rivers, CA 93271, USA; jon_keeley@usgs.gov or jkeeley@g.ucla.edu
4 Institute of the Environment and Sustainability, University of California, Los Angeles, CA 90095, USA
* Correspondence: Alexandra.syphard@vertuswildfire.com or asyphard@consbio.org

Abstract: Recent increases in destructive wildfires are driving a need for empirical research documenting factors that contribute to structure loss. Existing studies show that fire risk is complex and varies geographically, and the role of vegetation has been especially difficult to quantify. Here, we evaluated the relative importance of vegetation cover at local (measured through the Normalized Difference Vegetation Index) and landscape (as measured through the Wildland–Urban Interface) scales in explaining structure loss from 2013 to 2018 in California—statewide and divided across three regions. Generally, the pattern of housing relative to vegetation better explained structure loss than local-scale vegetation amount, but the results varied regionally. This is likely because exposure to fire is a necessary first condition for structure survival, and sensitivity is only relevant once the fire reaches there. The relative importance of other factors such as long-term climatic variability, distance to powerlines, and elevation also varied among regions. These suggest that effective fire risk reduction strategies may need to account for multiple factors at multiple scales. The geographical variability in results also reinforces the notion that "one size does not fit all". Local-scale empirical research on specific vegetation characteristics relative to structure loss is needed to inform the most effective customized plan.

Keywords: fire risk; intermix; interface; vegetation pattern; scale; fire; fuel; housing density; land use; land cover; defensible space

check for updates

Citation: Syphard, A.D.; Rustigian-Romsos, H.; Keeley, J.E. Multiple-Scale Relationships between Vegetation, the Wildland–Urban Interface, and Structure Loss to Wildfire in California. *Fire* **2021**, *4*, 12. https://doi.org/10.3390/fire4010012

Received: 5 February 2021
Accepted: 9 March 2021
Published: 12 March 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

1. Introduction

In the last three out of four years, California has experienced record-setting wildfires that have cumulatively added up to more than 50,000 structures destroyed. Although California is arguably a worldwide leader in these types of catastrophic events, large-scale human impacts from wildfires are also occurring more frequently in fire-prone ecosystems across the world [1–3] with the 2019–2020 bushfire season in Australia being of notable impact. As losses accrue, the urgency of understanding the factors influencing structure loss is growing. Hence, scientific study of structure loss in wildfire—and why it occurs—is starting to mature. One of the most important overall conclusions resulting from this research is that structure loss is a complex function of multiple interacting factors that vary geographically [4–6], and that much more work is needed to parse out the relative importance of different factors at different scales.

One of the factors that has been difficult to quantify empirically is the role of vegetation surrounding structures and in surrounding landscapes. Defensible space—the reduction of woody vegetation within a buffer surrounding the structure—is widely advocated for its potential to minimize structure loss. Although few studies have been conducted to evaluate its role empirically, its beneficial effects on reducing fire risk have been demonstrated via

simulation or theoretical modeling studies, field experiments, and case studies of individual fire events [7–11].

Two empirical studies in Southern California found a significant benefit of the State-mandated 100′ defensible space guideline in reducing house losses [12,13]. In both studies, the most significant effect was observed for vegetation reduction approximately 5–20 m from a structure, after which the protective effect of fuel treatments farther away was not evident. A remote sensing study in Colorado and an analysis of structures lost in 27 fires in Australia also found the most protective benefit of reduced vegetation was in the area immediately surrounding structures [14,15]. In a coarser-scale analysis in Australia, defensible space closest to the structure (i.e., within the first 40 m) was significantly more important than vegetation cover at farther distances [16]. However, vegetation arrangement and fuel moisture could provide the same protective benefit as removing trees and shrubs 40 m around the structure [17].

Although these modeling and empirical studies collectively suggest that reducing vegetation cover close to the structure can minimize the potential for structure loss, broad conclusions remain difficult to assess because the studies were conducted at different scales of analysis using different measurements and were restricted to the unique geographies of the study regions. In addition, the relative importance of defensible space compared to other factors remains unclear, although some studies suggest its relative importance varies based on location, housing pattern, structural characteristics, and scale [11,12,18].

In a statewide and regional-scale analysis using building inspectors' data, Syphard and Keeley [18] found evidence to suggest that structural characteristics were more significantly associated with structure survival than defensible space. In that work, however, defensible space distance may have been unreliably assessed because of the uncertainty in quantifying vegetation in a post fire environment. It is also possible that both surviving and destroyed homes had the same amount of defensible space, so it did not come out as a significant factor. In Southern California, Syphard et al. [12] found that housing arrangement and pattern were more influential than defensible space for explaining structure loss. This result is consistent with other studies that have more broadly revealed housing pattern and topographic variables to be more influential in explaining structure loss than vegetation amount and configuration [6,19] or other proxies for vegetation [4].

An important consideration when examining the factors associated with structure loss in wildfires is that vulnerability to a hazard is a combination of both exposure and sensitivity to the hazard [20]. Exposure means that the geographical location of an asset at risk (e.g., housing pattern and location) can predict its chance of encountering a hazard to begin with; and sensitivity means that, once the hazard is present, the potential for damage is related to local-scale, intrinsic characteristics (e.g., defensible space and structural characteristics). Given that most structures are lost to either direct ember attack, or to the ignition of surrounding elements from ember attack [21], both defensible space and structural characteristics minimize sensitivity by either preventing ember entry to the structure or reducing the flammability of whatever an ember lands upon. Thus, risk of structure loss to wildfires operates at different scales and the role of vegetation may also operate at different scales.

One of the most widely recognized indicators of exposure to wildfire is the wildland–urban interface (WUI [22,23]), which is where human communities are close to natural wildlands. Recent work has confirmed expectations that structure loss is significantly higher in the WUI than in non-WUI areas [24,25]. Although the definition and spatial delineation of the WUI varies widely [26], and may even explicitly account for wildfire probability [27], the most widely used definition and mapping rules are based on the US Federal Register, with two distinct types of WUI defined along with other map classes for varying degrees of development density and vegetation [22,23]. The difference between the two WUI types is the relative housing density and percentage cover of wildland vegetation.

The relationship between the WUI and structure loss is an example of how vegetation can influence fire risk at multiple scales. At a landscape scale, vegetation reflects exposure

to the hazard. Wildfire behavior is obviously a function of vegetation amount and configuration, which in turn mediates the potential for wildfire to reach a structure. At the local scale, vegetation plays a role in the structures' sensitivity to the hazard, with different features of the vegetation becoming more important than others.

In this study, we evaluate the relative importance of vegetation cover at local and landscape scales in explaining structure loss from 2013 to 2018 in California—statewide and separately for three of the most fire-prone regions. We compared vegetation metrics along with several human and biophysical variables associated with structure loss at the locations of destroyed and unburned structures within fire perimeters to assess their relative role.

We ask:

(1) Is vegetation cover substantially greater at locations of destroyed structures than unburned structures? Does this effect vary by region or distance?
(2) What is the relative importance of vegetation calculated at local and landscape scales in relation to other factors previously associated with structure loss?
(3) Does structure loss vary across different classes of the wildland–urban interface?
(4) Do these relationships vary by geographical region within California?

2. Materials and Methods

2.1. Structure Locations and Study Regions

We acquired the locations of destroyed structures via a public records request to Cal Fire, and divided them into three regions as in Syphard and Keeley [18] (Figure 1). These included the central and northern coast areas surrounding San Francisco Bay ("Bay Area"), the regions surrounding the northern cismontane Sierra Nevada ("North Interior"), and the region comprising coastal counties south of San Luis Obispo ("Southern California"). To derive data for unburned structures, we placed a point within the centroid of building polygons that overlaid fire perimeters using the open-access Microsoft Building Footprint dataset (https://www.microsoft.com/en-us/maps/building-footprints). For fire perimeters, we used the State of California Fire and Resource Assessment Program (FRAP) fire perimeter data from 2013 to 2018 (https://frap.fire.ca.gov/frap-projects/fire-perimeters/). After combining the unburned points with locations of destroyed structures within fires, we took a random sample of the data with a minimum of 500-m distance between points to reduce potential for statistical bias due to overlapping buffers.

2.2. Variables

To measure defensible space in previous studies, researchers have used fine-scale aerial photography to calculate the range of metrics that collectively define the legal definition of defensible space in California [12,13]. Calculating these types of measurements for large numbers across broad scales, however, would be prohibitively time-consuming. Alternatively, remotely sensed satellite imagery can provide unbiased calculations of vegetation biomass that was present before the fire (e.g., [14,16,28]). Here, we calculated the mean annual maximum Normalized Difference Vegetation Index (NDVI) values within three concentric circles around structures, averaged for the two years prior to the fire. Using the annual maximum NDVI and averaging across the two years prior to fire minimized potential uncertainties relative to fine-scale temporal fluctuation from weather variables [29]. We used NDVI data calculated from Landsat remote sensing products, at 30 m spatial resolution, provided by climateengine.org/data. To evaluate whether the distance of measurement differentially influences structure loss, we compared NDVI values from concentric circles surrounding the structure at three distances—30, 90, and 300 m (Table 1). We included all cells overlapping the concentric circles in our calculation of mean NDVI. Due to the resolution of the satellite data, we did not calculate distances shorter than 30 m.

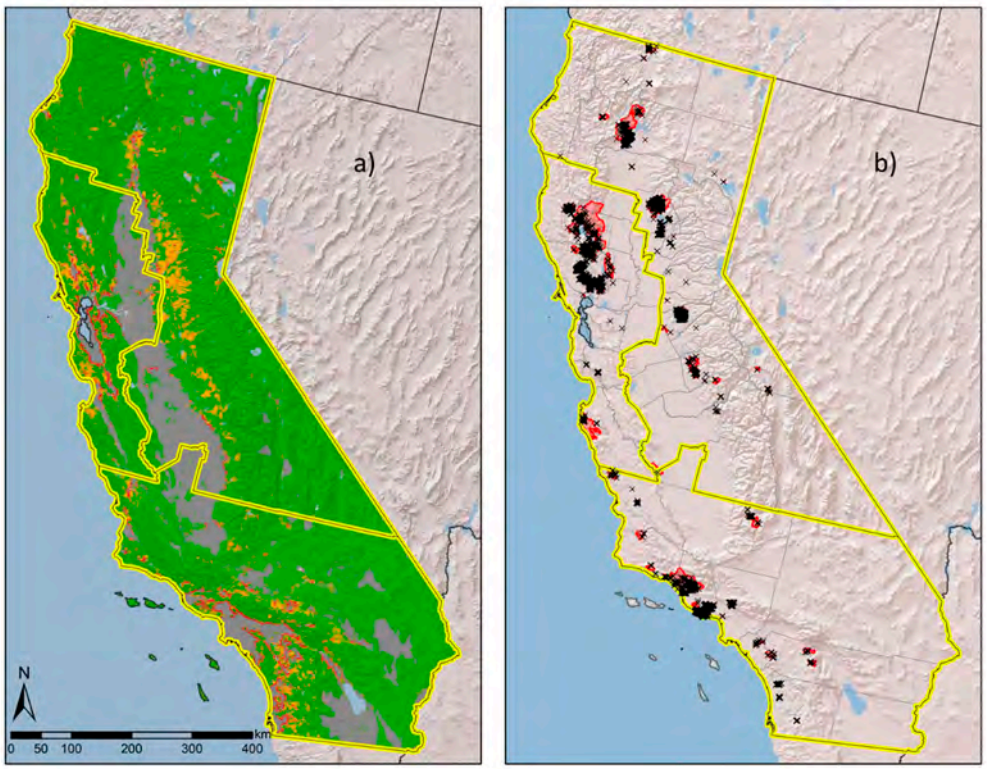


Figure 1. Study area illustrating three California regions: the Bay Area (northwest), the North Interior (northeast), and Southern California (south). The WUI classes in (**a**) depict Interface WUI (red), Intermix WUI (orange), Unvegetated (gray), and Low-density vegetated (green). The fires included in the study (red perimeters) and location of destroyed structures (black) are shown in (**b**). Hillshade basemap from ArcGIS Online (https://www.arcgis.com/index.html).

2.2. Variables

To represent landscape-level vegetation pattern, we used a landscape pattern metric to calculate the proportion of highly flammable vegetation within a circular moving window at a 2.5 km radius (the approximate distance the wind may carry an ember [8]) around all structures (as in Alexandre et al. [19]), using Fragstats v4.2.1 [30]. For this variable, we used the U.S. Geological Survey National Land Database (NLCD, mrlc.gov) from 2016 to create a binary class of flammable versus non-flammable vegetation, grouping together grass, shrubs, and trees into flammable vegetation (e.g., [14,16,28]). Here, we calculated the mean annual maximum Normalized Difference Vegetation Index (NDVI) values within these concentric circles around structures, averaged for the two years prior to the fire. Using the annual maximum NDVI and averaging across the two years prior to fire minimized potential uncertainties relative to fine-scale temporal fluctuation from weather variables [29]. We used NDVI data calculated from Landsat remote sensing products, at 30 m spatial resolution, provided by climateengine.org/data. To evaluate whether the distance of measurement differentially influences structure loss, we compared NDVI values from concentric circles surrounding the structure at three distances—30, 90, and 300 m (Table 1). We included all cells overlapping the concentric circles in our calculation of mean NDVI. Due to the resolution of the satellite data, we did not calculate distances shorter than 30 m.

To represent landscape-level vegetation pattern, we used a landscape pattern metric to calculate the proportion of highly flammable vegetation within a circular moving window at a 2.5 km radius (the approximate distance the wind may carry an ember [8]) around all structures (as in Alexandre et al. [19]), using Fragstats v4.2.1 [30]. For this variable, we used the U.S. Geological Survey National Land Database (NLCD, mrlc.gov) from 2016 to create a binary class of flammable versus non-flammable vegetation, grouping together grass, shrubs, and trees into flammable vegetation.

Table 1. Name and description of explanatory variables used to explain structure loss in California.

	Variable Name	*Definition*	*Source*	*Resolution*
Climate	Actual evapotranspiration (AET)	Average AET (Water available between wilting point and field capacity; mm), 1981–2020	Flint and Flint [31]	270 m
	MaxTemp	Average Maximum Monthly Temperature (deg. C), Annual, 1981–2010	Flint and Flint [31]	270 m
Topography	Elevation	Elevation (m)	U.S. Geological Survey	30 m
	Topographic heterogeneity	The range in elevation values from a center cell and the three-cell radius immediately surrounding it using a digital elevation model. Values were converted to a 0–1 scale using the standard deviation.	NatureServe (https://databasin.org)	90 m
Human	Dist_powerline	Euclidean distance from electric transmission lines (status = operational AND type = OH; m)	California Energy Commission	30 m
	Dist_rd	Euclidean distance from roads (excluding 4WD and OHV; m)	TIGER/Line 2016 (www.census.gov)	30 m
Vegetation				
	NDVI_30	Mean NDVI max averaged for 1 and 2 years before fire across 30 m buffer around structure	Climate Engine (http://climateengine.org/)	30 m
	NDVI_90	Mean NDVI max averaged for 1 and 2 years before fire across 90 m buffer around structure	Climate Engine (http://climateengine.org/)	30 m
	NDVI_300	Mean NDVI max averaged for 1 and 2 years before fire across 300 m buffer around structure	Climate Engine (http://climateengine.org/)	30 m
	Flammable veg in 2.5 km	Proportion highly flammable vegetation (grass, trees, and shrubs) across circular moving window with 2.5 km radius	NLCD 2016 Land Cover www.mrlc.gov	30 m
Vegetation and human	WUI Class	Intermix, Interface, Unvegetated; Low-density vegetated	Radeloff et al. [23]	Polygon converted to 30 m grid

In addition to the vegetation-related variables, we explored other biophysical and human factors as potential predictors (Table 1). Given their demonstrated overall relationship with the spatial distribution of fire probability [4,32–34], we considered two long-term climate variables—average maximum monthly temperature from 1981 to 2010 and average actual evapotranspiration (AET), a measure of the water available between wilting point and field capacity (mm), 1981–2010. We also included two topographic variables, which mediate fire behavior and vegetation properties: elevation and topographic heterogeneity. The elevation grid was provided by LANDFIRE (landfire.gov/elevation.php) at 30 m resolution and the topographic heterogeneity index was calculated from a 90 m digital elevation model (DEM) to capture surrounding diversity in terrain (https://databasin.org/datasets/1f86100938b544a3b6361eee6ac05945/). Finally, we included two anthropogenic variables to assess their relative influence on structure loss. These included distance to roads, which can serve as a proxy for firefighter access, derived using the 2015 TIGER Roads data, U.S. Dept. of Commerce, U.S. Census Bureau (www.census.gov), and distance from electric transmission line, with data provided by the California Energy Commission, Electric Transmission Lines (https://cecgis-caenergy.opendata.arcgis.com/datasets/260b4513acdb4a3a8e4d64e69fc84fee_0). We also included distance to powerline because several of the recent destructive fires were ignited by powerlines. As the building characteristics provided by Cal Fire for destroyed structures were not available for the unburned homes within the fire perimeter, we did not incorporate these into our analysis, as these numbers are available in Syphard and Keeley [18].

2.3. Analysis

Statewide and for the three regions, we summarized and compared the average NDVI within the buffer distances around destroyed and unburned structures. Although we used the spatially filtered data to ensure more robust statistical analysis, we assembled these summary statistics for the full dataset to reflect the full population. We additionally

summarized all point data for destroyed and unburned structures according to their WUI classification.

To quantify the relative importance of the explanatory variables, we developed generalized linear regression models (GLMs) [35] for single predictor variables using a logit link and a binomial response, i.e., destroyed versus unburned structures, as in Syphard and Keeley [18]. We then calculated the deviance explained (D^2) for each variable, a comparable metric to R-squared in linear regression. Given that the WUI data were presented in different classes, we also calculated the relative risk (RR) [36] among all class pairs to determine if there were significant differences in risk and to identify which classes were most strongly associated with destroyed structures. The RR is based on the ratio of pairwise class proportions (i.e., destroyed versus unburned structures in each WUI class) and identifies whether classes have the same risk (a value of 1), or if one class has a higher (values > 1) or lower (values < 1) risk compared to another.

We developed statewide and regional multivariate classification trees using the RPART package (https://cran.r-project.org/web/packages/rpart/rpart.pdf) in RStudio version 1.1463 (rstudio.com) to assess the relative importance of variables in terms of how well they split the data between destroyed and unburned structures. Classification trees are also useful for illustrating variable effects and interactions in a multi-variate environment [37]. Given the large number of potential predictor variables, we only performed this analysis statewide to ensure sufficient sample size. There was a strong correlation ($r > 0.7$) between the NDVI measurements in different buffer sizes, so we only evaluated NDVI at the 30 m buffer distance, as that was the measurement with the largest difference between destroyed and unburned structures. Additionally, elevation was correlated with mean annual temperature ($r = -0.8$), so we removed that variable because temperature is a more direct measurement of the spatial distribution of climatic variability. There were no other high correlations among explanatory variables. Thus, the variables that we included in the tree were: NDVI, topographic heterogeneity, distance to roads, distance to powerlines, WUI class, mean annual maximum temperature, mean actual evapotranspiration, and vegetation within 2.5 km. We pruned the trees using the complexity parameter that best minimized overfitting with the smallest cross-validated error and calculated model performance of the training data using the area under the curve (AUC) for receiver operating characteristic plots (ROC) [38].

3. Results

The comparison of destroyed versus unburned structures did not reveal a strong influence of surrounding vegetation as measured through NDVI statewide or in the Bay Area (Figures 2 and 3). There, and in Southern CA where the differences were larger, the NDVI was greater for destroyed structures than unburned structures at all three buffer distances. However, the differences among buffer distances were minimal, with a larger separation of destroyed and unburned structures at 30 m than the other two distances. In the North Interior region, the relationship was inverse in that there was greater NDVI in unburned than destroyed structures at all three buffer distances (Figure 2).

The ranking of the deviance explained for surrounding vegetation compared to other explanatory variables was low statewide and in all regions except for Southern CA, where the deviance explained for NDVI in the 30-m buffer was the top-ranking explanatory variable (Figure 3). In all cases, the amount of vegetation within 30 m was relatively more important than that in 90 or 300 m. The broader metric of vegetation, at 2.5 km, explained more than NDVI statewide and in the North Interior.

Vegetation pattern combined with housing pattern—as measured through the WUI—was consistently more important than the other vegetation-related variables, and it was one of the top two ranking variables for all analyses in all regions (Figure 3). The ranking of the non-vegetation variables varied from region to region, although elevation was one of the top two variables along with WUI class statewide (Figure 3). Otherwise, distance to powerline was one of the top two variables in the Bay Area, maximum average temperature

3. Results

The comparison of destroyed versus unburned structures did not reveal a strong influence of surrounding vegetation as measured through NDVI statewide or in the Bay Area (Figures 2 and 3). There, and in Southern CA where the differences were larger, the NDVI was greater for destroyed structures than unburned structures at all three buffer distances. However, the differences among buffer distances were minimal, with a larger separation of destroyed and unburned structures at 30 m than the other two distances. In the North Interior region, the relationship was inverse in that there was greater NDVI in unburned than destroyed structures at all three buffer distances (Figure 2).

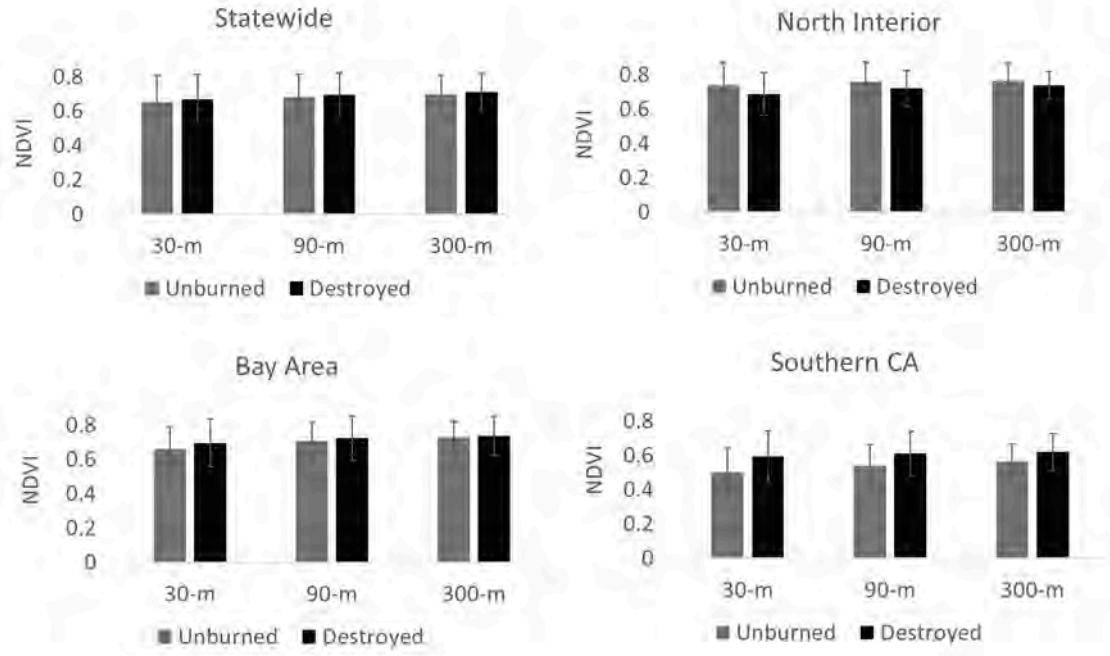


Figure 2. Mean NDVI in unburned and destroyed structures in wildfire perimeters statewide and in three regions of California. Error bars depict the standard deviation.

Figure 2. Mean NDVI in unburned and destroyed structures in wildfire perimeters statewide and in three regions of California. Error bars depict the standard deviation.

n compared to other
Southern CA, where
ing explanatory var-
was relatively more
at 2.5 km, explained

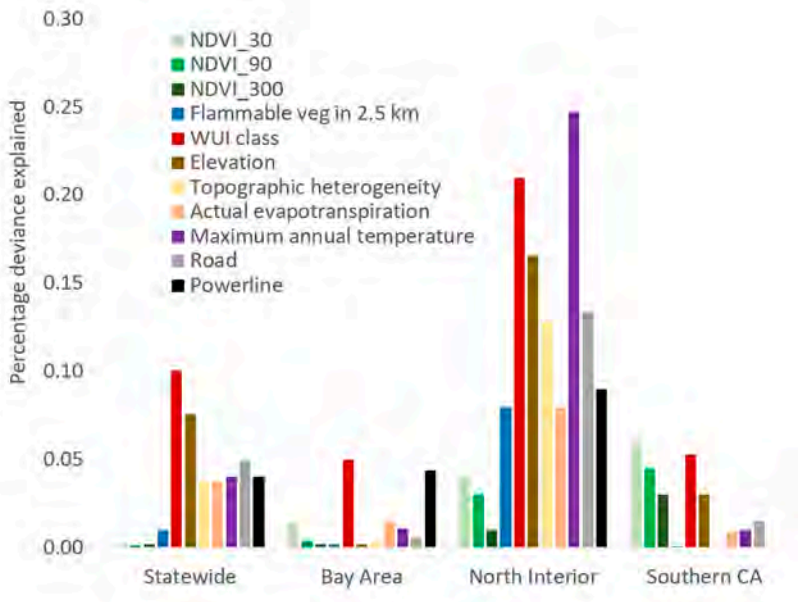


Figure 3. Percentage deviance explained for unburned versus destroyed structures in binomial regression models statewide and for three regions in California. The numbers following "NDVI" represent the buffer distance surrounding structures for which the Normalized Difference Vegetation Index (NDVI) was calculated.

Figure 3. Percentage deviance explained for unburned versus destroyed structures in binomial regression models statewide and for three regions in California. The numbers following "NDVI" represent the buffer distance surrounding structures for which the Normalized Difference Vegetation Index (NDVI) was calculated.

Of the four WUI classes evaluated, the Intermix WUI and Low-density vegetated classes were the most common for all structures in the analysis (Figure 4). Most of the unburned structures were distributed in the Low-density vegetated class while most of the destroyed structures were distributed within the Intermix WUI class. The RP assessment within different WUI classes showed that the Intermix WUI had disproportionately larger

Vegetation pattern combined with housing pattern as measured through the WUI was consistently more important than the other vegetation related variables, and it was one of the top two ranking variables for all analyses in all regions (Figure 3). The ranking of the non-vegetation variables varied from region to region, although elevation was one of the top two variables along with WUI class statewide (Figure 3). Otherwise, distance to powerline was one of the top two variables in the Bay Area, maximum average temperature was the highest-ranking variable in the North Interior, and NDVI at 30 m was one of the top two variables in Southern California.

Of the four WUI classes evaluated, the Intermix WUI and Low-density vegetated

numbers of destroyed structures than the three other classes statewide (RR = 1.15–2.5) and in all three regions (RR = 1.14–1.95), except for the Bay Area (RR = 0.93) and the North Interior (RR = 0.89) study areas, where there were proportionately fewer destroyed structures in the Intermix versus the Interface WUI classes (Table 2). Although all comparisons at the statewide scale were significant, the Intermix versus Interface comparisons were not significant for the three regions separately or for the Intermix versus Unvegetated class in the Bay Area. Among other classes, Interface WUI generally had disproportionately more destroyed structures than the two non-WUI classes, unvegetated and low-density vegetated (RR = 1.29–4.64). The vegetated class had consistently lower RR than the unvegetated class (RR = 0.5–0.79).

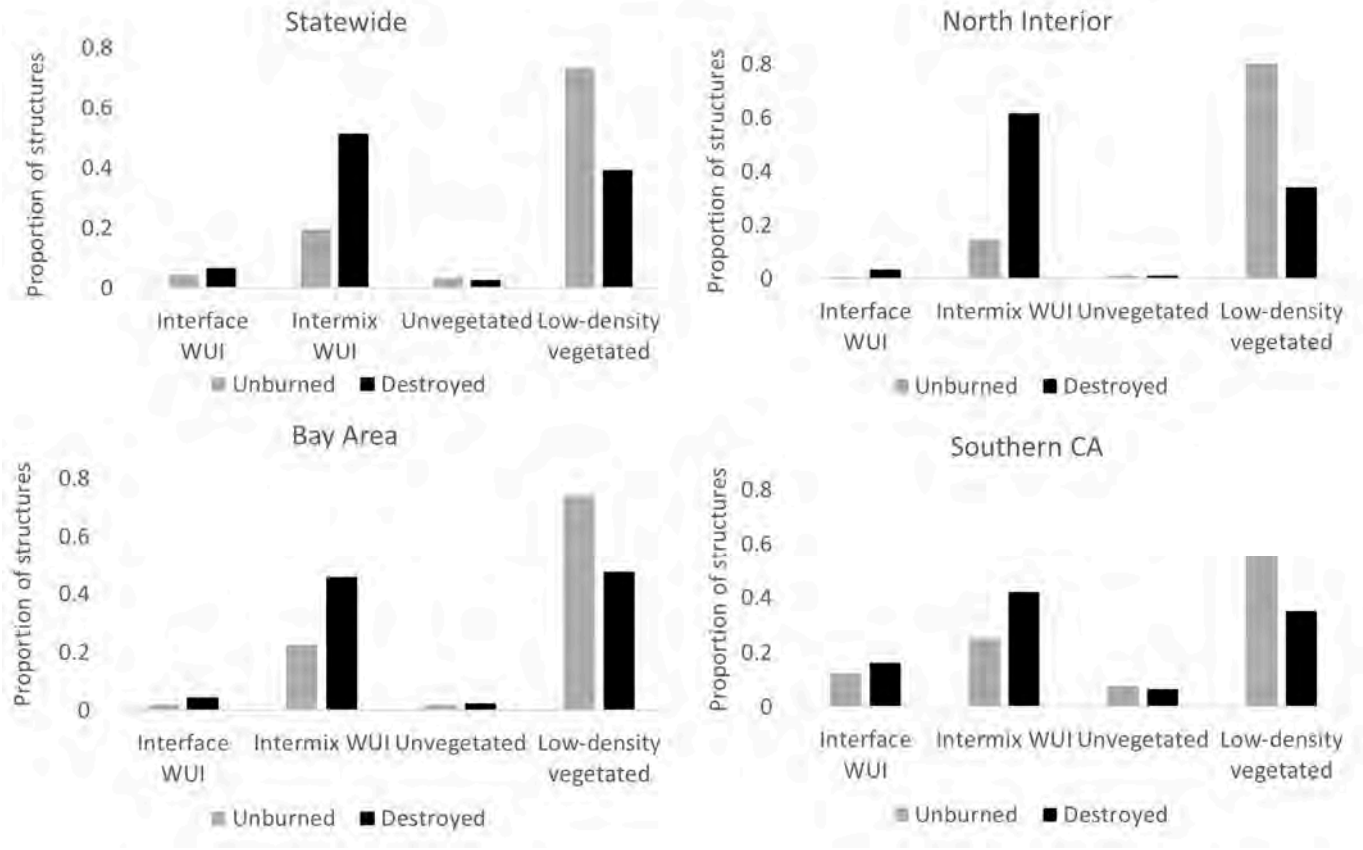


Figure 4. Proportion of unburned and destroyed structures among four Wildland–Urban Interface cover classes statewide and in three regions of California.

Table 2. Relative risk (RR) among WUI classes statewide and for three California regions. In the class comparisons, an RR > 1 means the first class listed had disproportionately more destroyed than unburned structures, < 1 means the first class listed had disproportionately fewer destroyed than unburned structures, and 1 means no difference between the two classes.

	Statewide	*p-Value*	*Bay Area*	*p-Value*	*North Interior*	*p-Value*	*Southern CA*	*p-Value*
Intermix vs. Interface	1.22	<0.001	0.93	0.4	0.89	0.25	1.14	0.2
Intermix vs. Unvegetated	1.15	<0.001	1.17	0.31	1.17	0.01	1.55	0.009
Intermix vs. Low-density vegetated	2.25	<0.001	1.66	<0.001	4.14	<0.001	1.95	<0.001
Interface vs. Unvegetated	0.96	0.004	1.29	0.19	2.34	0.006	1.34	0.11
Interface vs. Low-density vegetated	1.85	<0.001	1.78	<0.001	4.64	<0.001	1.7	<0.001
Vegetated vs. Unvegetated	0.51	<0.001	0.71	0.03	0.5	0.02	0.79	0.17

The classification trees showed that statewide, the WUI was the most influential factor separating destroyed from unburned structures (Figure 5), and in this case the two WUI types, Intermix and Interface, were two types associated with destroyed versus unburned structures. The second split in the data was NDVI within a 30-m buffer, with destroyed structures tending to occur above a threshold of 0.49. The last variable selected in the tree was mean annual maximum temperature, with destroyed structures tending to occur in areas that average between 20 and 23 degrees Celsius. The AUC for this tree was 0.68.

The separate classification trees for each region showed variability in the factors that best separated the destroyed from unburned structures (Figure 5). In all cases except Southern CA, landscape-scale factors related to spatial distribution and exposure were responsible for the first split in the data, and WUI was the second split in the data followed by other variables. For the North Interior region, the first split was maximum average temperature, followed by WUI class—again with Interface and Intermix separating destroyed from unburned structures, and mean actual evapotranspiration. The training AUC for the tree in this region was 0.84. In the Bay Area, the first split was distance to powerline followed by WUI class in which Interface, Intermix, and Unvegetated were

grouped together as those best separating destroyed from unburned structures. Depending on which WUI class the structure belonged, the final splits were for mean annual maximum temperature and distance to road or NDVI. The AUC for the Bay Area tree was 0.70. In Southern California, the first split in the data was the amount of vegetation within 30 m of the structure, with an NDVI of >= 0.49 being the threshold. In this region, the WUI was the second most important split, followed by distance to powerline and mean annual evapotranspiration, again with Unvegetated combined with Intermix and Interface defining the split in data. The AUC for this tree was 0.69.

The classification trees showed that statewide, the WUI was the most influential factor separating destroyed from unburned structures (Figure 5), and in this case, the two WUI types, Intermix and Interface, were two types associated with destroyed versus unburned structures. The second split in the data was NDVI within a 30-m buffer, with destroyed structures tending to occur above a threshold of 0.49. The last variable selected in the tree was mean annual maximum temperature, with destroyed structures tending to occur in areas that average between 20 and 23 degrees Celsius. The AUC for this tree was 0.68.

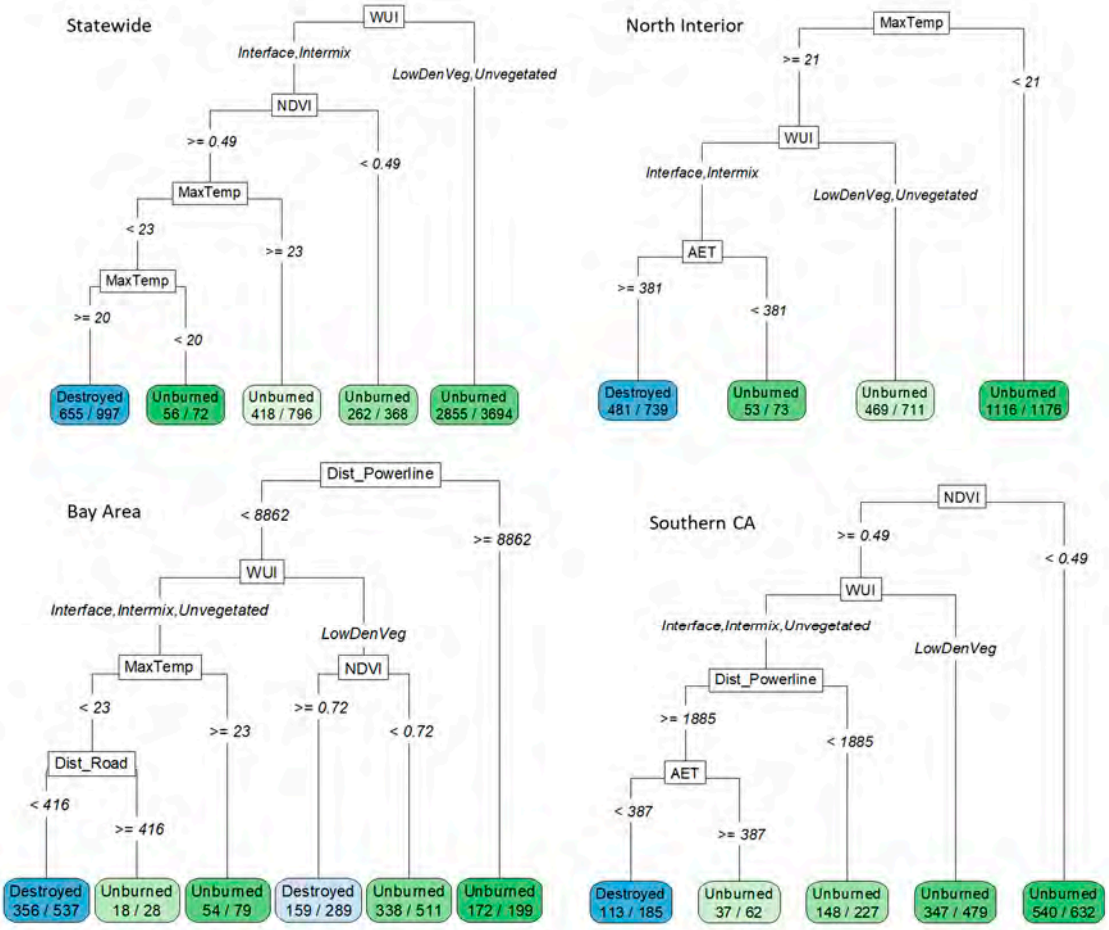


Figure 5. Classification trees illustrating variables explaining unburned versus destroyed structures statewide and for three California regions. The NDVI variable is for 30 m distance around structures (90 and 300 m not included). The intensity of the blue and green node colors is proportional to the percentage of observations. For variable explanations, refer to Table 1.

Figure 5. Classification trees illustrating variables explaining unburned versus destroyed structures statewide and for three California regions. The NDVI variable is for 30 m distance around structures (90 and 300 m not included). The intensity of the blue and green node colors is proportional to the percentage of observations. For variable explanations, refer to Table 1.

The separate classification trees for each region showed variability in the factors that best separated the destroyed from unburned structures (Figure 5). In all cases except Southern CA, landscape-scale factors related to spatial distribution and exposure were responsible for the first split in the data, and WUI was the second split in the data, followed by other variables. For the North Interior region, the first split was maximum average temperature, followed by WUI class—again with Interface and Intermix separating destroyed from unburned structures, and mean actual evapotranspiration. The training AUC for the tree in this region was 0.84. In the Bay Area, the first split was distance to powerline followed by WUI class in which Interface, Intermix, and Unvegetated were grouped together as those best separating destroyed from unburned structures. Depending on which WUI class the structure belonged, the final splits were for mean annual maximum temperature and distance to road or NDVI. The AUC for the Bay Area tree was 0.70. In Southern California, the first split in the data was the amount of vegetation within 30 m of the structure, with an NDVI of >= 0.49 being the threshold. In this region, the WUI was the second most

4. Discussion

Vegetation is the primary means by which wildfire propagates; is something that can be managed; and thus, is often considered key among strategies to reduce wildfire risk. Yet, the relationship between vegetation and structure loss is complex, and this study underlines the fact that vegetation has different relationships with fire risk at different scales, representing different operative mechanisms. These relationships also vary in relative effect depending upon geographical region. Overall, landscape-level vegetation and housing pattern provided better separability of unburned and destroyed structures across the state than local-scale vegetation amount. None of the variables analyzed, however, had deviance explained higher than 25%, which reaffirms the notion that structure loss is a

important split, followed by distance to powerline and mean annual evapotranspiration, again with Unvegetated combined with Intermix and Interface defining the split in data. The AUC for this tree was 0.69.

4. Discussion

Vegetation is the primary means by which wildfire propagates; is something that can be managed; and thus, is often considered key among strategies to reduce wildfire risk. Yet, the relationship between vegetation and structure loss is complex, and this study underlines the fact that vegetation has different relationships with fire risk at different scales, representing different operative mechanisms. These relationships also vary in relative effect depending upon geographical region. Overall, landscape-level vegetation and housing pattern provided better separability of unburned and destroyed structures across the state than local-scale vegetation amount. None of the variables analyzed, however, had deviance explained higher than 25%, which reaffirms the notion that structure loss is a function of multiple factors interacting simultaneously, including factors not explored here.

Although multiple definitions of the WUI have been proposed and incorporated into policy, even explicitly accounting for fire risk [27], the underlying conceptual premise for most definitions that focus on fire is that risk and ignitions are likely to be higher where houses meet or intermingle with vegetation [23,39–42]. Thus, the two conditions that must be present are vegetation and housing, with different classes of WUI defined based on variations in housing density and vegetation cover.

In previous studies examining structure loss probability, housing location and pattern have consistently been found to be top-ranked among a wide range of explanatory variables [4,6,19,43]. Although the specific structural pattern and housing density where risk is highest vary geographically [4,6,19], lower-density housing at a landscape scale has been the most consistent housing pattern with the highest risk. The reason for the strong significance of housing variables, particularly ones that reflect dispersed or low-density housing, is that they represent high exposure to wildfire, which is the first condition that must be met for structure loss to occur [5,20]. If a fire does not reach a structure, the other factors become irrelevant.

A primary reason explaining why low- to intermediate-density housing is so strongly tied to fire risk is because these are the houses most likely to be adjacent to flammable wildland vegetation—and this is what creates the exposure. This is also the reason that the WUI as defined here is so strongly associated with fire risk [23]—because it is a measurement that combines housing with adjacency and distance to wildland vegetation [44]. The WUI definition incorporates a measurement of vegetation out to 2.4 km, and this variable was more influential than our measurement of vegetation to 2.5 km, which suggests it is the specific pattern of houses and vegetation that matter most—more than vegetation by itself.

In this study, the largest proportion of destroyed structures was in the Intermix WUI class, followed by the non-WUI, low-density, vegetated class. Intermix also had the highest RR compared to Interface and non-WUI classes statewide. Regionally, however, the relative ranking between Intermix and Interface varied, and the differences were non-significant. Both Intermix and Interface WUI had higher RRs than the other two non-WUI classes across all regions.

This finding, that WUI classes have disproportionately higher fire risk than non-WUI classes, and that relationships vary by region and scale, has been observed in other empirical studies. Kramer et al. [24] found that, across the United States, the majority of destroyed and threatened structures were within areas designated as WUI, but a large proportion of destroyed structures were also in non-WUI areas with housing density that was too low to meet the definition of WUI defined here. Ciggiano et al. [44] also found that most buildings lost in recent fires across the US from 2000 to 2018 were within WUI-designated areas. Furthermore, all destroyed structures in their study were close to wildland vegetation (from 100 to 850 m), and more burned buildings were in the Intermix rather than the Interface. On the other hand, Kramer et al. [25] found that from 1985 to 2013

in California, more structures were destroyed in Interface rather than Intermix WUI; that is, in areas with less wildland vegetation. This empirical research on WUI types is generally consistent with the finding that low-intermediate housing density is where most structures are destroyed [4,43]; but clearly there are regional, and perhaps temporal, differences in the relative importance of the predominant type of WUI.

The geographical differences in the relative housing density or type of WUI where structure loss is most likely to occur likely reflects the influence of other factors that combine to contribute to structure loss probability, and the fact that fires tend to be idiosyncratic. For example, in several recent California fires, the role of winds and structural characteristics of buildings were clearly dominant factors. While the average structure density where structures were lost fires was low, there were also portions of the fires evaluated here in which significant structure-to-structure spread occurred throughout high-density housing. High housing density that facilitates structure-to-structure spread has been observed in other fires with large numbers of destroyed buildings [10,45], in part because certain structural features and surrounding materials can facilitate fire spread [46].

The difference between a structure surviving and being destroyed could also be due to factors that have yet to be quantified, such as firefighter presence or serendipitous factors such as a sudden shift in wind velocity or direction. The scale of measurement can also affect the relative importance of different housing and vegetation patterns [11]. Different regions have different baseline housing densities with unique arrangements of housing interspersed with vegetation. Empirical studies have also been conducted at different spatial scales, where the average housing density may vary with the overall range and variation of the structures in the sample.

Comparison of destroyed with unburned structures may also yield different results depending upon whether the unburned structures are within fire perimeters as they are in this study. That is, if housing density and the WUI are indices of exposure to fire, houses in the perimeter are already biased in that they have been exposed. This is likely why the second most common WUI class in this study was non-WUI low-density vegetated housing.

This study also shows that structure exposure to wildfire can be a function of other sources of spatial variation across a landscape. Depending upon the region, factors such as elevation, climatic variation as measured by maximum annual temperature, and distance to powerline were similar in variable importance to WUI class. These factors illustrate how parts of some landscapes are more fire-prone than others, and that structure loss tends to occur in the most fire-prone facets of a landscape. For example, the importance of temperature in the North Interior likely reflects how climatic variation is a strong driver of fire activity in this region of California [47], and structures were destroyed more often in areas with hotter temperatures. Given that the most destructive fires in the Bay Area were caused by powerline ignitions, spatial proximity to powerline was a strong separator of unburned and destroyed structures in that region. In Southern CA, distance to powerline was one of the lower-ranking variables included in the classification tree, and the direction of the relationship was counter-intuitive. This may reflect the lower number of destructive powerline-ignited fires during the study period here; it may also reveal an interaction with the higher-ranking variables in the tree, suggesting powerline proximity is serving as a proxy for something else. As the definition of WUI used here is a function of housing and vegetation alone, other approaches that additionally account for variation in fire risk [27] or that are scaled for specific geographies [44] may be even more useful for planning purposes.

The one region in which local-scale vegetation amount explained structure loss better than landscape-scale vegetation pattern (i.e., the WUI) was Southern CA. The classification tree showed that NDVI at 30 m was the first split in the classification tree, followed by the WUI. This result is somewhat surprising because Southern CA has the largest extent of WUI of the three regions. Additionally, in Southern CA, housing density was found to explain more variation in structure loss than other factors, including defensible space [48]. However, it may be that the extensive nature of WUI in the region may partly explain why it was second in importance to local-scale vegetation. Here and in the Bay area,

unvegetated areas (largely urban) were included with the WUI class in the first split of the classification tree, suggesting that these fires were all at least partially surrounded by high-density development, and there may not be much variability in the spatial pattern of development where the fires in this study occurred. It may also suggest structures with large amounts of exotic landscaping in urban areas are most at risk in this region.

The use of NDVI to measure local vegetation amount was appropriate for a broad-scale study such as this, to rank the relative importance of factors across large regions; and while NDVI captures vegetation abundance, it cannot distinguish vegetation type, condition, or structure, all of which are important for fire behavior [49]. NDVI also cannot indicate where abundance is high within a 30 m grid cell. The empirical studies evaluating the role of defensible space in this region used a wide range of factors to quantify defensible space at scales much finer than 30 m [12,13], and these studies found that the most effective distance of defensible space is shorter than 30 m, particularly when vegetation is touching or overhanging a structure.

That vegetation is most important closer to the house may be seen in this study in that the deviance explained was smaller for larger buffer distances; however, given the low overall deviance explained, further analysis is needed. A regional study exploring four of the fires included in the two northern regions of our analysis also found that vegetation cover near the structure, as measured by NDVI within a 25 m buffer, was an important predictor of structure loss. However, wind speed dampened the relationship to the point that all vegetation classes in that study had loss rates above 80% [50]. Syphard and Keeley [18] found that defensible space distance was much less important than structural characteristics and speculated that this result might be because the distances measured were not at fine enough scales to capture the importance of vegetation close to the structure. Another important component of defensible space is irrigation and vegetation moisture. Gibbons et al. [17] found that irrigation and vegetation arrangement can be just as effective as minimizing vegetation amount. This is likely because wind-borne embers are more likely to be extinguished if they land on something with high fuel moisture.

Although we did not repeat the analysis here, Syphard and Keeley [18] found that structural characteristics play an important role in protecting structures once a fire reaches there. This may also reflect how preventing ember entry to the building may be one of the most significant factors in increasing probability of survival. In that study and this one, none of the factors we evaluated explained a substantial amount of variation in destroyed structures.

The low deviance explained may be due to uncertainty introduced with spatial data or a low overall variability in our spatial data. As all structures in our analysis had been, to some extent, exposed to a fire, the measurements of exposure used here, such as the WUI, distance to roads, or broad climatic variation, are only able to explain the difference between degrees of exposure. The reason for this restriction was that we could not compare pre-fire NDVI with structures that did not have a fire. Nevertheless, given the many large fires in this study, factors such as distance to powerline or road, or the distance to the ignition location, can still vary significantly across the dataset. We are unsure why the deviance explained was higher overall for the North Interior region, but it may reflect a higher vegetation heterogeneity in the fire perimeters than the other regions, given that conifer forest is more prevalent here. The low deviance overall also suggests, as mentioned previously, that a range of other characteristics play into the ultimate outcome of a fire event. Thus, this research illustrates differences in the relative importance of the variables analyzed, but additional work and more extensive empirical research will be needed to obtain a full understanding of why some structures are destroyed in fires and others are not.

5. Conclusions

There are multiple ways that vegetation can influence fire risk. At broad scales, vegetation pattern is an important determinant of exposure. At finer scales, vegetation affects sensitivity to the hazard and mediates fire behavior through fuel load (i.e., amount)

or fuel moisture and flammability [20]. Our comparison of vegetation pattern and amount generally identified the pattern of vegetation and housing to better explain structure loss than local-scale vegetation amount. This is likely because exposure to fire is a necessary first condition determining structure survival, and sensitivity is only relevant once the fire reaches a structure. This finding could help develop the ranking of regions for focus of fire management efforts. These results also suggest that the most effective fire risk reduction approach will account for multiple factors at multiple scales and will incorporate multiple simultaneous strategies. The widespread geographical variability in results reinforces the notion that "one size does not fit all". Our study indicates that effective fire management plans will need additional customized, local-scale empirical research on specific vegetation characteristics relative to structure loss.

Author Contributions: Conceptualization, A.D.S., H.R.-R. and J.E.K.; methodology, A.D.S. and H.R.-R.; formal analysis, A.D.S.; writing—original draft preparation, A.D.S.; writing—review and editing, A.D.S., H.R.-R. and J.E.K. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Data Availability Statement: No new data were created or analyzed in this study. Data sharing is not applicable to this article.

Acknowledgments: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Haynes, H.J.G. *Fire Loss in the United States during 2014*; National Fire Protection Association, Fire Analysis and Research Division: Quincy, MA, USA, 2015.
2. Blanchi, R.; Lucas, C.; Leonard, J.; Finkele, K. Meteorological conditions and wildfire-related house loss in Australia. *Int. J. Wildl. Fire* **2010**, *19*, 914–926. [CrossRef]
3. Molina-Terrén, D.M.; Xanthopoulos, G.; Diakakis, M.; Ribeiro, L.; Caballero, D.; Delogu, G.M.; Viegas, D.X.; Silva, C.A.; Cardil, A. Analysis of forest fire fatalities in Southern Europe: Spain, Portugal, Greece and Sardinia (Italy). *Int. J. Wildl. Fire* **2019**, *28*, 85–98. [CrossRef]
4. Syphard, A.D.; Rustigian-Romsos, H.; Mann, M.; Conlisk, E.; Moritz, M.A.; Ackerly, D. The relative influence of climate and housing development on current and projected future fire patterns and structure loss across three California landscapes. *Glob. Environ. Chang.* **2019**, *56*, 41–55. [CrossRef]
5. Syphard, A.D.; Keeley, J.E. Why are so many structures burning in California. *Fremontia* **2020**, *47*, 28–35.
6. Alexandre, P.M.; Stewart, S.I.; Mockrin, M.H.; Keuler, N.S.; Syphard, A.D.; Bar-Massada, A.; Clayton, M.K.; Radeloff, V.C. The relative impacts of vegetation, topography and spatial arrangement on building loss to wildfires in case studies of California and Colorado. *Landsc. Ecol.* **2015**, *31*, 415–430. [CrossRef]
7. Foote, E.I.D.; Martin, R.E.; Gilless, J.K. The defensible space factor study: A survey instrument for post-fire structure loss analysis. In Proceedings of the 11th Conference on Fire and Forest Meteorology, Missoula, MT, USA, 16–19 April 1991; Andrews, P.L., Potts, D.F., Eds.; Society of American Foresters: Bethesda, MD, USA, 1991.
8. Cohen, J.D. Home ignitability in the wildland-urban interface. *J. For.* **2000**, *98*, 15–21.
9. Cohen, J. Relating flame radiation to home ignition using modeling and experimental crown fires. *Can. J. For. Res.* **2004**, *34*, 1616–1626. [CrossRef]
10. Maranghides, A.; Mell, W. *A Case Study of a Community Affected by the Witch and Guejito Fires*; National Institute of Standards and Technology: Gaithersburg, MD, USA, 2009.
11. Braziunas, K.H.; Seidl, R.; Rammer, W.; Turner, M.G. Can we manage a future with more fire? Effectiveness of defensible space treatment depends on housing amount and configuration. *Landsc. Ecol.* **2021**, *36*, 309–330. [CrossRef]
12. Syphard, A.D.; Brennan, T.J.; Keeley, J.E. The role of defensible space for residential structure protection during wildfires. *Int. J. Wildl. Fire* **2014**, *23*, 1165–1175. [CrossRef]
13. Miner, A. *Defensible Space Optimization for Preventing Wildfire Structue Loss in the Santa Monica Mountains*; Johns Hopkins University: Baltimore, MD, USA, 2014.
14. Platt, R.V. Wildfire hazard in the home ignition zone: An object-oriented analysis integrating LiDAR and VHR satellite imagery. *Appl. Geogr.* **2014**, *51*, 108–117. [CrossRef]
15. Penman, S.H.; Price, O.F.; Penman, T.D.; Bradstock, R.A. The role of defensible space on the likelihood of house impact from wildfires in forested landscapes of south eastern Australia. *Int. J. Wildl. Fire* **2018**, *28*, 4–14. [CrossRef]

16. Gibbons, P.; van Bommel, L.; Gill, A.; Cary, G.J.; Driscoll, D.A.; Bradstock, R.A.; Knight, E.; Moritz, M.A.; Stephens, S.L.; Lindenmayer, D.B. Land management practices associated with house loss in wildfires. *PLoS ONE* **2012**, *7*, e29212. [CrossRef]
17. Gibbons, P.; Gill, A.M.; Shore, N.; Moritz, M.A.; Dovers, S.; Cary, G.J. Options for reducing house-losses during wildfires without clearing trees and shrubs. *Landsc. Urban Plan.* **2018**, *174*, 10–17. [CrossRef]
18. Syphard, A.D.; Keeley, J.E. Factors associated with structure loss in the 2013–2018 California wildfires. *Fire* **2019**, *2*, 49. [CrossRef]
19. Alexandre, P.M.; Stewart, S.I.; Keuler, N.S.; Clayton, M.K.; Mockrin, M.H.; Bar-Massada, A.; Syphard, A.D.; Radeloff, V.C. Factors related to building loss due to wildfires in the conterminous United States. *Ecol. Appl.* **2016**, *26*, 2323–2338. [CrossRef] [PubMed]
20. Schumann, R.L.; Mockrin, M.; Syphard, A.D.; Whittaker, J.; Price, O.; Johnson, C.; Emrich, C.T.; Butsic, V. Wildfire recovery as a "hot moment " for creating fire-adapted communities. *Int. J. Disaster Risk Reduct.* **2019**, *42*, 101354. [CrossRef]
21. Blanchi, R.; Leonard, J.E. Investigation of Bushfire Attack Mechanisms Involved in House Loss in the ACT Bushfire 2003. Bushfire CRC Report CMIT-2005-377. Available online: https://www.bushfirecrc.com/sites/default/files/downloads/act_bushfire_crc_report.pdf (accessed on 11 March 2021).
22. Radeloff, V.C.; Hammer, R.B.; Stewart, S.I.; Fried, J.S.; Holcomb, S.S.; McKeefry, J.F. The wildland-urban interface in the United States. *Ecol. Appl.* **2005**, *15*, 799–805. [CrossRef]
23. Radeloff, V.C.; Helmers, D.P.; Anu Kramer, H.; Mockrin, M.H.; Alexandre, P.M.; Bar-Massada, A.; Butsic, V.; Hawbaker, T.J.; Martinuzzi, S.; Syphard, A.D.; et al. Rapid growth of the US wildland-urban interface raises wildfire risk. *Proc. Natl. Acad. Sci. USA* **2018**, *115*, 3314–3319. [CrossRef] [PubMed]
24. Kramer, H.A.; Mockrin, M.H.; Alexandre, P.M.; Stewart, S.I.; Radeloff, V.C. Where wildfires destroy buildings in the US relative to the wildland–urban interface and national fire outreach programs. *Int. J. Wildl. fire* **2018**, *27*, 329–341. [CrossRef]
25. Kramer, H.A.; Mockrin, M.H.; Alexandre, P.M.; Radeloff, V.C. High wildfire damage in interface communities in California. *Int. J. Wildl. Fire* **2019**, *28*, 641. [CrossRef]
26. Bar-Massada, A.; Radeloff, V.C.; Stewart, S.I. Biotic and abiotic effects of human settlements in the wildland-urban interface. *Bioscience* **2014**, *64*, 429–437. [CrossRef]
27. Miranda, A.; Carrasco, J.; González, M.; Pais, C.; Lara, A.; Altamirano, A.; Weintraub, A.; Syphard, A.D. Evidence-based mapping of the wildland-urban interface to better identify human communities threatened by wildfires. *Environ. Res. Lett.* **2020**, *15*. [CrossRef]
28. Schmidt, J. The Butte Fire: A Case Study in Using LIDAR Measures of Pre-Fire Vegetation to Estimate Structure Loss Rates. *Munich Pers. RePEc Arch.* 2020. Available online: https://mpra.ub.uni-muenchen.de/99699/ (accessed on 11 March 2021).
29. Gray, M.E.; Dickson, B.G.; Zachmann, L.J. Modelling and mapping dynamic variability in large fire probability in the lower Sonoran Desert of south-western Arizona. *Int. J. Wildl. Fire* **2014**, *23*, 1108–1118. [CrossRef]
30. McGarigal, K.; Marks, B.J. FRAGSTATS: Spatial Pattern Analysis Program for Quantifying Landscape Structure. 1995. Available online: http://www.umass.edu/landeco/research/fragstats/documents/Metrics/Metrics%20TOC.htm (accessed on 11 March 2021).
31. Flint, A.L.; Flint, L.E. Downscaling future climate scenarios to fine scales for hydrologic and ecologic modeling and analysis. *Ecol. Process.* **2012**, *1*, 2. [CrossRef]
32. Mann, M.; Batllori, E.; Moritz, M.; Waller, E.; Berck, P.; Flint, A.; Flint, L.; Dolfi, E. Incorporating anthropogenic influences into fire probability models: Effects of human activity and climate change on fire activity in California. *PLoS ONE* **2016**, *11*, e0153589. [CrossRef]
33. Krawchuk, M.A.; Moritz, M.A.; Parisien, M.-A.; Van Dorn, J.; Hayhoe, K. Global Pyrogeography: The Current and Future Distribution of Wildfire. *PLoS ONE* **2009**, *4*, e5102. [CrossRef]
34. Parisien, M.A.; Moritz, M.A. Environmental controls on the distribution of wildfire at multiple spatial scales. *Ecol. Monogr.* **2009**, *79*, 127–154. [CrossRef]
35. Venables, W.M.; Ripley, B.D. *Modern Applied Statistics with S-Plus*; Springer: New York, NY, USA, 1994.
36. Sheskin, D.J. *Handbook of Parametric and Nonparametric Statistical Procedures*; CRC Press: Boca Raton, FL, USA, 2003; ISBN 1420036262.
37. Breiman, L.; Friedman, J.; Olshen, R.; Stone, C. *Classification and Regression Trees*; Wadsworth: Belmont, CA, USA, 1984.
38. Hanley, J.A.; McNeil, B.J. The meaning and use of the area under a receiver operating characteristics curve. *Radiology* **1982**, *143*, 29–36. [CrossRef]
39. Theobald, D.M.; Romme, W.H. Expansion of the US wildland-urban interface. *Landsc. Urban Plan.* **2007**, *83*, 340–354. [CrossRef]
40. Stewart, S.I.; Radeloff, V.C.; Hammer, R.B.; Hawbaker, T.J. Defining the Wildland—Urban Interface. *J. For.* **2007**, *105*, 201–207.
41. Sirca, C.; Casula, F.; Bouillon, C.; García, B.F.; Ramiro, M.M.F.; Molina, B.V.; Spano, D. A wildfire risk oriented GIS tool for mapping Rural-Urban Interfaces. *Environ. Model. Softw.* **2017**, *94*, 36–47. [CrossRef]
42. Alcasena, F.J.; Evers, C.R.; Vega-Garcia, C. The wildland-urban interface raster dataset of Catalonia. *Data Br.* **2018**, *17*, 124–128. [CrossRef] [PubMed]
43. Syphard, A.D.; Keeley, J.E.; Massada, A.B.; Brennan, T.J.; Radeloff, V.C. Housing arrangement and location determine the likelihood of housing loss due to wildfire. *PLoS ONE* **2012**, *7*, e33954. [CrossRef]
44. Caggiano, M.D.; Hawbaker, T.J.; Gannon, B.M.; Hoffman, C.M. Building loss in wui disasters: Evaluating the core components of the wildland–urban interface definition. *Fire* **2020**, *3*, 73. [CrossRef]

45. Price, O.; Bradstock, R. Landscape scale influences of forest area and housing density on house loss in the 2009 Victorian bushfires. *PLoS ONE* **2013**, *8*, e73421. [CrossRef] [PubMed]
46. Caton, S.E.; Hakes, R.S.P.; Gorham, D.J.; Zhou, A.; Gollner, M.J. Review of pathways for building fire spread in the wildland urban interface part I: Exposure conditions. *Fire Technol.* **2017**, *53*, 429–473. [CrossRef]
47. Keeley, J.E.; Syphard, A.D. Different historical fire-climate patterns in California. *Int. J. Wildl. Fire* **2017**, *26*, 253. [CrossRef]
48. Syphard, A.D.; Brennan, T.J.; Keeley, J.E. The importance of building construction materials relative to other factors affecting structure survival during wildfire. *Int. J. Disaster Risk Reduct.* **2017**, *21*, 140–147. [CrossRef]
49. Bond, W.J.; van Wilgen, B. *Fire and Plants*; Chapman & Hall: London, UK, 1996.
50. Schmidt, J. Vegetation Cover and Structure Loss in Four Northern California Wildfires: Butte, Tubbs, Carr, and Camp. 2020. Available online: https://core.ac.uk/download/pdf/356665112.pdf (accessed on 11 March 2021).

ENVIRONMENTAL RESEARCH
COMMUNICATIONS

LETTER • OPEN ACCESS

Fitting the solutions to the problems in managing extreme wildfire in California

To cite this article: Mark W Schwartz and Alexandra D Syphard 2021 *Environ. Res. Commun.* **3** 081005

View the article online for updates and enhancements.

This content was downloaded from IP address 174.65.155.156 on 13/08/2021 at 16:04

Environmental Research Communications

LETTER

Fitting the solutions to the problems in managing extreme wildfire in California

Mark W Schwartz[1,*] **and Alexandra D Syphard**[2,3]

[1] Department of Environmental Science and Policy, University of California, Dave, Davis, CA 95616, United States of America
[2] Vertus Wildfire, New York, NY, United States of America
[3] Conservation Biology Institute, Corvallis, OR, United States of America
[*] Author to whom any correspondence should be addressed.

E-mail: mwschwartz@ucdavis.edu

Keywords: wildfire, forest, California, risk

OPEN ACCESS

RECEIVED
15 June 2021

ACCEPTED FOR PUBLICATION
19 July 2021

PUBLISHED
10 August 2021

Original content from this work may be used under the terms of the Creative Commons Attribution 4.0 licence.

Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

Abstract

Agencies are busy within California developing prioritization strategies to increase the pace and scale of forest treatment in an effort to reduce damage to ecosystems and people by large severe wildfire. A tacit assumption of this effort is that building forest resilience to wildfire will resolve California's extreme wildfire challenge. Specifically, the management focus is on coniferous forests where there is abundant evidence of increased tree density and a history of timber production. However, much of the state is covered by non-forested ecosystems, which is also where a lot of structure loss has occurred. We use more than twenty years of wildfire data in California to identify the relative proportion of wildfire area, ignitions and the number of structures destroyed by wildfire categorized by vegetation type. Using five general categories of vegetation (annual dominated, shrubland, woodland, mixed hardwood forest and coniferous forest) we show that a majority of area burned, ignitions and the vast majority of structures damaged by wildfire occur in vegetation types other than coniferous forests. Comprising 19% of the vegetation of California, coniferous forests garner the lion's share of interest in management strategies to reduce the adverse impacts of wildfire. Simply summary statistics clearly show, however, that most of the damage from fire is in systems where forest management is not likely to result in increased wildfire resilience.

Introduction

California led the country in both the total number and total area burned in 2020 (www.nifc.gov). California is consistently ranked as the state with the most fatalities, largest wildfire-related loss of structures, and high suppression costs (https://iii.org/fact-statistic/facts-statistics-wildfires). As wildfire area burned and associated property losses accelerate, much attention has turned to how to manage California's natural ecosystems toward higher fire resilience. California and the federal government have engaged in initiatives (e.g., https://gov.ca.gov/2020/08/13/california-u-s-forest-service-establish-shared-long-term-strategy-to-manage-forests-and-rangelands/)) and teams (e.g., California Forest Management Task Force, https://fmtf.fire.ca.gov/, Tahoe-Central Sierra Initiative, https://sierranevada.ca.gov/what-we-do/tcsi/) to find solutions for the wildfire challenge. These efforts focus on vegetation management to reduce fuels, with numerous calls to amplify mechanical thinning and prescribed fire within forested ecosystems (Kalies and Kent 2016, Little Hoover Commission 2018, Kolden 2019, Miller *et al* 2020). The goals of managing wildfire risk are varied, but include both the protection of life and property and to maintain ecosystem structure and function in fire-maintained ecosystems. California is characterized by a diversity of vegetation types that are highly flammable, fire maintained, and in close proximity to human habitation. These attributes create fire risk that has garnered the attention of the public and politicians. But, like many public environmental crises, there is a tendency for problems to become over-simplified. Understanding the distribution of fire across vegetation types and the

© 2021 The Author(s). Published by IOP Publishing Ltd

corresponding capacity for management to reduce this risk can lead to a more efficient allocation of limited wildland management resources.

Our focus is on the effort to deploy forest management techniques to reduce the risk of wildlife to property. The debate regarding the best ways to minimize the risks of and damage from wildfires focuses primarily on forests and forest fire. With a common understanding that some forests contain more trees now than they did 50 or 100 years ago, a debate has erupted on the drivers of tree density increase (e.g., Little Hoover Commission 2018) and the best pathway forward for reducing this stand density (e.g., Little Hoover Commission 2018). The debate often revolves around the relative impacts of fire suppression and reduced timber cutting driving these increases (Little Hoover Commission 2018). There remains considerable uncertainty regarding the degree to which reducing stand density actually reduces fire hazard (Keeley and Syphard 2019). All of this assumes an operational hypothesis that wildfire is predominantly a problem that occurs in forests and that changing *forest management* can substantially alter wildfire outcomes. The prominence of fire and structure loss in the southern California chaparral, however, provides an obvious example of how managing wildfire requires more than managing forests.

Understanding the extent to which vegetation management choices (i.e., timber harvest, biomass removal, prescribed fire, managed wildfire) affect risk reduction of high intensity wildfire is important. It is also important to identify areas where treating fuels is likely to be less effective. As California moves to invest millions into forest v management, a fundamental issue is ascertaining what fraction of extreme wildfire that puts lives at risk, burns structures and damages ecosystems is actually found in vegetation types where risk can be reduced through forest management. Here we focus on the most easily addressed of these three issues: assessing the nature of wildfire that places human property at risk.

We sought to answer four simple, but important questions. What fraction of the state of California is in various vegetation cover types, including forests? What fraction of the areas recently burned or ignited in California is in each of these flammable vegetation types? How has that changed through time? What fraction of structures burned in wildfires are found in each of the various flammable vegetation types? Understanding the fraction of the wildfire problem that occurs in the various vegetation types that burn is a precursor to understanding the extent that management choices can reduce the risk of damages through wildfire.

Methods

To answer our questions, we performed a series of calculations by overlaying digital maps and deriving summary statistics within the ArcGIS 10.7 Geographical Information System (GIS).

For estimating the area found by vegetation type, we used a 2015 vegetation map (hereafter 'fveg') developed by the Fire and Resource Assessment Program (FRAP) of the California Department of Forestry and Fire Protection (Cal Fire) (https://map.dfg.ca.gov/metadata/ds1327.html). To develop the map, Cal Fire assembled a range of remote sensing land cover data products and prioritized them according to detail, date of imagery, and consistency. Using a consistent crosswalk system, Cal Fire then classified the maps into the California Wildlife Habitat Relationships (CWHR) System. For this analysis, we used the WHR 13-level classification of vegetation types, including: coniferous forest, hardwood forest, woodland (created by combining hardwood and coniferous woodland), shrub, and herbaceous vegetation. For lower-flammability and only partially vegetated classes, including barren, urban, wetland, water, agriculture, and desert woodland and shrub, we grouped them into a separate 'other' class.

Also provided by Cal Fire, we used the historical overlapping fire perimeter data (https://frap.fire.ca.gov/mapping/gis-data/) to calculate area burned within vegetation types for years 1950–2019 to assess long-term trends, and for 2000–2018 to correspond to the time period for which we had destroyed structure data. For these calculations, we summarized the total area burned for all vegetation types within the boundaries of all wildfire perimeters that occurred within those dates. The source of data for the location of ignitions was from the National

Interagency Fire Program Analysis, Fire-Occurrence Database (FPA FOD) (Short 2017). These data span the years 1992–2015 and include fires of all sizes on all land ownership types. We overlayed these point data on the vegetation map to extract the type of land cover for each point.

We assembled the locations of destroyed structures from a dataset that combined digitized points based on analysis of pre- and post-fire Google Earth imagery and points that were provided via public records request from the Cal Fire Damage INSpection Program (DINS) (Keeley and Syphard 2019). After merging the two datasets, we visually inspected all locations to ensure accuracy and to remove any duplicates. For these data, we extracted the vegetation type at the point location of the building destroyed. We also selected all the wildfire perimeters that corresponded to a fire that had at least one structure destroyed and summarized the area burned by vegetation type for the entire area within the boundaries of the wildfire perimeters. The resulting synopsis

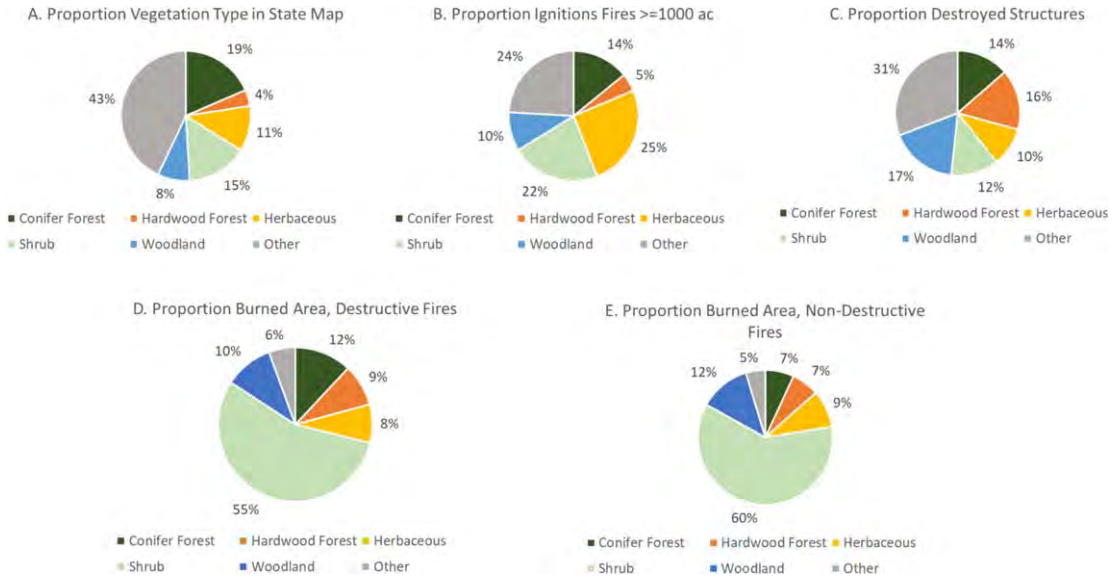


Figure 1. Pie charts of proportional representation of (a) amount of vegetation type; (b) ignitions of large fires; (c) location of structures destroyed; (d) area burned in fires that destroyed buildings; and (e) area burned in fires that did not burn structures plotted by five major vegetation types (conifer forests, hardwood forest, woodlands, herbaceous dominated communities and shrubland communities) addressed in this paper. Deserts, agricultural crop lands and urban areas are lumped into 'other'.

reflected area burned within vegetation types of 'destructive fires.' As a control, we selected all other fires from the same period (2000–2018) and again summarized area burned by vegetation type. As a primarily descriptive assessment, we include no specific statistical analysis of statistical inference.

Results

California is characterized by a variety of vegetation and vegetation types (Van Wagtendonk *et al* 2018). A coarse classification scheme places coniferous forest as the largest category of flammable cover types at 19% (figure 1(a)). We place a special emphasis on coniferous forest because more than 99% of timber cut in California is from coniferous forest types (McIver *et al* 2015). Similarly, seed planting, prescribed fire, biomass removal programs all focus largely on coniferous forest types making coniferous forests synonymous with managed forest. Another 38% of California is characterized by four other types of flammable vegetated landscape: woodland, shrubland or grasslands. This leaves 43% of California as relatively non-flammable (urban, row crops, desert and open water) systems (figure 1(a)).

Over the course of good fire records, since 1950, the area burned by wildfire in California has disproportionately been found in shrubland and herbaceous dominated vegetation (figure 2). While wildland fire has increased since 2000 in most vegetation types, fire in coniferous forest has shown the most marked rate of increase (figure 2). Nevertheless, the cumulative acres burned has consistently remained dominated by non-coniferous habitats (figure 2).

An important component of managing wildfire risk is to understand where, when and why fires ignite. While analyzing ignitions fully is beyond our scope here, we can say that ignitions, among those recorded for all wildfire, are over-represented in grassland and shrubland habitats (figure 1(b)) relative to the abundance of those cover types (figure 1(a)).

Examining patterns of structure loss by wildfire provides yet another perspective on management need. The largest number of structures were lost in locations classified as 'other.' This includes residential areas along the wildland-urban interface (WUI). Discerning the vegetation that was burning that led to these losses is beyond the current scope. However, this can be inferred from the natural vegetation types associated with structure loss. The largest fraction of destroyed structures since 2000 in natural vegetation types are found in hardwood forests and woodlands, at their point location (figure 1(c)). Since 2000, 88% of the wildland area burned where structures were destroyed was in non-coniferous vegetation types (figure 1(d)). Fires that destroyed property were, by far, most strongly associated with shrubland habitats (figure 1(d)). Woodlands and grasslands also both exceeded coniferous forest in terms of area burned in destructive fires (figure 1(d)). The relative proportions of vegetation types burned in destructive and non-destructive fires is roughly the same (figures 1(d), (e)).

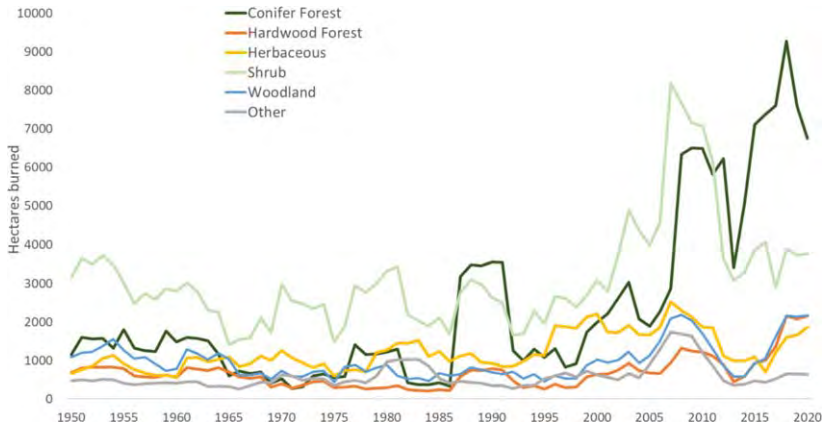


Figure 2. Area burned through time by the major vegetation types addressed in this paper. Area burned is smoothed on a five year window. The 'other' category includes primarily agricultural lands and desert.

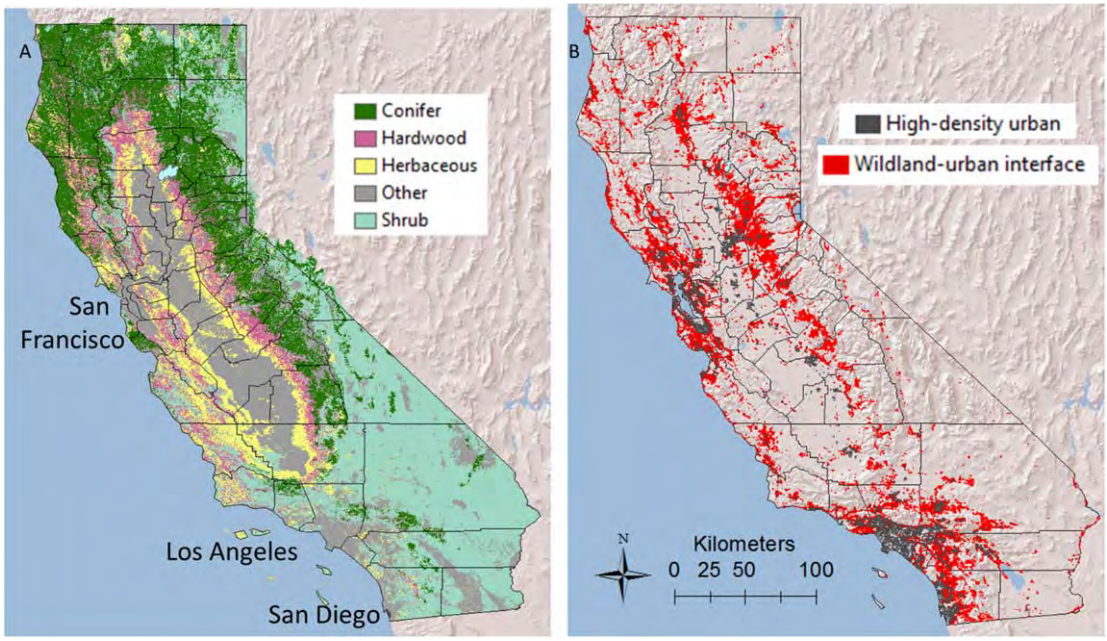


Figure 3. Maps of California depicting (a) the distribution of dominant vegetation types addressed, from Fveg, and (b) the wildland—urban interface in 2010.

Discussion

Understanding the distributional patterns of wildfire across vegetation types is important for several reasons. We address the five focal vegetation types sequentially to better understand measures that might be used to reduce risks from wildfire. We recognize that these are coarse descriptions and, particularly for coniferous forests, there is much variation across sub-types. We further recognize that most large, high intensity fires burn across more than one type, Nevertheless, we felt that a summarization at this scale allows for a useful perspective on managing wildfire risk.

These wildfire summary statistics suggest that while fire in coniferous forests is both notable and increasing, it represents a minority of the total area burned and an even smaller fraction of where structures are burned by wildfire. Since 2000, 88% of the wildland area burned where structures were destroyed was in non-coniferous vegetation types (figure 3). Thus, coniferous forests are not the dominant vegetation type of wildfire (figure 2). In fact, less than 35% of all area burned in the state of California since 2000 has been in coniferous forests. These observations run counter to likely popular impressions left by the 2018 Camp Fire, which partly burned through coniferous forest systems to kill 85 people and burn nearly 19,000 structures. Even in this fire, however, coniferous forest only represented 32% of the area burned, with 55% of the area burned being in hardwood

forest and herbaceous vegetation. In short, human losses are far more common in vegetation types other than the coniferous forests that are under scrutiny for management options to reduce risk.

Many coniferous forest types, particularly in montane regions, historically experienced frequent, low-intensity surface fires (Stephens *et al* 2007). Throughout the 20th century, wildfires in these frequent-fire forests were effectively suppressed. In addition, timber extraction has declined sharply over the past 50 years (McIver *et al* 2015). The consequence has been an increase in number and density of trees (Dolanc *et al* 2014, McIntyre *et al* 2015). This uncharacteristic fuel accumulation has also increased the occurrence of wildfires (Miller *et al* 2009) and increased the frequency of high severity wildfire (Mallek *et al* 2013). Reducing fuel accumulation to increase fire resiliency of coniferous forests would reduce overall fire risk within the state. Nevertheless, this often appears as both the beginning and end of the discussion of wildfire management.

Hardwood forest represents just 4% of habitat area, yet 7% of total area burned, 9% of area burned in destructive fires, and 16% of structures destroyed (figure 1(c)). Although hardwood forests have undergone increases in forest stand density in some areas (McIntyre *et al* 2015), this increase has been less substantial than in coniferous forest types. Further, the management options within this system are limited. The state of California has virtually no infrastructure associated with harvesting hardwood for timber (McIver *et al* 2015). Fuels reduction through mechanical means may be an infeasible strategy in most hardwood dominated systems. Hardwood forests, in general, tend to be less flammable than coniferous forests. As a consequence, these may be good habitats in which to favor early season let burn policies, when fuel moisture makes it less likely to have a large, high intensity wildfire (Boisrame *et al* 2017). Given the lower elevation of hardwood forests, most of these lands are privately owned and found in the wildland- urban interface (WUI) (figure 3). The high fraction of structures destroyed in this habitat relative to total area reflects this pattern. With a limited applicability of fuels reduction, low capacity to prescribe fire on private lands, and low capacity to deploy let burn strategies on private lands, the best possible strategies for reducing risk of losses to wildfire in these vegetation types may be through building fire resilience in the built environment.

In most years (45 out of 69), shrublands were the habitat that showed the most area burned (figure 2), and fires that destroyed property were, by far, most strongly associated with shrubland habitats (figure 1(d)). Shrublands, in contrast to forests, have not experienced increased fuels as a consequence of fire suppression, and in fact, fires in shrublands have increased dramatically relative to historical estimates (Safford and Van de Water 2014). Regardless, although most of the shrubland landscape is currently quite young due to so much fire, fuels are not strongly limiting in the large fires of this vegetation type anyway. Healthy shrublands tend to regenerate quickly post-fire, and empirical analysis shows that wildfire and prescribed fire have do not effectively reduce subsequent wildfire in this vegetation type (Price *et al* 2012). Instead, annual foehn winds coupled with human-caused ignitions are the primary factor (Keeley and Syphard 2019). While mechanical vegetation treatments in forests focus on removing surface fuels, the approach in shrublands is to intentionally convert woody biomass to grassland, which is necessary given there is no understory in chaparral shrublands. While these grassy fuel breaks can effectively increase firefighter access to defend communities (Syphard *et al* 2013), they are also corridors for increased spread of invasive annual grasses (Merriam *et al* 2006). Mechanical treatments of shrublands via mastication also increase the potential for grass expansion (Brennan and Keeley 2017). Observing that ignitions are most skewed above average in herbaceous vegetation, we find that grassland conversion is likely to have the unintended negative consequence of increasing fire frequencies in adjacent highly flammable shrublands by igniting easily near roads, trails, human settlements, or even fuel breaks (Syphard and Keeley 2015) and carrying fire quickly into more intensely burning shrublands. Given the challenge of managing fires in shrublands it seems that a dominant effort should be focused on managing the built environment and ignitions in and around them.

Grasslands and open woodlands are also systems where fuel build-up is not driving increased fire and managing fuels is not a likely solution. Open woodlands are generally grasslands with occasional trees, deriving most of their fuels, and flammability, from grasses. Thus, managing open woodlands would be similar to managing grasslands. Both of these vegetation cover types can have very high fire return intervals and recuperate fuels quickly following fire. Grasslands are easily ignited, highly flammable, and contribute to a positive feedback cycle of fire (Fusco *et al* 2019). In addition to shrublands converting to grass under frequent fire, there is also evidence of and potential for fire-catalyzed type conversion of coniferous forests to shrub- or grass-dominated vegetation types (Coop *et al* 2016, Syphard *et al* 2019a, 2019b, Kerns *et al* 2020). Grassland fires under high winds often move very fast. These systems, similar to shrublands, require managing the human environment in order to reduce risk of damage from wildfire.

These simple analyses demonstrate that, while coniferous forests are strong contributors to wildfire and wildfire damage, fire risk to humans overall is not predominantly a forest issue in California. Well-designed fuel treatment strategies in dry mixed coniferous forests may substantially reduce fire hazard in surrounding areas (Stevens *et al* 2016). Further, fuels management in coniferous forests is likely to have longer lasting positive effects, as coniferous forests accrue fuels more slowly than many other vegetation cover types. Although

vegetation management is also performed in other woody vegetation types, these treatments are more effective at controlling fire behavior under non-extreme weather conditions (Syphard *et al* 2011, Schoennagel *et al* 2017, Brown *et al* 2012) when structures are rarely destroyed (Keeley and Syphard 2019).Thus, we fear that the heavy attention to wildfire in coniferous forests may blind policy-makers to management opportunities that may more broadly confer safety from the damaging effects of wildfire.

The geographical distribution of the human population and assets at risk is, unsurprisingly, also highly heterogeneous (Syphard *et al* 2019a, 2019b). Thus, understanding how to best manage the wildfire problem requires understanding of where management tools such as prescribed fire or mechanical removal of wood fuels provide opportunities to reduce risk, and the majority of fire-prone locations where they do not. Just as addressing the wildfire issue in California requires considering wildfire in all vegetation types, it also requires a focus on people and the built environment. Just as wildfire is not evenly distributed amongst vegetation types, the most damaging impacts of those wildfires (e.g. loss of lives and property) are not evenly distributed across fire-prone vegetation types. Recent trends indicate that the WUI is rapidly increasing in California (Radeloff *et al* 2018), and projected future increases in the WUI are far higher in non-forested areas than forested areas: increasing the risk of damage from wildfire in non-forested areas.

Recent studies have provided empirical evidence documenting the most significant factors explaining structure loss to wildfire via comparison of structures previously destroyed with those that were unburned. Consistently, the results have shown that the most important factors explaining structure loss in California (e.g., Syphard *et al* 2012, 2019, Alexandre *et al* 2016, Kramer *et al* 2018) and elsewhere (Abatzoglou *et al* 2018, Kramer *et al* 2018, Nagy *et al* 2018) are the coincidence of human-caused ignitions with severe wind and weather conditions and the location and pattern of housing development. Studies also show significant protective benefits of homeowner mitigation strategies including defensible space (Syphard *et al* 2013, Gibbons *et al* 2018) and structural characteristics (Syphard *et al* 2017a, 2017b, 2019a). Strategically located fuel breaks around communities allowing firefighter access for defensive strategies may also be helpful (Syphard *et al* 2011). These collective strategies that focus on fire prevention and land planning in the built environment may be a more efficient means to the goal of minimizing human risk to wildfire across all habitats.

Further, as climate changes, we should expect damaging wildfire to become less of a managed forest issue and more of an 'other' flammable vegetation type issue. Predictions of 21st century vegetation type change suggest that coniferous forest extent will be reduced and shift upslope, away from the WUI (Thorne *et al* 2017. Liang *et al* 2017). This will make California's wildfire problem less and less of a managed forest problem. Fire-vegetation interactions accelerate this problem by driving type conversion of forests to other physiognomic types through fire (Keeley *et al* 2019, Coop *et al* 2020). The net consequence is that climate-driven vegetation change may shorten expected fire return intervals, at least in the near term, and reduce the capacity of forest management to manage damaging wildfire.

Principally, a focus on making communities more fire safe (Calkin *et al* 2014, Moritz *et al* 2014) is both a more general, more extensively relevant, and potentially more certain strategy to reduce losses to wildfire. However, our investment in social solutions to wildfire lags significantly behind investment in fixing a vegetation challenge that impacts a minor subset of the vegetation that carries damaging wildfire. California spends roughly $2.5 billion in firefighting each year (Petek 2020). In addition, the budget for reducing fuels and cutting fire breaks is $364 million. In contrast, the budget for improving emergency services is just $122 million, and this includes non-fire emergency services (Petek 2020). The Governor's assessment of the wildfire challenge identifies the Wildland Urban Interface (WUI) as a critical region where most of the fire damage occurs, and this is supported through empirical research (Kramer *et al* 2018, 2019). The number of households in the fire-prone California WUI grew 11% to 2.9 between 2000 and 2012 (Petek 2020). The WUI continues to grow (Radeloff *et al* 2018). Given the importance of the WUI in terms of fire risk, and the lack of capacity to prevent wildfires in the WUI through fuels management in non-coniferous regions, it would make sense to invest in creating safer living spaces in the WUI. Yet, the Governor is proposing just $110 million for 'home hardening', of which $100 is one-time spending (Petek 2020). Considering the scope of the problem in non-managed forested systems, these budget priorities do not align with the magnitude of the problem. If we accept wildfire as a natural component of California's natural vegetation types then the lack of policies and investment in the non-coniferous WUI is setting California up for continued human impacts from wildfires.

Together these observations lead to sobering conclusions. We are not suggesting that we are over-investing in resolving the wildfire challenge in coniferous forests where management may significantly reduce fire risk. There are many good reasons to address fuels in coniferous forests. Fuel treatment has longer lasting impacts than in many other systems, fires may be more likely to drive unwanted ecosystem change in coniferous forests, and the controllability of intense forest wildfire is low. We agree that more needs to be done in forested systems to create resilient ecosystems. However, there is clear evidence that damage to human structures from wildfire is predominantly outside of these managed forests systems. This leads to a clear conclusion that vegetation management, of any sort, may have a limited capacity to significantly reduce risk of property damage due to

wildfire. This observation suggests a need for robust parallel efforts to increase the resilience of human communities that are found in and adjacent to environments that experience frequent fires and that no amount of natural vegetation management will completely resolve risk to human structures.

Data availability statement

The data that support the findings of this study are available upon reasonable request from the authors. https://map.dfg.ca.gov/metadata/ds1327.html.

ORCID iDs

Mark W Schwartz https://orcid.org/0000-0002-3739-6542
Alexandra D Syphard https://orcid.org/0000-0003-3070-0596

References

Abatzoglou J T, Williams A P, Boschetti L, Zubkova M and Kolden C A 2018 Global patterns of interannual climate-fire relationships *Global Change Biol.* **24** 5164–75
Alexandre P M, Stewart S, Keuler N S, Clayton M K, Mockrini M H, Bar-Massada A, Syphard A D and Radeloff V C 2016 Factors related to building loss due to wildfires in the conterminous United States *Ecological Applications* **26** 2323–38
Boisrame G, Thompson S, Collins B and Stephens S 2017 Managed wildfire effects on forest resilience and water in the Sierra Nevada *Ecosystems* **20** 712–32
Brennan T J and Keeley J E 2017 Impacts of mastication fuel treatments on California, USA, chaparral vegetation structure and composition *Fire Ecology* **13** 120–38
Brown T J, Kolden C A and Abatzoglou J T 2012 *Assessing fuels treatments in southern California national forests in the context of climate change Project ID:08-1-1-19* (https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1029&context=jfspresearch)
Calkin D E, Jack D C, Finney M A and Matthew P T 2014 How risk management can prevent future wildfire disasters in the wildland-urban interface *Proc. Natl Acad. Sci.* **111** 746–51
Coop J D, Parks S A, McClernan S R and Holsinger L M 2016 Influences of prior wildfires on vegetation response to subsequent fire in a reburned southwestern landscape *Ecological Applications* **26** 346–54
Coop J D *et al* 2020 Wildfire-driven forest conversion in western North American landscapes *BioScience* **70** 659–73
Dolanc C R, Safford H D, Thorne J H and Dobrowski S Z 2014 Changing forest structure across the landscape of the Sierra Nevada, CA, USA, since the 1930s *Ecosphere* **5** 101
Fusco E J *et al* 2019 Invasive grasses increase fire occurrence and frequency across US ecoregions *Proc. Natl Acad. Sci.* **116** 23594–9
Gibbons P, Gil A M, Shore N, Moritz M A, Dovers S and Cary G J 2018 Options for reducing house-losses during wildfires without clearing trees and shrubs *Landscape and Urban Planning* **174** 10–7
Kalies E L and Kent L L Y 2016 Tamm Review: are fuel treatments effective at achieving ecological and social objectives? a systematic review *Forest Ecology and Management* **375** 84–95
Keeley J E and Syphard A D 2019 Twenty-first century California, USA, wildfires: fuel-dominated vs. wind-dominated fires *Fire Ecology* **15** 24
Keeley J E, van Mantgem P and Falk D A 2019 Fire, climate and changing forests *Nature plants* **5** 774–5
Kerns B K, Tortorelli C, Day M A, Nietupski T, Barros A M, Kim J B and Krawchuk M A 2020 Invasive grasses: A new perfect storm for forested ecosystems? *Forest Ecology and Management* **463** 117985
Kolden C A 2019 We're not doing enough prescribed fore in the western United States to mitigate wildfire risk *Fire* **2** 30
Kramer H A, Mockrin M H, Alexandre P M, Stewart S I and Radeloff V C 2018 Where wildfires destroy buildings in the US relative to the wildland-urban interface and national fire outreach programs *International J of Wildland Fire* **27** 329–41
Kramer H A, Mockrin M H, Alexandre P M and Radeloff V C 2019 High wildfire damage in interface communities in California *International J of Wildland Fire* **28** 641–50
Liang S, Hurteau M S and Westerling A L 2017 Response of Sierra Nevada forests to projected climate-wildfire interactions *Global Change Biol.* **23** 2016–30
Little Hoover Commission 2018 *Fire on the Mountain: Rethinking Forest Management in the Sierra Nevada. Report #242* Little Hoover Commission, Sacramento (www.lhc.ca.gov)
Mallek C, Safford H, Viers J and Miller J 2013 Modern departures in fire severity and area vary by forest type,Sierr Nevada and southern Cascades, California, USA *Ecosphere* **4** 153
McIntyre P J, Thorne J H, Dolanc C R, Flint A L, Flint L E, Kelly M and Ackerly D 2015 Twentieth-century shifts in forest structure in California: denser forests, smaller trees, and increased dominance of oaks *PNAS* **112** 1458–63
McIver C P, Meek J P, Scudder M G, Sorenson C B, Morgan T A, Christensen G A *et al* 2015 California's forest products industry and timber harvest, 2012USFS GTR 908
Merriam K E, Keeley J E and Beyers J L 2006 Fuel breaks affect nonnative species abundance in Californian plant communities *Ecological Applications* **16** 515–27
Miller J D, Safford H D, Crimmins M A and Thode A E 2009 Quantitative evidence for increasing forest fire severity in the Sierra Nevada and southern Cascade Mountains, California and Nevada, USA *Ecosystems* **12** 16–32
Miller R K, Field C B and Mach K J 2020 Barriers and enablers for prescribed burns for wildfire management in California *Nature Sustainability* **3** 101–9
Moritz M A *et al* 2014 Learning to coexist with wildfire *Nature* **515** 58–66
Nagy R, Fusco E, Bradley B, Abatzoglou J T and Balch J 2018 Human-related ignitions increase the number of large wildfires across US ecoregions *Fire* **1** 4
Petek G 2020 Governor's Wildfire Related Proposals. Legislative Analyst's Office. Sacramento. (https://lao.ca.gov/Publications/Report/4172)

Price O F, Ross A B, Keeley J E and Syphard A D 2012 The impact of antecedent fire area on burned area in southern California coastal ecosystems *J. Environ. Manage.* **113** 301–7
Radeloff V C *et al* 2018 Rapid growth of the US wildland-urban interface raises wildfire risk *Proc. Natl Acad. Sci.* **115** 3314–9
Safford H D and Van de Water K M 2014 Using fire return interval departure (FRID) analysis to map spatial and temporal changes in fire frequency on national forest lands in California *Res. Pap. PSW-RP-266.* 59 (Albany, CA: US Department of Agriculture, Forest Service, Pacific Southwest Research Station) p 266
Schoennagel T *et al* 2017 Adapt to more wildfire in western North American forests as climate changes *Proc. Natl Acad. Sci.* **114** 4582–90
Short K C 2017 Spatial wildfire occurrence data for the United States, 1992-2015 (4th Edition) (https://doi.org/10.2737/RDS-2013-0009.4)
Stevens J T, Collins B M, Long J W, North M P, Prichard S J, Tarnay L W and White A M 2016 Evaluating potential trade-offs among fuel treatment strategies in mixed-conifer forests of the Sierra Nevada *Ecosphere* **7** e01445
Stephens S L, Martin R E and Clinton N E 2007 Prehistoric fire area and emissions from California's forests, woodlands, shrublands and grasslands *Forest Ecology and Management* **251** 205–16
Syphard A D, Keeley J E and Brennan T J 2011 Comparing the role of fuel breaks across southern California National Forests *Forest Ecology and Management* **261** 2038–48
Syphard A D *et al* 2012 Housing arrangement and location determine the likelihood of housing loss due to wildfire *PLoS One* **7** e33954
Syphard A D, Bar Massada A, Bustic V and Keeley J E 2013 Land use planning and wildfire: development policies influence future probability of housing loss *PLoS One* **8** e71708
Syphard A D and Keeley J E 2015 Location, timing and extent of wildfire vary by cause of ignition *International Journal of Wildland Fire.* **24** 37–47
Syphard A D, Brennan T J and Keeley J E 2017a The importance of building construction materials relative to other factors affecting structure survival during wildfire *Int. J. Disaster Risk Reduct.* **21** 140–7
Syphard A D, Keeley J E and Abatzoglou J T 2017b Trends and drivers of fire activity vary across California aridland ecosystems *J of Arid Environments* **144** 110–22
Syphard A D *et al* 2019a The relative influence of climate and housing development on current and projected future fire patterns and structure loss across three California landscapes *Global Environ. Change* **56** 41–55
Syphard A D and Keeley J E 2019 Factors associated with structure loss in the 2013–2018 California wildfires *Fire* **2** 49
Syphard A D, Brennan T J and Keeley J E 2019b Extent and drivers of vegetation type conversion in Southern California chaparral *Ecosphere* **10** e02796
Thorne J H, Hyeyeong C, Boynton R M, Bjorkman J, Albright W, Nydick K, Flint A L, Flint L E and Schwartz M W 2017 The impact of climate change uncertainty on California's vegetation andadaptive management *Ecosphere* **8** e02021
Van Wagtendonk J W, Sugihara N G, Stephens S L, Thode A E, Shaffer K E, Fites-Kaufman A and Agee J K (ed) 2018 *Fire in California's Ecosystems.* (Oakland: Univ of California Press)

Ecological Applications, 17(5), 2007, pp. 1388–1402
© 2007 by the Ecological Society of America

HUMAN INFLUENCE ON CALIFORNIA FIRE REGIMES

Alexandra D. Syphard,[1,6] Volker C. Radeloff,[1] Jon E. Keeley,[2] Todd J. Hawbaker,[1] Murray K. Clayton,[3] Susan I. Stewart,[4] and Roger B. Hammer[5]

[1]*Department of Forest Ecology and Management, University of Wisconsin, Madison, Wisconsin 53706 USA*
[2]*U.S. Geological Survey, Western Ecological Research Center, Sequoia Field Station, Three Rivers, California 93271-9651 USA*, and *Department of Ecology and Evolutionary Biology, University of California, Los Angeles, California 90095 USA*
[3]*Departments of Plant Pathology and Statistics, University of Wisconsin, Madison, Wisconsin 53706 USA*
[4]*USDA Forest Service, Northern Research Station, Evanston, Illinois 60201 USA*
[5]*Department of Sociology, Oregon State University, Corvallis, Oregon 97331 USA*

Abstract. Periodic wildfire maintains the integrity and species composition of many ecosystems, including the mediterranean-climate shrublands of California. However, human activities alter natural fire regimes, which can lead to cascading ecological effects. Increased human ignitions at the wildland–urban interface (WUI) have recently gained attention, but fire activity and risk are typically estimated using only biophysical variables. Our goal was to determine how humans influence fire in California and to examine whether this influence was linear, by relating contemporary (2000) and historic (1960–2000) fire data to both human and biophysical variables. Data for the human variables included fine-resolution maps of the WUI produced using housing density and land cover data. Interface WUI, where development abuts wildland vegetation, was differentiated from intermix WUI, where development intermingles with wildland vegetation. Additional explanatory variables included distance to WUI, population density, road density, vegetation type, and ecoregion. All data were summarized at the county level and analyzed using bivariate and multiple regression methods. We found highly significant relationships between humans and fire on the contemporary landscape, and our models explained fire frequency ($R^2 = 0.72$) better than area burned ($R^2 = 0.50$). Population density, intermix WUI, and distance to WUI explained the most variability in fire frequency, suggesting that the spatial pattern of development may be an important variable to consider when estimating fire risk. We found nonlinear effects such that fire frequency and area burned were highest at intermediate levels of human activity, but declined beyond certain thresholds. Human activities also explained change in fire frequency and area burned (1960–2000), but our models had greater explanatory power during the years 1960–1980, when there was more dramatic change in fire frequency. Understanding wildfire as a function of the spatial arrangement of ignitions and fuels on the landscape, in addition to nonlinear relationships, will be important to fire managers and conservation planners because fire risk may be related to specific levels of housing density that can be accounted for in land use planning. With more fires occurring in close proximity to human infrastructure, there may also be devastating ecological impacts if development continues to grow farther into wildland vegetation.

Key words: California, USA; fire; fire history; housing density; nonlinear effects; regression; wildland–urban interface.

Introduction

Fire is a natural process in many biomes and has played an important role shaping the ecology and evolution of species (Pyne et al. 1996, Bond and Keeley 2005). Periodic wildfire maintains the integrity and species composition of many ecosystems, particularly those in which taxa have developed strategic adaptations to fire (Pyne et al. 1996, Savage et al. 2000, Pausas et al. 2004). Despite the important ecosystem role played by fire, human activities have altered natural fire regimes relative to their historic range of variability. To develop effective conservation and fire management strategies to deal with altered fire regimes, it is necessary to understand the causes underlying altered fire behavior and their human relationships (DellaSalla et al. 2004). Nowhere is this more critical in the United States than in California, which is the most populous state in the nation, with roughly 35×10^6 people. Most of the population lives in lower elevations dominated by hazardous chaparral shrublands susceptible to frequent high-intensity crown fires.

In California, as elsewhere, the two primary mechanisms altering fire regimes are fire suppression, resulting in fire exclusion, and increased anthropogenic ignitions, resulting in abnormally high fire frequencies (Keeley and

Manuscript received 3 July 2006; revised 7 December 2006; accepted 4 January 2007. Corresponding Editor (ad hoc): K. A. Hibbard.

[6] E-mail: asyphard@yahoo.com

Fotheringham 2003), though climate change, vegetation manipulation, and other indirect factors may also play a role (Lenihan et al. 2003, Sturtevant et al. 2004). For most of the 20th century, fire suppression effectively excluded fire from many western U.S. forest ecosystems, such as ponderosa pine. In these ecosystems, fire exclusion contributed to unnatural fuel accumulation and increased tree density (Veblen et al. 2000, Allen et al. 2002, Gray et al. 2005). Recently, when wildfires have hit many of these forests, hazardous fuel loads have contributed to high-intensity crown fires that are considered outside the historical range of variability (Stephens 1998). While these patterns are widely applicable to many forested landscapes in the western United States, California chaparral shrublands have experienced such substantial human population growth and urban expansion that the increase in ignitions, coupled with the most severe fire weather in the country (Schroeder et al. 1964), have acted to offset the effects of suppression to the point that fire frequency exceeds the historic range of variability (Keeley et al. 1999). Because anthropogenic ignitions tend to be concentrated near human infrastructure, more fires now occur at the urban fringe than in the backcountry (Pyne 2001, Keeley et al. 2004). Profound impacts on land cover condition and community dynamics are possible if a disturbance regime exceeds its natural range of variability, and altered fire regimes can lead to cascading ecological effects (Landres et al. 1999, Dale et al. 2000). For example, too-frequent fire can result in habitat loss and fragmentation, shifting forest composition, reduction of small-mammal populations, and accompanying loss of predator species (Barro and Conard 1991, DellaSalla et al. 2004).

Landscape-level interactions between human activities and natural dynamics tend to be spatially concentrated at the wildland–urban interface (WUI; see Plate 1), which is the contact zone in which human development intermingles with undeveloped vegetation (Radeloff et al. 2005). The WUI has received national attention because housing developments and human lives are vulnerable to fire in these locations and because anthropogenic ignitions are believed to be most common there (Rundel and King 2001, USDA and USDI 2001). The majority of WUI fire research has focused on strategies to protect lives and structures (e.g., Cohen 2000, Winter and Fried 2000, Winter et al. 2002, Shindler and Toman 2003) or on the assessment of fire risk using biophysical or climate variables that influence fire behavior (Bradstock et al. 1998, Fried et al. 1999, Haight et al. 2004). However, it is also important to understand how the WUI itself (or other indicators of human activity) affects fire and to quantify the spatial relationships between human activities and fire (Duncan and Schmalzer 2004).

The influence of proximity to the WUI and other human infrastructure appears to vary markedly with region. In the northern Great Lakes states, areas with higher population density, higher road density, and lower distance to nonforest were positively correlated with fire (Cardille et al. 2001). Also, in southern California, a strong positive correlation between population density and fire frequency was reported (Keeley et al. 1999). However, no relationship between housing count and fire was found in northern Florida counties (Prestemon et al. 2002); population density and unemployment were positively related, and housing density and unemployment were negatively related to fire in a different analysis of Florida counties (Mercer and Prestemon 2005). A negative relationship between housing density and fire was also found in the Sierra Nevada Mountains of California (CAFRAP 2001).

In addition to potential regional differences, it is also difficult to draw general conclusions from these studies because they used different indicators of human activities, their data sets differed in spatial and temporal scale, and they were conducted in small areas where ranges of variability in both fire frequency and level of development were limited. Human–fire relationships may also vary based on factors that were not accounted for, such as pattern of development. Another explanation for the discrepancy is that relationships between human activities and fire may be nonlinear in that humans may affect fire occurrence positively or negatively, depending on the level of influence. These nonlinear effects were apparent in data from a recent study in the San Francisco Bay region, where population growth was positively related to fire frequency over time up to a point, but then fire frequency leveled off as population continued to increase (Keeley 2005).

Whether positive or negative, the significance of the relationships between human activities and fire that were detected in previous studies stresses the importance of further exploring links between anthropogenic and environmental factors and their relative influence on wildfire patterns across space and time. Therefore, our research objective was to quantify relationships between human activities and fire in California counties using temporally and spatially rich data sets and regression models. Although fire regimes encompass multiple characteristics, including seasonality, intensity, severity, and predictability, we restricted our analysis to questions about fire frequency and area burned to determine: (1) what the contemporary relationship between human activities and fire is; (2) how human activities have influenced change in fire over the last 40 years; and (3) whether fire frequency and area burned vary nonlinearly in response to human influence.

Humans are responsible for igniting the fires that burn the majority of area in California (Keeley 1982); therefore, we expected our anthropogenic explanatory variables to significantly explain fire activity on the current landscape and over time. In addition to population density (which simply quantifies the number of people in an area), we expected the spatial pattern of human development (indicated by housing density and

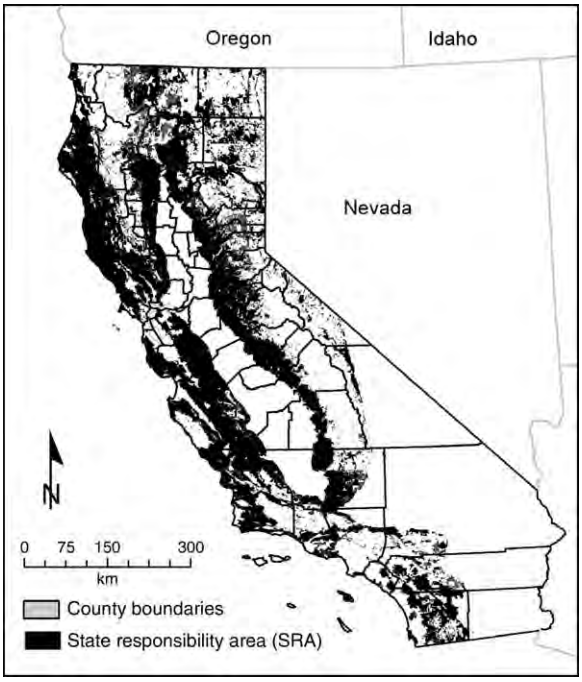


FIG. 1. Map of California Department of Forestry and Fire Protection (CDF) state responsibility areas (SRAs) within county boundaries of California, USA.

land cover combinations and distance variables) to be an important influence on fire because we assumed that anthropogenic ignitions are most likely to occur where human presence is greatest. We also expected that the relationships between human activities and fire would be both positive and negative because humans ignite fires, but development patterns affect fuel continuity and the accessibility of fire suppression resources. Finally, we included several environmental variables in the analysis because we expected the human relationships to be mediated by these other biophysical variables that shape the pattern and frequency of fire (Wells et al. 2004).

METHODS

Study area

California is the second largest state in the continental United States and is the most populous and physically diverse. Most of the state has a mediterranean climate, which, along with a heterogeneous landscape, contributes to tremendous biodiversity (Wilson 1992). Because the state contains a large proportion of the country's endangered species, it is considered a "hotspot" of threatened biodiversity (Dobson et al. 1997). There is extensive spatial variation in human population density: large areas in the north are among the most sparsely populated in the country, but metropolitan regions in the south are growing at unprecedented rates (Landis and Reilly 2004). Much of the landscape is highly fire-prone, but fire regimes vary, and fire management is divided among many institutions. Humans have altered California's fire regimes, and its fire-related financial losses are among the highest in the country (Halsey 2005).

Data

Dependent variables: fire statistics.—We assembled our fire statistics from the California Department of Forestry and Fire Protection (CDF; Sacramento, California, USA) annual printed records, which included information on all fires for which the CDF took action between 1931 and 2004. For all state responsibility areas (SRA; Fig. 1), fire statistics are recorded by county and include numbers by size class, total area burned, vegetation type, and cause. Because the statistics did not include spatially explicit information on individual fires, we weighted the data by the area within the SRA in each county by calculating proportions to use as our dependent variables. These fire statistics were substantially more comprehensive than the readily available electronic Statewide Fire History Database, which excludes most fires <40 ha, which in many counties represents $>90\%$ of the fires. Although both anthropogenic and lightning ignitions would be important to consider for fully understanding fire patterns in other regions (e.g., Marsden 1982), humans were responsible for $\sim 95\%$ of both the number of fires and area burned in California in the last century. We restricted our analysis to these anthropogenic fires because our focus was on human relationships with fire. Although the fire statistics were not spatially explicit, we developed GIS grids at 100-m resolution to derive data for all of the explanatory variables. The data for these explanatory variables were only extracted and averaged from within the SRA boundaries corresponding to the fire data.

Out of the 58 counties in California, we had fire statistics for 54 of them for the year 2000. Therefore, to assess the contemporary relationship between fire and human activities (hereafter referred to as the "contemporary analysis"), we analyzed the data from these counties using the annual number of fires and area burned as our dependent variables (Table 1).

Based on a preliminary exploration of the fire history data (averaged across all counties), we observed two distinct trends during the last 50 years. First, the number of fires substantially increased until 1980 and then decreased until 2000; and second, the average area burned changed inversely to the number of fires, but the differences over time were less dramatic and not statistically significant (Fig. 2). Considering these trends, we broke the historic analysis into two equal time periods (1960–1980 and 1980–2000) to compare the relative influence of the explanatory variables on both the increase (i.e., from 1960 to 1980) and decrease (from 1980 to 2000) in fire activity. The year 1980 is used to compute differences for both time periods because the census data that formed the basis for many of our explanatory variables were only available by decade. We averaged the number of fires and the area burned for 10-

TABLE 1. Variables analyzed in the regression models.

Variable	Source	Processing
2000 data		
Dependent variables		
Number of fires	CDF	proportion in SRA, square-root transformed
Area burned	CDF	proportion in SRA, square-root transformed
Explanatory variables		
Human		
Intermix WUI	SILVIS	proportion in SRA
Interface WUI	SILVIS	proportion in SRA
Low-density housing	SILVIS	proportion in SRA
Distance to intermix WUI	SILVIS	mean Euclidean distance in SRA
Distance to interface WUI	SILVIS	mean Euclidean distance in SRA
Population density	SILVIS	proportion in SRA
Road density	TIGER	mean km/km^2 in SRA
Distance to road	TIGER	mean Euclidean distance in SRA
Biophysical		
Ecoregion	CDF	discrete class
Vegetation type	CDF	area burned in vegetation type/area burned in SRA
Historic data, 1960–1980 and 1980–2000		
Dependent variables		
Change in number of fires	CDF	difference between decadal averages, proportion in SRA, square-root transformed
Change in area burned	CDF	difference between decadal averages, proportion in SRA, square-root transformed
Explanatory variables		
Human		
Change in housing density	SILVIS	difference between decades
Change in distance to low-density housing	SILVIS	difference between mean Euclidean distance in SRA
Initial housing density	SILVIS	mean housing density in either 1960 or 1980
Initial distance to low-density housing	SILVIS	mean Euclidean distance in SRA in either 1960 or 1980
Biophysical		
Ecoregion	CDF	discrete class
Vegetation type	CDF	mean area burned in vegetation type/area burned in SRA over time period

Notes: Key to abbreviations: WUI, wildland–urban interface; SRA, state responsibility area. Sources are as follows: CDF, California Department of Forestry and Fire Protection, Sacramento, California, USA, *unpublished data*; SILVIS, Radeloff et al. (2005); TIGER, U.S. Census Bureau (2000).

year time periods that bracketed the dates of the census data (e.g., 1955–1964 [1960], 1975–1984 [1980], 1995–2004 [2000]) and then calculated the difference in averages from the 1960–1980 and 1980–2000 periods for our dependent variables (Table 1). By averaging the fire data, we smoothed some of the annual variability that may have occurred due to stochastic factors such as weather.

Explanatory variables: housing data.—Data for most of the anthropogenic variables were available through a nationwide mapping project that produced maps of the WUI in the conterminous United States using housing density data from the 1990 and 2000 U.S. Census (U.S. Census Bureau 2002) and land cover data from the USGS National Land Cover Dataset (Radeloff et al. 2005). The maps were produced at the finest demographic spatial scale possible, the 2000 decennial census blocks. The vegetation data were produced at 30-m resolution. These maps delineated two types of WUI in accordance with the Federal Register definition (USDA and USDI 2001). "Intermix WUI" is defined as the intermingling of development with wildland vegetation; the vegetation is continuous and occupies >50% of the area. "Interface WUI" is defined as the situation in which development abuts wildland vegetation; there is <50% vegetation in the WUI, but it is within 2.4 km of an area that has >75% vegetation. In both types of WUI communities, housing must meet or exceed a density of more than one structure per 16 ha (6.17 housing units/km^2). Interface WUI tends to occur in buffers surrounding higher-density housing, whereas intermix WUI is more dispersed across the landscape (Fig. 3A, B).

The WUI data were only produced for 1990 and 2000 due to the lack of historic land cover data, but housing density data were available from 1960 to 2000. Historic housing density distribution was estimated using back-casting methods to allocate historic county-level housing unit counts into partial block groups (as described in Hammer et al. 2004). We used both intermix and interface WUI as explanatory variables (proportions within the county SRAs) in the current analysis to evaluate how these different patterns of vegetation and housing density affected fire activity. We also used low-density housing (housing density $\geq$6.17 housing units/km^2 and <49.42 housing units/km^2) to determine whether it could act as a substitute for WUI as an explanatory variable in the historic analysis (Table 1).

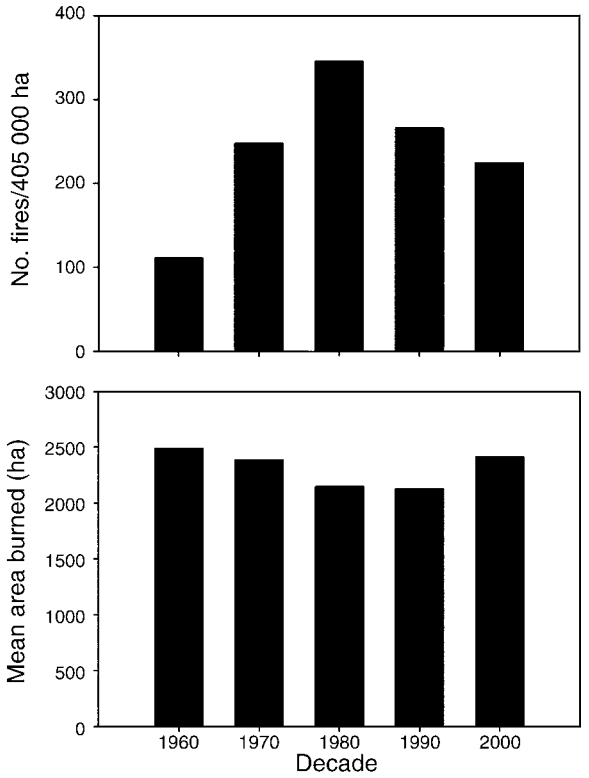


FIG. 2. Trends in number of fires and area burned for all land in the state responsibility areas (SRAs) in California from 1960 to 2000.

Looking at an overlay of fire perimeters from the electronic Statewide Fire History Database (from the last 25 years; *available online*)[7] on the WUI data, it was apparent that many fires occurred close to the WUI, but not necessarily within the WUI (Fig. 3C, D). Therefore, we calculated the mean distance to intermix and interface WUI to evaluate as explanatory variables (Table 1). These means were calculated by iteratively determining the Euclidean distances from every grid cell in the county SRA boundaries and then averaging the distances across all cells to determine means for the counties. We also included population density data from the 2000 Census.

For the historic analysis, we calculated changes in mean housing density and mean distance to low-density housing between the 1960–1980 and 1980–2000 periods to relate to change in the dependent variables. We excluded the proportion of low-density housing from our analysis because it was highly correlated with mean housing density ($r = 0.84$). Unlike the historical fire data that switched in their direction of change over time, housing density continued to increase while the mean distance to low-density housing continued to decline (Fig. 4). We included the initial values of these data (e.g., 1960 and 1980) to account for the fact that the same magnitude of change may have different effects on the dependent variables depending on the starting value of the explanatory variables (Table 1).

Explanatory variables: road data.—The quality of road data can vary according to data source (Hawbaker and Radeloff 2004), so we compared the U.S. Geological Survey digital line graph (DLG; U.S. Geological Survey 2002) and the US TIGER 2000 GIS (U.S. Census Bureau 2000) layers of roads to determine whether there were substantial differences that could affect the interpretation of the results. After calculating and summarizing road density by county, we found a strong positive correlation ($r = 0.97$). Therefore, we used the TIGER data because they were produced in 2000, the same year as the contemporary analysis. The more current TIGER data generally capture new development that might not be included in the DLG data. We evaluated mean road density and mean distance to roads in the current analysis (Table 1), but road data were unavailable for the historic analysis.

Explanatory variables: environmental.—In the absence of human influence, fire behavior is primarily a function of biophysical variables (Pyne et al. 1996, Rollins et al. 2002). These can vary widely across a county, but ecoregions capture broad differences by stratifying landscapes into unique combinations of physical and biological variables (ECOMAP 1993). Our ecoregion data were the geographic subdivisions of California defined for The Jepson Manual (Hickman 1993), designated through broadly defined vegetation types and geologic, topographic, and climatic variation (Fig. 5).

Because vegetation type influences the ignitability of fuel and the rate of fire spread (Bond and van Wilgen 1996, Pyne et al. 1996), we also evaluated the proportion of area burned within three broad vegetation types: shrubland, grassland, and woodland (Fig. 5). Differences in fire regimes between broadly defined vegetation types can be striking, particularly between shrubland and woodland in southern California (Wells et al. 2004). The CDF fire statistics included information on the proportion of area burned in these vegetation types. For the historic analysis, we averaged the proportion of fires burned within different vegetation types over the entire decade (Table 1).

Analytical methods

Diagnostics and data exploration.—Before developing regression models, we examined scatter plots for each variable. Nonlinear trends were apparent (e.g., Fig. 6), suggesting that we needed to include quadratic terms for the explanatory variables in the regressions. Unequal variances in the residual plots prompted us to apply a square-root transformation to the dependent variables. We also plotted semivariograms of the models' residuals (using centroids from the SRA boundaries) and found no evidence of spatial autocorrelation. To check for

[7] ⟨http://frap.cdf.ca.gov/data/frapgisdata/select.asp⟩

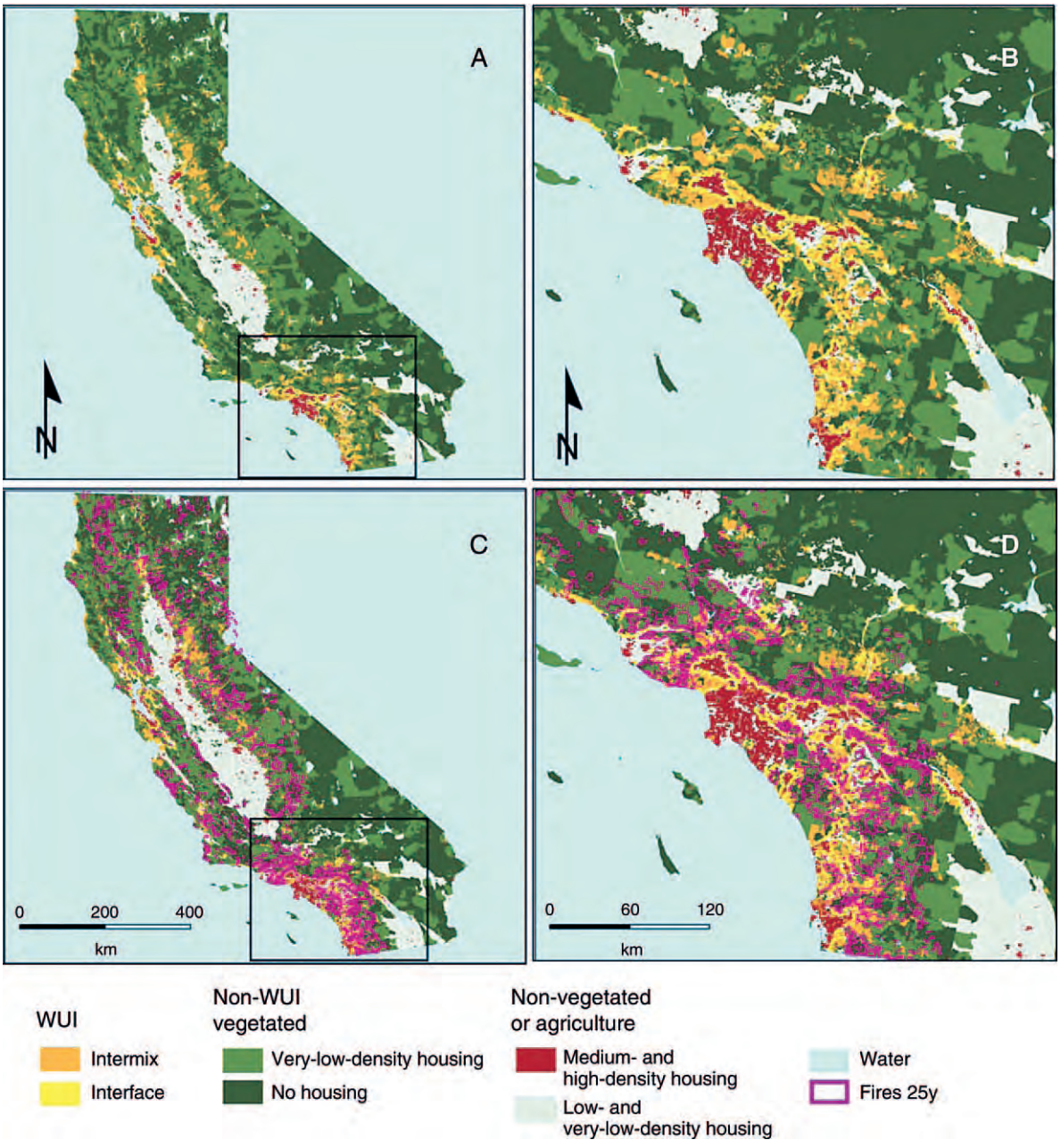


FIG. 3. The wildland–urban interface (WUI) in 2000 with and without fire perimeter overlays (from 1979 to 2004) in (A, C) California and (B, D) southern California. Housing density is defined as follows: very low, >0–6.17 housing units/km^2; low, 6.17–49.42 housing units/km^2; medium, 49.42–741.31 housing units/km^2; and high, >741.31 housing units/km^2 (USDA and USDI 2001). "Fires 25y" refers to 25 years of fire perimeters, from 1980 to 2005.

multicollinearity, we calculated the correlation coefficients between all of the explanatory variables and only included noncorrelated variables ($r \leq 0.7$) in the multiple regression models.

The areas of CDF jurisdiction for each county varied slightly over time. Therefore, we compared separate regressions from the full historic data set ($n = 37$) to a subset of the data excluding counties that experienced a greater than 20% change in area over time ($n = 23$). For both the 1960–1980 regressions and the 1980–2000 regressions, every one of the explanatory variables that was significant in the subset was also significant in the full data set, with very similar R^2 values; therefore, we felt confident proceeding with the full data set for the historic analysis because we had greater power with the larger sample size.

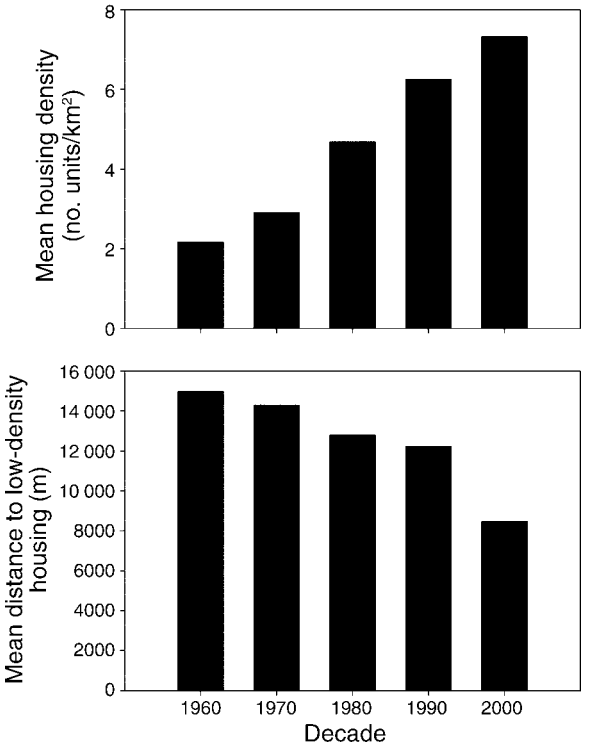


FIG. 4. Trends in housing density and distance to low-density housing (6.17–49.42 housing units/km^2) for all land in the state responsibility areas (SRAs) in California from 1960 to 2000.

Statistical analysis

We used the same regression modeling approach for both the current and historic analyses. First, we developed bivariate regression models for all of the explanatory variables and their quadratic terms so that we could evaluate their independent influence on fire frequency and area burned. To account for the interactions between variables (and their quadratic terms), we also built multiple regression models using the R statistical package (R Development Core Team 2005). For all models, we first conducted a full stepwise selection analysis (both directions) using Akaike Information Criteria to identify the best combination of predictor variables (Burnham and Anderson 2002). Some of the models retained a quadratic term without including the lower-order variable. In these models, we added the lower-order term, rebuilt the model, and then proceeded with a backwards elimination process until all predictor variables in the model were significant with P values ≤ 0.05.

RESULTS

Current analysis

Bivariate regressions.—Many of the anthropogenic variables were highly significant in explaining the number of fires in 2000. The quadratic term for each of these variables was also significant, and the direction of influence was both positive and negative (Fig. 7). Compared to the other variables, population density explained the greatest amount of variability. The proportion of intermix WUI and low-density housing in the counties also explained significant variation in the number of fires; but the proportion of interface WUI was insignificant. The number of fires was significantly related to the mean distance to both types of WUI, but neither of the road variables was significant. All three vegetation types, particularly shrubland, significantly influenced the number of fires, but ecoregion was insignificant.

For the anthropogenic variables, the number of fires was highest at intermediate levels of population density (from ~35 to 45 people/km^2; Fig. 6), proportion of intermix WUI (~20–30% in the county), and proportion of low-density housing (~25–35% in the county). It was also highest at the shortest distances to intermix and interface WUI, but started to level off at ~9–10 km for intermix (Fig. 6) and 14–15 km for interface WUI.

Unlike the number of fires, none of the anthropogenic variables were significantly associated with the area burned in 2000. In fact, shrubland was the only variable that explained significant variation in area burned.

Multiple regression.—When all of the variables were modeled in the multiple regressions, the resulting model for number of fires in 2000 included population density, the proportion of intermix WUI and its quadratic term, grassland and its quadratic term, and shrubland (Table 2). The model was highly significant with an adjusted R^2 value of 0.72.

The multiple regression model for area burned in 2000 included distance to road, shrubland, and woodland, and all three variables had significant positive relationships (no quadratic terms were retained). This model was also highly significant with an adjusted R^2 of 0.50.

Historical analysis 1960–1980

Bivariate regressions.—Change in the number of fires (net increase) from 1960 to 1980 was significantly explained by each of the human-related variables except for change in the mean distance to low-density housing (Fig. 8). The quadratic term was also significant in the separate models, except for the initial distance to low-density housing (in 1960), which had a negative influence on the change in number of fires. Change in number of fires was also significantly related to ecoregion and shrubland vegetation.

The only three variables with significant influence on the change in area burned (net decrease) were the three vegetation types.

Multiple regression.—The explanatory variables that were retained in the multiple regression model for change in the number of fires from 1960 to 1980 included mean housing density in 1960 and its quadratic term, grassland vegetation, and ecoregion (Table 2). The adjusted R^2 value was highly significant at 0.72.

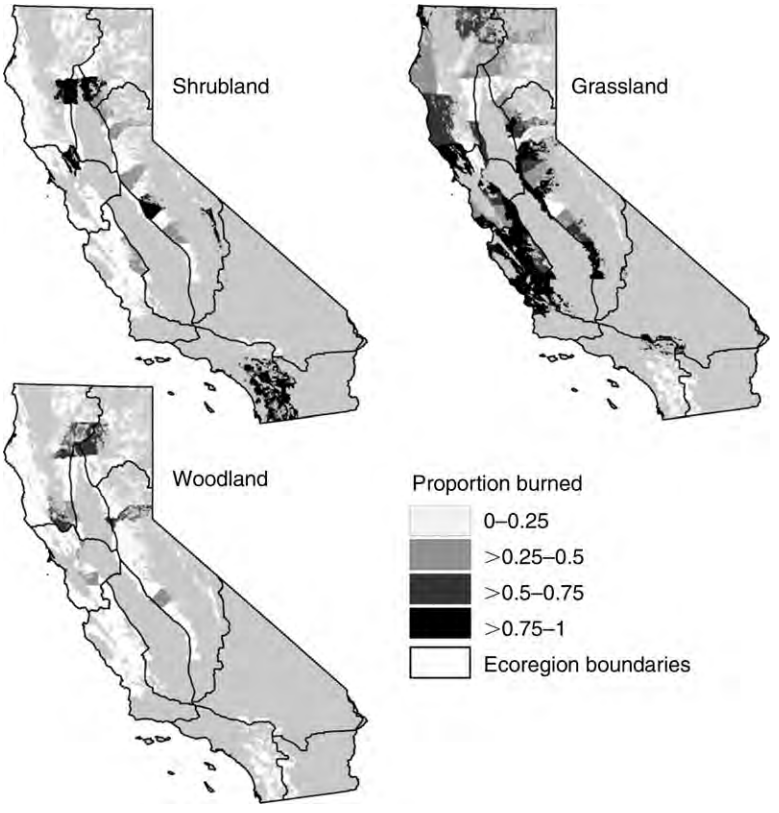


FIG. 5. Maps showing ecoregion boundaries and the proportion of area burned in shrubland, grassland, and woodland in 2000.

Mean housing density in 1960 was positively associated with change in area burned from 1960 to 1980, and the distance to low-density housing had first a positive, then a negative influence because the quadratic term was included. Other variables retained in the multiple regression model included shrubland and its quadratic term, grassland, woodland, and ecoregion.

Historical analysis 1980–2000

Bivariate regressions.—Initial housing density (in 1980) was the only significant explanatory variable explaining change in number of fires (net decrease) from 1980 to 2000 (Fig. 9). Woodland vegetation was the only significant variable out of the separate models explaining change in area burned from 1980 to 2000 (net increase). The quadratic terms were significant for both of these models.

Multiple regression.—The multiple regression model explaining change in number of fires from 1980 to 2000 included change in housing density, initial housing density (in 1980), and woodland vegetation; the quadratic term was also significant for these three variables (Table 2). Although the model was significant, the R^2 was substantially lower than the 1960–1980 model, at 0.26.

The multiple regression model explaining change in area burned included initial housing density (in 1980) and its quadratic term, initial distance to low-density

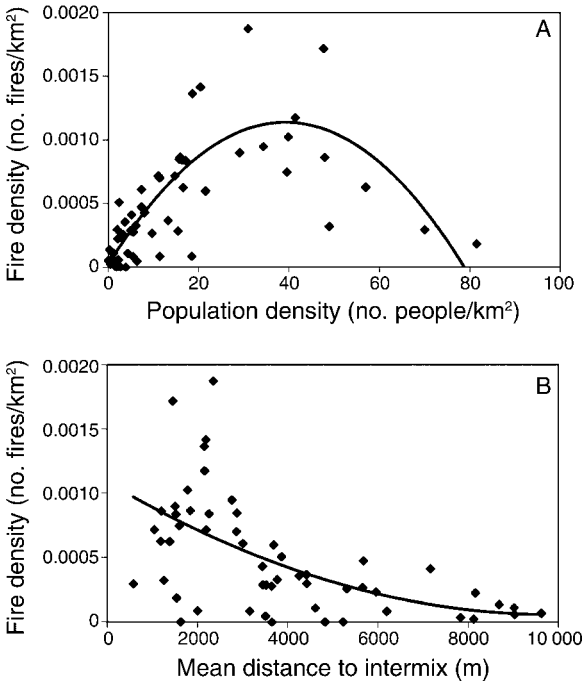


FIG. 6. The relationships between (A) the proportion of the number of fires and population density and (B) the proportion of the number of fires and mean distance to intermix wildland–urban interface (WUI).

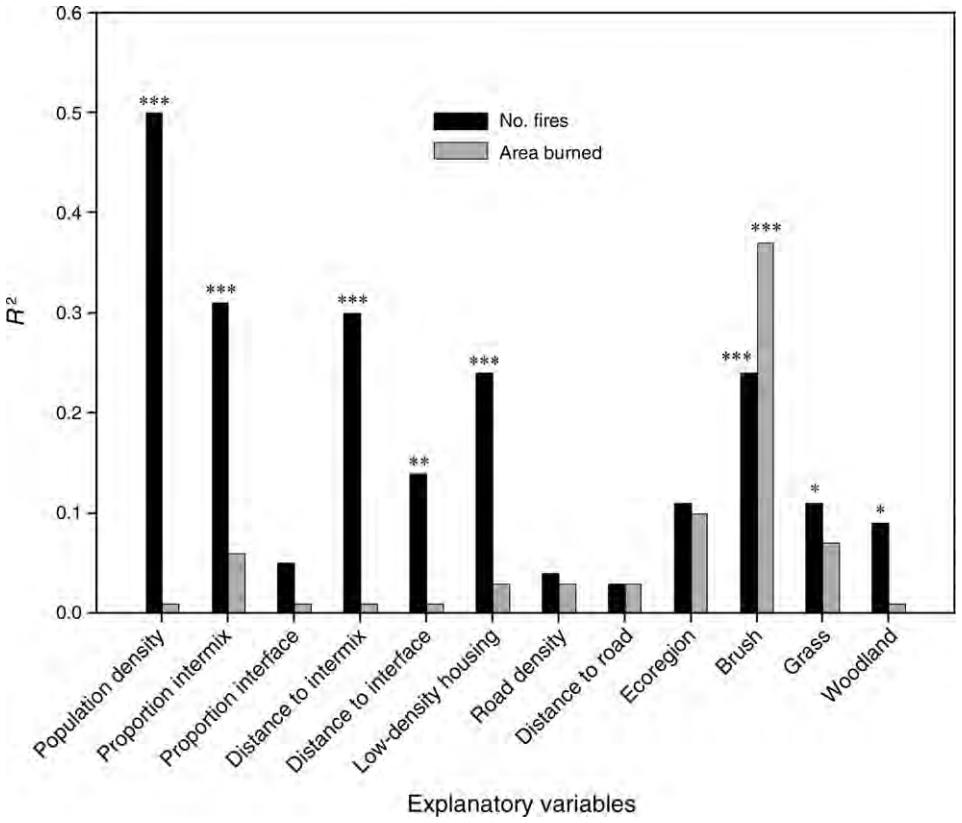


FIG. 7. R^2 values and significance levels for the explanatory variables in the bivariate regression models for number of fires and area burned in 2000.
* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

housing, woodland vegetation and its quadratic, and ecoregion. This model had better explanatory power than the number of fires model, with an R^2 of 0.41.

DISCUSSION

The expression of fire on a landscape is influenced by a combination of factors that vary across spatial and temporal scales and involve both physical and biological characteristics. Fire behavior has long been viewed as a largely physical phenomenon illustrated by the classic fire environment triangle that places fire as a function of weather, fuels, and topography (Countryman 1972), but clearly the human influence on modern fire regimes must also be understood to meet fire management needs (DellaSalla et al. 2004). We first asked what the current relationship is between human activities and fire in California and found that humans and their spatial distribution explained a tremendous proportion of the variability in the number of fires, but that area burned was more a function of vegetation type. Anthropogenic ignitions are the primary cause of fire in California and were the focus of our analysis, so we were not surprised by the strong human influence. Nevertheless, the high explanatory power of the models underscores the importance of using locally relevant anthropogenic factors as well as biophysical factors in fire risk assessments and mapping. The models also identify which indicators of human activity are most strongly associated with fire in California. For number of fires, the proportion of intermix WUI explained more variation than any other variable except for population density, suggesting that the spatial pattern of housing development and fuel are important risk factors for fire starts.

Human-caused ignitions frequently occur along transportation corridors (Keeley and Fotheringham 2003, Stephens 2005), so it was surprising that neither road density nor average distance to road were significant in explaining fire frequency. Although roads are important in local-scale ignition modeling, detecting their influence on fire ignitions may be difficult at an aggregated, county level since they are narrow, linear features. On the other hand, distance to roads was the only anthropogenic variable associated with area burned, having a positive influence when grassland and shrubland were also accounted for in the multiple regression model, which may reflect the difficulty of fire suppression access contributing to fire size.

Humans influence fire frequency more than area burned because anthropogenic ignitions are responsible

TABLE 2. Variables retained in the multiple regression models for the current and historic analyses.

Analysis and explanatory variable	Coefficient and intercept	*P*
Current		
2000		
No. fires		
Population density	0.0006	<0.01
Proportion intermix	0.0702	<0.01
(Proportion intermix)^2	−0.2629	<0.01
Grassland	0.0496	<0.01
(Grassland)^2	−0.0441	<0.01
Shrubland	0.0093	0.02
Overall model (adjusted R^2: 0.72)	0.0001	<0.01
Area burned		
Distance to road	0.00004	<0.01
Shrubland	0.0833	<0.01
Woodland	0.0559	<0.01
Overall model (adjusted R^2: 0.50)	−0.0052	<0.01
Historic		
1960–1980		
No. fires		
Initial housing	2.7649	<0.01
(Initial housing)^2	−0.1523	<0.01
Grassland	4.6311	0.05
Ecoregion	...†	<0.01
Overall model (adjusted R^2: 0.72)	0.6443	<0.01
Area burned		
Initial housing	0.0188	<0.01
Initial distance	0.00002	<0.01
(Initial distance)^2	-2×10^{-10}	<0.01
Shrubland	−0.3641	0.12
(Shrubland)^2	0.8778	0.01
Grassland	0.0371	<0.01
Woodland	0.0449	0.01
Ecoregion	...†	0.03
Overall model (adjusted R^2: 0.51)	−0.373	<0.01
1980–2000		
No. fires		
Change housing	3.0666	0.01
(Change housing)^2	−0.2661	0.01
Initial housing	−1.8269	0.01
(Initial housing)^2	0.0505	0.03
Woodland	38.1957	0.03
(Woodland)^2	−107.0112	0.02
Overall model (adjusted R^2: 0.26)	−1.894	0.01
Area burned		
Initial housing	−0.0114	0.01
(Initial housing)^2	0.0003	0.05
Initial distance	−0.000003	<0.01
Woodland	0.0292	0.18
(Woodland)^2	−1.2831	0.02
Ecoregion	...†	0.05
Overall model (adjusted R^2: 0.41)	0.0409	<0.01

† Coefficients are not listed for categorical variables.

for fire initiation, but fire spread and behavior is ultimately more a function of fuel availability and type (Bond and van Wilgen 1996, Pyne et al. 1996). Yet humans do have some control over fire size through suppression and, indirectly, through fuel connectivity (Sturtevant et al. 2004), although fires are extremely difficult to suppress in California shrublands under high-wind conditions that typify the most destructive fires (Keeley and Fotheringham 2003). Therefore, human effects on area burned may cancel one another out to some extent because fire suppression can minimize the increase in area burned that would result from increased ignitions, at least at the WUI. Fire suppression resources are more likely to be concentrated on structural protection in developed areas (Calkin et al. 2005), which would explain the positive relationship between area burned and distance to road. Roads can serve as firebreaks and can also provide access routes for firefighters.

The inclusion of vegetation type in the multiple regression models illustrates that, despite the strong influence of humans, fire occurrence remains a function

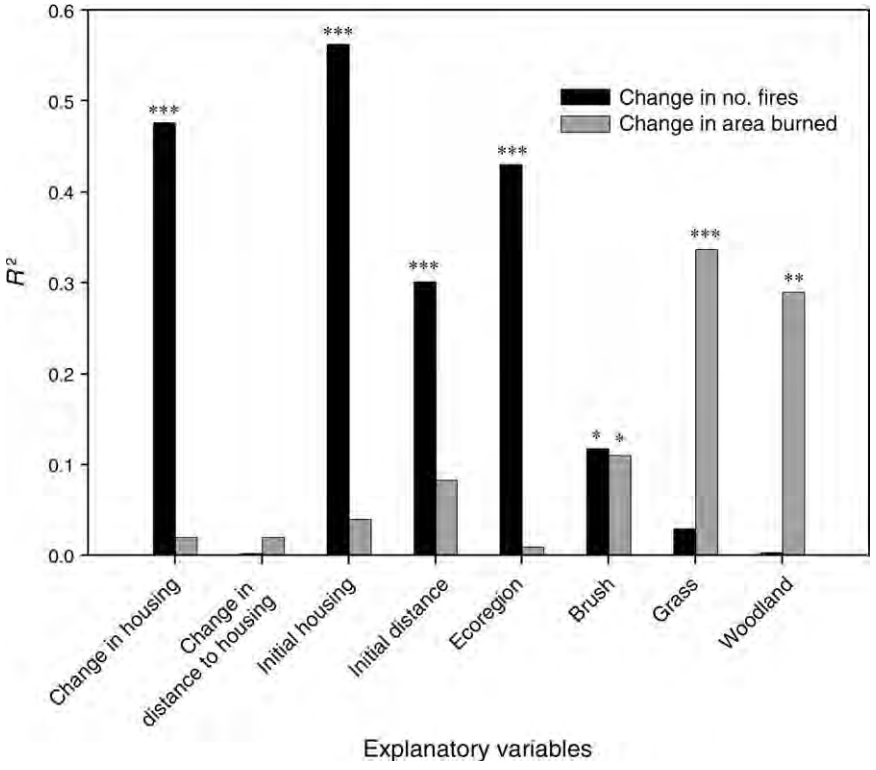


FIG. 8. R^2 values and significance levels for the explanatory variables in the bivariate regression models for number of fires and area burned from 1960 to 1980.
* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

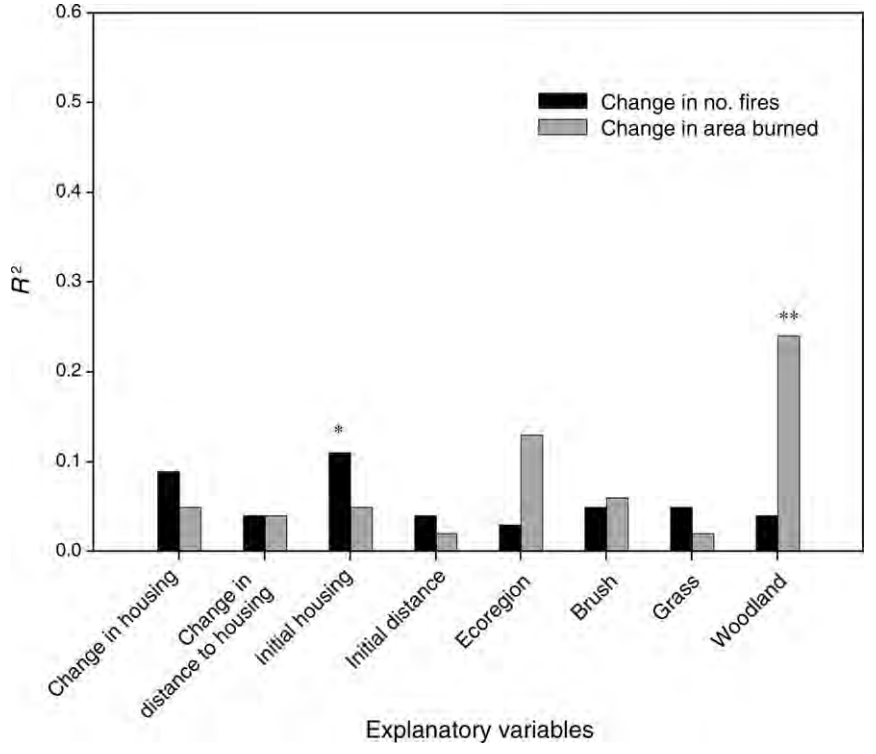


FIG. 9. R^2 values and significance levels for the explanatory variables in the bivariate regression models for number of fires and area burned from 1980 to 2000.
* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.



PLATE 1. (Left) Wildland–urban interface (WUI) and (right) burned-over fuel break, both at the eastern end of Scripps Ranch (San Diego County, California, USA) after the autumn 2003 Cedar Fire (largest fire in California since the beginning of the 20th century). Photo credits: J. E. Keeley.

of multiple interacting social and environmental variables. For number of fires and area burned, shrubland had the strongest explanatory power of the vegetation types. Chaparral and coastal sage scrub are both extremely fire-prone vegetation types and high human population density tends to be distributed in these types; other studies have shown that they have experienced a higher rate of burning than other vegetation types in the southern part of the state in the last century (Keeley et al. 1999, Keeley 2000, Wells et al. 2004). Increased ignitions in highly flammable vegetation types can lead to very hazardous conditions (Halsey 2005).

The second question we asked was "How do human activities relate to change in fire?" In the last 40 years, the most substantial change was the increase in number of fires from 1960 to 1980. The decrease in number of fires was less dramatic between 1980 and 2000; and the change in area burned was relatively small in both time periods. Housing development patterns were most influential when change was greatest, from 1960 to 1980, and for trends in fire frequency (vs. area burned).

Although anthropogenic influence was partially responsible for the change in area burned, the apparent inverse relationship between change in fire frequency and change in area burned may be spurious. In other words, the explanation for a decrease in number of fires may be independent of the concurrent increase in area burned. Trends in area burned are naturally cyclic due to broad-scale factors such as climate. Recent research has shown that change in climate was a major factor driving fire activity in the western United States in the last several decades (Westerling et al. 2006); however, that research was restricted to large montane fire events on federally owned land above 1370 m. Therefore, while climate change may have played some role in our observed change in area burned, we cannot extend those results to our analysis because we included fires of all sizes under multiple land ownership classes, and historical fire patterns in the lower elevations do not correspond to patterns in montane forests (Halsey 2005).

Fire both constrains and is constrained by the fuel patterns it creates, resulting in cycles of fire activity and temporal autocorrelation in area burned, in part because young fuels are often less likely to burn (Malamud et al. 2005). Temporal autocorrelation effects vary with ecosystem, fuel type, and the area of analysis; but in all vegetation types, temporal dependence diminishes over time due to post-fire recovery. Therefore, we assumed that the effects would be low in our study because we were looking at change over 20-year time periods. Furthermore, the chaparral vegetation that dominates much of California recovers very quickly following fire, meaning that the effect of temporal autocorrelation in this vegetation type would last for only brief periods of time. Also, under extreme weather conditions, young age classes are capable of carrying fires in the southern portions of California (Moritz 1997, Moritz et al. 2004).

In general, the anthropogenic influence on fire frequency and extent was complicated through the combination of positive and negative effects, which helps to answer our third question: "Do fire frequency and area burned vary nonlinearly in response to human influence?" Nonlinear effects were evident in the scatter plots and confirmed by the significance of quadratic terms in most of the models. The regression models indicate that humans were responsible for first increasing and then decreasing fire frequency and area burned. These dual influences may explain why prior studies presented conflicting results, because a positive or negative response was dependent on the level of human presence. Aside from the fact that we intentionally tested hypotheses regarding nonlinear relationships, our data also contained a wide range of human presence due to the large extent and diversity of the state of California.

The scatter plots illustrate how these human–fire relationships occurred. For both the number of fires and area burned, and in the current and historic analyses, the

maximum fire values occurred at intermediate levels of human presence (as in Fig. 6A); and when human activity was either lower or higher, fire activity was lower. Initial increase in fire occurrence with increasing population is reasonable since human presence results in more ignitions. However, it appears that when human population density and development reach a certain threshold density, ignitions decline, and this is likely the result of diminished and highly fragmented open space with fuels insufficient to sustain fire. In addition, above a certain population threshold, fire suppression resources are likely to be more concentrated in the WUI. Inverse relationships were evident in the scatter plots of distance (Fig. 6B). In these, fire frequency and area burned were greatest at short distances to WUI; and at longer distances, the trend lines leveled off. These distance relationships indicate that more fires would be expected in close proximity to settled areas where ignitions are likely to occur.

The inclusion of quadratic terms in the multiple regression models supports the concept that fire frequency and area burned were dependent on the level of human activity. Initial housing density was important in all four historic multiple regression models, and initial distance to low-density housing was important in both of the historic area-burned models. The change in number of fires for both periods was also related to change in housing density, in bivariate regression models for the earlier period and in the multiple regression model for the later period (1980–2000). These results further emphasize that fire activity was a function of a certain level of human presence. In addition to the strong influence of human presence, ecoregion and vegetation types were also highly significant in the multiple regression models, suggesting that the particular level of human activity that was most influential in explaining fire activity was dependent upon biophysical context.

The primary value of the multiple regression models was to identify the most influential variables and their direction of influence when accounting for other factors. While they explained how fire activity varied according to context-dependent interactions, their purpose was not to provide a formula for determining fire risk at a landscape scale. Environmental and social conditions differ from region to region, and processes such as fire and succession are controlled by a hierarchy of factors, with different variables important at different scales (Turner et al. 1997). Nevertheless, these models provide strong evidence about the strength and nature of human–fire relationships. That these relationships are significant across a state as diverse as California suggests that human influence is increasingly overriding the biophysical template; yet, managers must account for the interactions with ecoregion and vegetation type when making management decisions. Determining the conditions (e.g., thresholds) for nonlinear anthropogenic relationships will be important to understand how fire risk is distributed across the landscape.

At the coarse scale of our analysis, we can estimate these thresholds based on the nonlinear relationships in our scatter plots (as in Fig. 6) and suggest that fire frequency is likely to be highest when population density is between 35 and 45 people/km^2, proportion of intermix WUI is ~20–30%, proportion of low-density housing is ~25–35%, the mean distance to intermix WUI is <9 km, and the mean distance to interface WUI is <14 km. Our next step is to more precisely define these relationships at scales finer than the county level (where management decisions often occur) and to understand the conditions under which human activities positively or negatively influence fire.

These results imply that fire managers must consider human influence, together with biophysical characteristics such as those represented in the LANDFIRE database, when making decisions regarding the allocation of suppression and hazard mitigation resources. If human presence is not explicitly included in decision making, inefficiencies may result, because fire occurrence is related to human presence on the landscape. In particular, we identify an intermediate level of housing density and distance from the WUI at which the effects of human presence seem to be especially damaging, i.e., a point at which enough people are present to ignite fires, but development has not yet removed or fragmented the wildland vegetation enough to disrupt fire spread. This intermediate level of development is one that large areas of the lower 48 states, particularly in the West and Southwest, will achieve in the coming decade. Hence, the WUI's location, extent, and dynamics will continue to be essential information for wildland fire management.

Conclusion

In addition to the risk to human lives and structures, changing fire regimes may have substantial ecological impacts, and the results in this analysis support the hypothesis that humans are altering both the spatial and temporal pattern of the fire regime. Although the overall area burned has not changed substantially, the distribution of fires across the landscape is shifting so that the majority of fires are burning closer to developed areas, and more remote forests are no longer burning at their historic range of variability (Pyne 2001). In either case, the ecological impacts may be devastating. Due to lack of dendrochronological information, historic reference conditions are difficult to determine in stand-replacing chaparral shrublands. Although chaparral is adapted to periodic wildfire, there is substantial evidence that fires are burning at unprecedented frequencies, and this repeated burning (at intervals closer than 15–20 years apart) exceeds many species' resilience and has already resulted in numerous extirpations (Zedler et al. 1983, Haidinger and Keeley 1993, Halsey 2005).

If present trends continue in California, the population may increase to 90×10^6 residents in the next 100 years. Recent trends in housing development patterns also indicate that growth in area and number of houses in intermix WUI has far outpaced the growth in interface WUI (Radeloff et al. 2005; Hammer et al., *in press*). Our results showing that fire frequency and area burned tend to be highest at intermediate levels of development (more typical of intermix than interface) suggest that fire risk is a function of the spatial arrangement of housing development and fuels. Therefore, in addition to more people in the region that could ignite fires, future conditions that include continued growth of intermix WUI may also contribute to greater fire risk. Land use planning that encourages compact development has been advocated to lessen the general impacts of growth on natural resources (Landis and Reilly 2004), and we suggest that reducing sprawling development patterns will also be important to the control of wildfires in California.

Acknowledgments

We thank Ayn Shlisky, Julie Yee, and an anonymous reviewer for insightful comments that improved our manuscript. We are also grateful for the support from the U.S. Forest Service Northern Research Station and the Pacific Northwest Research Station.

Literature Cited

Allen, C. D., M. Savage, D. A. Falk, K. F. Suckling, T. W. Swetnam, T. Schulke, P. B. Stacey, P. Morgan, M. Hoffman, and J. T. Klingel. 2002. Ecological restoration of southwestern ponderosa pine ecosystems: a broad perspective. Ecological Applications 12:1418–1433.

Barro, S. C., and S. G. Conard. 1991. Fire effects on California chaparral systems: an overview. Environment International 17:135–149.

Bond, W. J., and J. E. Keeley. 2005. Fire as a global 'herbivore': the ecology and evolution of flammable ecosystems. Trends in Ecology and Evolution 20:387–394.

Bond, W. J., and B. van Wilgen. 1996. Fire and plants. Chapman and Hall, London, UK.

Bradstock, R. A., A. M. Gill, B. J. Kenny, and J. Scott. 1998. Bushfire risk at the urban interface estimated from historical weather records: consequences for the use of prescribed fire in the Sydney region of south-eastern Australia. Journal of Environmental Management 53:259–271.

Burnham, K. P., and D. R. Anderson. 2002. Model selection and inference: a practical information-theoretic approach. Springer-Verlag, New York, New York, USA.

CAFRAP [California Fire Resource and Assessment Program]. 2001. Comparison of areas burned in developed and undeveloped wildland areas in the northwestern Sierra Nevada foothills. California Department of Forestry and Fire Protection, Sacramento, California, USA.

Calkin, D. E., K. M. Gebert, K. M. Jones, and R. P. Neilson. 2005. Forest Service large fire area burned and suppression expenditure trends, 1970–2002. Journal of Forestry 103: 179–183.

Cardille, J. A., S. J. Ventura, and M. G. Turner. 2001. Environmental and social factors influencing wildfires in the upper Midwest, United States. Ecological Applications 11: 111–127.

Cohen, J. D. 2000. Preventing disaster: home ignitability in the wildland–urban interface. Journal of Forestry 98:15–21.

Countryman, C. M. 1972. The fire environment concept. USDA Forest Service, Pacific Southwest Range and Experiment Station, Berkeley, California, USA.

Dale, V. H., L. A. Joyce, S. McNulty, and R. P. Neilson. 2000. The interplay between climate change, forests and disturbances. Science of the Total Environment 262:201–204.

DellaSalla, D. A., J. E. Williams, C. D. Williams, and J. F. Franklin. 2004. Beyond smoke and mirrors: a synthesis of fire policy and science. Conservation Biology 18:976–986.

Dobson, A. P., J. P. Rodriguez, W. M. Roberts, and D. S. Wilcove. 1997. Geographic distribution of endangered species in the United States. Science 275:550–553.

Duncan, B. W., and P. A. Schmalzer. 2004. Anthropogenic influences on potential fire spread in a pyrogenic ecosystem of Florida, USA. Landscape Ecology 19:153–165.

ECOMAP. 1993. National hierarchical framework of ecological units. USDA Forest Service, Washington, D.C., USA.

Fried, J. S., G. Winter, and J. K. Gilless. 1999. Assessing the benefits of reducing fire risk in the wildland–urban interface: a contingent valuation approach. International Journal of Wildland Fire 9:9–20.

Gray, A. N., H. S. J. Zald, R. A. Kern, and N. Malcolm. 2005. Stand conditions associated with tree regeneration in Sierran mixed-conifer forests. Forest Science 51:198–210.

Haidinger, T. L., and J. E. Keeley. 1993. Role of high fire frequency in destruction of mixed chaparral. Madroño 40: 141–147.

Haight, R. G., D. T. Cleland, R. B. Hammer, V. C. Radeloff, and T. S. Rupp. 2004. Assessing fire risk in the wildland–urban interface. Journal of Forestry 104:41–48.

Halsey, R. W. 2005. Fire, chaparral, and survival in southern California. Sunbelt, San Diego, California, USA.

Hammer, R. B., V. C. Radeloff, J. S. Fried, and S. I. Stewart. *In press*. Wildland–urban interface growth during the 1990s in California, Oregon and Washington. International Journal of Wildland Fire.

Hammer, R. B., S. I. Stewart, R. Winkler, V. C. Radeloff, and P. R. Voss. 2004. Characterizing spatial and temporal residential density patterns across the U.S. Midwest, 1940–1990. Landscape and Urban Planning 69:183–199.

Hawbaker, T. J., and V. C. Radeloff. 2004. Road and landscape pattern in northern Wisconsin based on a comparison of four road data sources. Conservation Biology 18:1233–1244.

Hickman, J. C. 1993. The Jepson manual: higher plants of California. University of California Press, Berkeley, California, USA.

Keeley, J. E. 1982. Distribution of lightning and man-caused wildfires in California. Pages 431–437 *in* C. E. Conrad and W. C. Oechel, editors. Proceedings of the International Symposium on the Dynamics and Management of Mediterranean-type Ecosystems. USDA Forest Service, Pacific Southwest Forest and Range Experiment Station, Berkeley, California, USA.

Keeley, J. E. 2000. Chaparral. Pages 202–253 *in* M. G. Barbour and W. D. Billings, editors. North American terrestrial vegetation. Cambridge University Press, New York, New York, USA.

Keeley, J. E. 2005. Fire history of the San Francisco East Bay region and implications for landscape patterns. International Journal of Wildland Fire 14:285–296.

Keeley, J. E., and C. J. Fotheringham. 2003. Impact of past, present, and future fire regimes on North American Mediterannean shrublands. Pages 218–262 *in* T. T. Veblen, W. L. Baker, G. Montenegro, and T. W. Swetnam, editors. Fire and climatic change in temperate ecosystems of the western Americas. Springer-Verlag, New York, New York, USA.

Keeley, J. E., C. J. Fotheringham, and M. Morais. 1999. Reexamining fire suppression impacts on shrublandland fire regimes. Science 284:1829–1832.

Keeley, J. E., C. J. Fotheringham, and M. A. Moritz. 2004. Lessons from the 2003 wildfires in southern California. Journal of Forestry 102:26–31.

Landis, J. D., and M. Reilly. 2004. How we will grow: baseline projections of the growth of California's urban footprint through the year 2100. Working Paper 2003-04. Institute of Urban and Regional Development, University of California, Berkeley, California, USA.

Landres, P. B., P. Morgan, and F. J. Swanson. 1999. Overview of the use of natural variability concepts in managing ecological systems. Ecological Applications 9:1179–1188.

Lenihan, J. L., R. Drapek, D. Bachelet, and R. P. Neilson. 2003. Climate change effects on vegetation distribution, carbon, and fire in California. Ecological Applications 13: 1667–1681.

Malamud, B. D., J. D. A. Millington, and G. L. W. Perry. 2005. Characterizing wildfire regimes in the United States. Proceedings of the National Academy of Sciences (USA) 102: 4694–4699.

Marsden, M. A. 1982. A statistical analysis of the frequency of lightning-caused forest fires. Journal of Environmental Management 14:149–159.

Mercer, D. E., and J. P. Prestemon. 2005. Comparing production function models for wildfire risk analysis in the wildland–urban interface. Forest Policy and Economics 7: 782–795.

Moritz, M. A. 1997. Analyzing extreme disturbance events: fire in the Los Padres National Forest. Ecological Applications 7: 1252–1262.

Moritz, M. A., J. E. Keeley, E. A. Johnson, and A. A. Schaffner. 2004. Testing a basic assumption of shrubland fire management: Does the hazard of burning increase with the age of fuels? Frontiers in Ecology and the Environment 2: 67–72.

Pausas, J. G., R. A. Bradstock, D. A. Keith, and J. E. Keeley. and GCTE (Global Change of Terrestrial Ecosystems) Fire Network. 2004. Plant functional traits in relation to fire in crown-fire ecosystems. Ecology 85:1085–1100.

Prestemon, J. P., J. M. Pye, D. T. Butry, T. P. Holmes, and D. E. Mercer. 2002. Understanding broadscale wildfire risks in a human-dominated landscape. Forest Science 48:685–693.

Pyne, S. J. 2001. Fire in America. Princeton University Press. Princeton, New Jersey, USA.

Pyne, S. J., P. L. Andrews, and R. D. Laven. 1996. Introduction to wildland fire. John Wiley and Sons, New York, New York, USA.

Radeloff, V. C., R. B. Hammer, S. I. Stewart, J. S. Fried, S. S. Holcomb, and J. F. McKeefry. 2005. The wildland–urban interface in the United States. Ecological Applications 15: 799–805.

R Development Core Team. 2005. R: a language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. ⟨http://www.R-project.org⟩

Rollins, M. G., P. Morgan, and T. Swetnam. 2002. Landscape-scale controls over 20th century fire occurrence in two large Rocky Mountain (USA) wilderness areas. Landscape Ecology 17:539–557.

Rundel, P. W., and J. A. King. 2001. Ecosystem processes and dynamics in the urban/wildland interface of Southern California. Journal of Mediterranean Ecology 2:209–219.

Savage, M., B. Sawhill, and M. Askenazi. 2000. Community dynamics: What happens when we rerun the tape? Journal of Theoretical Biology 205:515–526.

Schroeder, M. J., et al. 1964. Synoptic weather types associated with critical fire weather. U.S. Forest Service, Pacific Southwest Range and Experiment Station. Berkeley, California, USA.

Shindler, B., and E. Toman. 2003. Fuel reduction strategies in forest communities. Journal of Forestry 101:8–14.

Stephens, S. L. 1998. Evaluation of the effects of silvicultural and fuels treatments on potential fire behaviour in Sierra Nevada mixed-conifer forests. Forest Ecology and Management 105:21–35.

Stephens, S. L. 2005. Forest fire causes and extent on United States Forest Service lands. International Journal of Wildland Fire 14:213–222.

Sturtevant, B. R., P. A. Zollner, E. J. Gustafson, and D. T. Cleland. 2004. Human influence on the abundance and connectivity of high-risk fuels in mixed forests of northern Wisconsin, USA. Landscape Ecology 19:235–253.

Turner, M. G., W. H. Romme, R. H. Gardner, and W. W. Hargrove. 1997. Effects of fire size and pattern on early succession in Yellowstone National Park. Ecological Monographs 67:411–433.

U.S. Census Bureau. 2000. Census 2000 TIGER line files. U.S. Census Bureau, Washington, D.C., USA.

U.S. Census Bureau. 2002. Census 2000 summary file 3A technical documentation. U.S. Census Bureau, Washington, D.C., USA.

USDA and USDI. 2001. Urban wildand interface communities within vicinity of federal lands that are at high risk from wildfire. Federal Register 66:751–777.

U.S. Geological Survey. 2002. Digital line graph (DLG) availability, 7.5 minute transportation overlay. U.S. Geological Survey, Washington, D.C., USA.

Veblen, T. T., T. Kitzberger, and J. Donnegan. 2000. Climatic and human influences on fire regimes in ponderosa pine forests in the Colorado Front Range. Ecological Applications 10:1178–1195.

Wells, M. L., J. F. O'Leary, J. Franklin, J. Michaelson, and D. E. McKinsey. 2004. Variations in a regional fire regime related to vegetation type in San Diego County, California (USA). Landscape Ecology 19:139–152.

Westerling, A. L., H. G. Hidalgo, D. R. Cayan, and T. W. Swetnam. 2006. Warming and earlier spring increase western U.S. forest wildfire activity. Science 313:940–943.

Wilson, E. O. 1992. The diversity of life. Norton, New York, New York, USA.

Winter, G., and J. S. Fried. 2000. Homeowner perspectives on fire hazard, responsibility, and management strategies at the wildland–urban interface. Society and Natural Resources 13: 33–49.

Winter, G. J., C. Vogt, and J. S. Fried. 2002. Fuel treatments at the wildland–urban interface: common concerns in diverse regions. Journal of Forestry 100:15–21.

Zedler, P. H., C. R. Gautier, and G. S. McMaster. 1983. Vegetation change in response to extreme events: the effect of a short interval between fires in California chaparral and coastal scrub. Ecology 64:809–818.

OPEN ACCESS Freely available online

PLoS one

Housing Arrangement and Location Determine the Likelihood of Housing Loss Due to Wildfire

Alexandra D. Syphard[1]*, Jon E. Keeley[2,3], Avi Bar Massada[4], Teresa J. Brennan[2], Volker C. Radeloff[4]

1 Conservation Biology Institute, La Mesa, California, United States of America, **2** United States Geological Survey, Western Ecological Research Center, Sequoia-Kings Canyon Field Station, Three Rivers, California, United States of America, **3** Department of Ecology and Evolutionary Biology, University of California Los Angeles, Los Angeles, California, United States of America, **4** Department of Forest and Wildlife Ecology, University of Wisconsin-Madison, Madison, Wisconsin, United States of America

Abstract

Surging wildfires across the globe are contributing to escalating residential losses and have major social, economic, and ecological consequences. The highest losses in the U.S. occur in southern California, where nearly 1000 homes per year have been destroyed by wildfires since 2000. Wildfire risk reduction efforts focus primarily on fuel reduction and, to a lesser degree, on house characteristics and homeowner responsibility. However, the extent to which land use planning could alleviate wildfire risk has been largely missing from the debate despite large numbers of homes being placed in the most hazardous parts of the landscape. Our goal was to examine how housing location and arrangement affects the likelihood that a home will be lost when a wildfire occurs. We developed an extensive geographic dataset of structure locations, including more than 5500 structures that were destroyed or damaged by wildfire since 2001, and identified the main contributors to property loss in two extensive, fire-prone regions in southern California. The arrangement and location of structures strongly affected their susceptibility to wildfire, with property loss most likely at low to intermediate structure densities and in areas with a history of frequent fire. Rates of structure loss were higher when structures were surrounded by wildland vegetation, but were generally higher in herbaceous fuel types than in higher fuel-volume woody types. Empirically based maps developed using housing pattern and location performed better in distinguishing hazardous from non-hazardous areas than maps based on fuel distribution. The strong importance of housing arrangement and location indicate that land use planning may be a critical tool for reducing fire risk, but it will require reliable delineations of the most hazardous locations.

Citation: Syphard AD, Keeley JE, Massada AB, Brennan TJ, Radeloff VC (2012) Housing Arrangement and Location Determine the Likelihood of Housing Loss Due to Wildfire. PLoS ONE 7(3): e33954. doi:10.1371/journal.pone.0033954

Editor: Guy J-P. Schumann, University of Bristol, United Kingdom

Received September 23, 2011; **Accepted** February 20, 2012; **Published** March 28, 2012

This is an open-access article, free of all copyright, and may be freely reproduced, distributed, transmitted, modified, built upon, or otherwise used by anyone for any lawful purpose. The work is made available under the Creative Commons CC0 public domain dedication.

Funding: Funding was provided by the United States Geological Survey Multi-Hazards Demonstration Project and the United States Forest Service Northern Research Station. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Competing Interests: The authors have declared that no competing interests exist.

* E-mail: asyphard@consbio.org

Introduction

As the frequency, extent, and severity of wildfires are surging across the world [1,2], so too are the ecological, social, and economic consequences. Residential losses associated with wildland fire have escalated globally [3–5], and recent fire events have resulted in billions of dollars of damage per event [6]. The problem is particularly critical in Mediterranean-climate regions of the world, where major metropolitan centers are juxtaposed with highly flammable ecosystems [7]. Since the 1950s, southern California has experienced the highest losses in property and life in the U.S., averaging 500 homes per year [8]. Here we show that the arrangement and location of structures strongly affects their susceptibility to being destroyed in a wildfire, and that empirically based maps developed using housing density and location can better identify hazardous locations than fuel-based maps.

The escalation of wildland fire losses is typically attributed to housing development within or adjacent to wildland vegetation (i.e., the "wildland-urban interface") [6,9], changing climate conditions [1], or an accumulation of hazardous wildland fuels [10]. The primary preventive strategy used for reducing fire impacts has been the manipulation of wildland vegetation to reduce hazardous fuels. The U.S. federal government has strongly promoted and funded fuel reduction treatments to mitigate fire hazard, and federal land management agencies spent billions of dollars (e.g., $2.7 billion from 2001–2006) to treat millions of hectares within the last decade [10]. Yet, while costs for suppression and treatment have nearly tripled since 1996 [11], the fire problem has only gotten worse.

With the growing realization that wildland fuel manipulations can alter fire outcomes only to a limited extent, the need for alternatives has risen. For example, a structure's survival during a wildfire depends largely on its building materials and the characteristics of fuels in its immediate surroundings [3], suggesting that fire hazard can be reduced by homeowner actions to protect the structure [12].

However, what remains unclear is to what extent property loss depends on the role of land planning and the placement and arrangement of homes relative to the spatial patterns of wildland fire hazards. Past land-use decision-making has allowed homes to be constructed in highly flammable areas, and this may be one of the roots of the fire problem [13]. Although it is not feasible to change current housing patterns, homes in the most hazardous locations could be identified and prioritized for fire protection efforts, and land use planning and regulation may potentially be a powerful tool for reducing future property loss [14], especially in

areas such as southern California where substantial future housing growth is expected [15], and across the western US, where further development is expected in a substantial proportion of the wildland-urban interface [16].

If land use regulation and planning are to effectively reduce wildland fire loss, they have to be based on solid understanding of what landscape factors most significantly contribute to wildfire danger and where to locate and arrange homes to reduce fire hazard. Currently, most fire hazard maps are based on expert knowledge of how fuel and fire history determine threats to a given community e.g., [17–19]. Similar fire hazard maps have been created for the state of California that identify communities at risk and areas of substantial fire threat to people. These maps are readily available [20] and widely used. Fire hazard maps, however, are only effective if they accurately delineate areas where property loss is most likely to occur. Whether this is the case or not is unknown since most have never been evaluated against empirical data.

We constructed a complete database of structure locations in two extensive, fire-prone regions of southern California and identified which structures were destroyed or damaged by wildfires since 2001 (Fig. 1). These two regions were the Santa Monica Mountains, one of the largest wildland open space areas adjacent to the Los Angeles metropolitan area and San Diego County, site of major wildfire losses in both 2003 and 2007 [20]. Based on these data, we used logistic regression and maximum entropy analysis to answer three questions: 1) What is the relative importance of housing arrangement (i.e., the spatial pattern of residential structures), location, and environment in explaining property loss from fire? 2) How well do currently available statewide fuel-based maps of fire hazard correspond to actual wildfire impacts? 3) Can fire hazard maps based on empirical data and an expanded set of explanatory variables successfully predict local-scale housing losses?

Results

In the Santa Monica Mountains, 3% of 36,399 structures were located within the boundaries of 10 large fires that occurred from 2001 to 2009. In these fires, 173 homes, guest houses, or outbuildings were destroyed and an additional 140 were damaged. For the second study region in San Diego County, 4% of 687,869 structures were located within one of 40 fire perimeters. In these fires, 4315 structures were completely destroyed and an additional 935 were damaged.

In both study regions, the spatial arrangement of structures (Table 1) significantly influenced the likelihood of property loss (i.e., destruction or damage) (Figs. 2 and 3). Property loss was more likely in smaller, more isolated housing clusters with low- to intermediate housing density and fewer roads, although road density was insignificant after accounting for spatial autocorrelation in the Santa Monica Mountains (Table 2). Structures located near the edges of developments, or in housing clusters on steep slopes, were also more susceptible. Many relationships were nonlinear, with the highest property loss occurring when structures were at intermediate distances to other structures or housing clusters.

In addition to spatial arrangement, a structure's location on the landscape was also a highly significant predictor of property loss (Fig. 2). In both study regions, property loss was significantly related to a structure's distance from the coastline, but the relative effect varied. In the Santa Monica Mountains, property loss occurred disproportionately closer to the coast, whereas structures farther from the coast were most susceptible in San Diego County (Tables 2 and 3).

The other significant location-dependent variable affecting property loss was historical fire frequency (Fig. 2). In the Santa Monica Mountains, this was the single most important predictive variable. Here, property loss was most likely in areas of historical high fire frequency, which corresponded with wind corridors. Fire frequency was also a significant variable in San Diego County, but here the relationship was nonlinear.

Property loss was more likely to occur when structures were surrounded by wildland vegetation rather than by urban or impervious areas (Fig. 4). However, property loss was also more (Santa Monica Mountains) or as likely (San Diego County) to

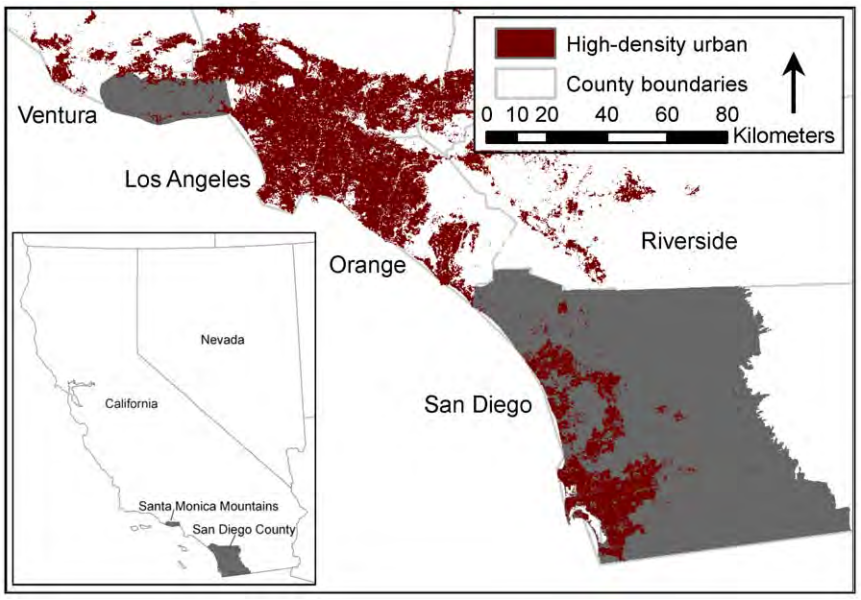


Figure 1. The Santa Monica Mountains and San Diego County, California, USA. Study areas in gray. The Santa Monica Mountains are located in Ventura and Los Angeles counties, and both study areas are located within the South Coast Ecoregion of California, USA. Study areas in gray.
doi:10.1371/journal.pone.0033954.g001

Table 1. Variables analyzed for explaining structure loss in the Santa Monica Mountains and San Diego County.

Variable	*Source*	*Description*
Fire frequency 2001	CDF* Fire perimeter overlays	Number of fires (2001–2010)
Distance to coast	Derived from coastline of county	Continuous distance in meters
Fire threat	CDF*	Ranking from 1 to 5
Fire threat to people	CDF*	Ranking from 1 to 5
Communities at risk	CDF*	Binary, at risk or not at risk
Housing density	Derived from digitized structures	Structures per hectare
Distance nearest housing cluster	Derived from 100 m buffer of structures	Continuous distance in meters
Housing dispersion	Derived from 100 m buffer of structures	Standard deviation/mean distance between structures in housing cluster
Distance to nearest structure	Derived from digitized structures	Continuous distance in meters
Distance to edge of housing cluster	Derived from digitized structures	Continuous distance in meters
Area of housing cluster	Derived from 100 m buffer of structures	Squared meters
Elevation	US Geological Survey digital elevation model (DEM	30 meters
Slope	Derived from the DEM	Percent slope
Southwestness	Derived from the DEM	SW = con(aspect(<dem>) = = −12, 201,(cos(((aspect(<dem>)−255) div deg)+1) * 100)))
Road length	US Census Bureau TIGER/Line files	Meters

*California Department of Forestry Fire and Resource Assessment Program.
doi:10.1371/journal.pone.0033954.t001

occur within herbaceous fuel types than within the higher fuel-volume woody types that are typically considered as the most hazardous fuels.

Variables with correlation coefficients greater or equal to 0.7 in the Santa Monica Mountains included road length and area of housing cluster (0.95) and elevation and distance to coast (0.72). In San Diego County, pairs of correlated variables also included road length and area of housing cluster (0.99), distance to nearest structure and distance to nearest housing cluster (0.71). Distance to coast was correlated with housing density (−.71) and elevation (0.89). To develop multiple-regression models, we removed elevation and road length from consideration in the Santa Monica Mountains, because they explained less variation than the variable with which they were correlated. For the San Diego County analyses, we removed distance to coast, road length, and distance to nearest housing cluster.

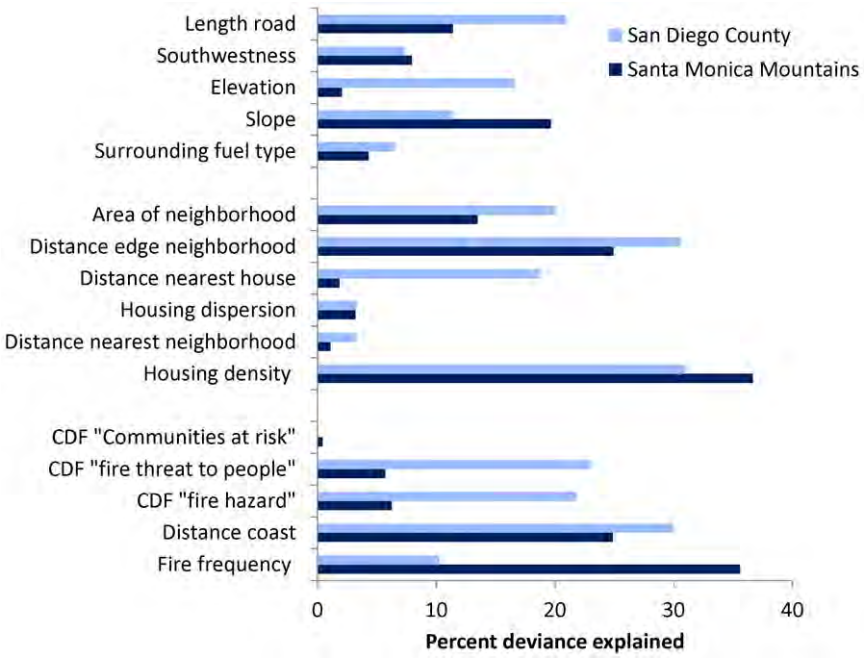


Figure 2. Percent deviance explained for generalized additive models (GAMs). GAMs explain the influence of firefighter access, biophysical variables, structure arrangement, and structure location on burned structures from fires during 2001–2010 in the Santa Monica Mountains, CA and San Diego County, CA. CDF – California Department of Forestry and Fire Protection.
doi:10.1371/journal.pone.0033954.g002

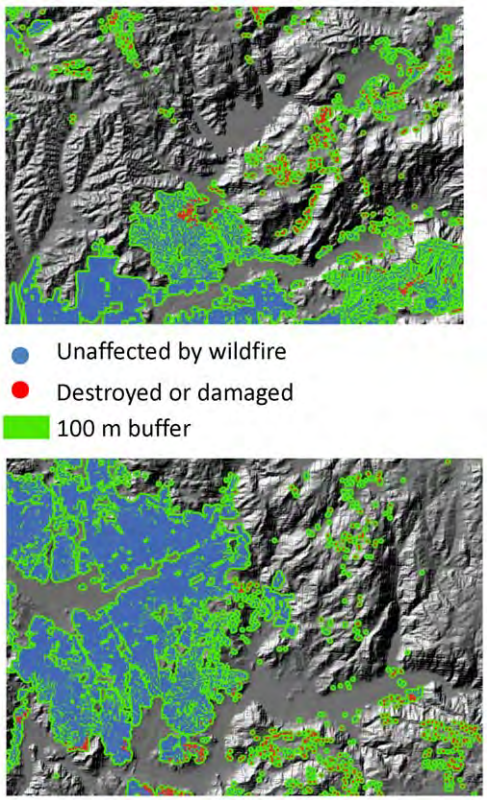


Figure 3. Maps from portions of San Diego County illustrating how housing arrangement influences the likelihood that a house will be lost from wildfire. Structures most likely to be burned by fires (in red) were: in areas with low to intermediate structure density; in small, dispersed housing clusters, close to the edge of the housing cluster, at intermediate distance to the nearest structure or housing cluster than structures that were unaffected (in blue).
doi:10.1371/journal.pone.0033954.g003

The multiple-regression GAM model for the Santa Monica Mountains included fire frequency, housing density, distance to edge of housing cluster, distance to coast, slope, area of housing cluster, southwestness, fuel type, housing dispersion, distance to nearest structure and housing cluster. Only nonparametric terms were selected, except fuel type, which was categorical. The deviance explained for the model was 65.7%, and the area under the curve (AUC) of receiver operating characteristic (ROC) plots, indicating the ability of the model to discriminate between burned and unburned structures on test data (20%), was 0.82.

The multiple-regression GAM model for San Diego County included housing density, distance to edge of housing cluster, area of housing cluster, elevation, fire frequency, fuel type, and housing dispersion. All terms included in the model were nonparametric except for distance to edge of neighborhood, which was linear, and fuel type. The deviance explained for the model was 45.5%, and the AUC was 0.87.

Our fire-hazard maps developed with the Maxent model using empirical data and multiple explanatory variables (Figs. 5 and 6) performed well. The AUC of receiver operating characteristic (ROC) plots on test data (15% withheld) was 0.987 for the Santa Monica Mountains and 0.923 for San Diego County.

In contrast, statewide fire-hazard maps developed using fuel rank and fire rotation were unable to predict which structures were burned by fire (Fig. 7). This poor performance of the statewide maps was also evident through visual comparison with maps of actual property loss (Figs. 5 and 6). Similarly, property loss was not substantially higher in the highest hazard or communities-at-risk areas of the statewide maps. In most cases, property loss was evenly divided among hazard levels (Fig. 8A and 8B), and even where a substantial proportion of burned structures were located in areas mapped as high fire hazard, most of the unaffected structures were also distributed in these high-hazard areas, suggesting high commission error (Fig. 8C and 8D). The most worrisome finding was that the majority of property loss occurred in areas not designated as at-risk (Fig. 8E and 8F).

The results of all sensitivity analyses indicated that the results were robust: the importance and ranking of variables remained essentially the same for all data sets at different buffer distances and certainty classifications (Table 3). Differences in results were slightly larger using different buffer distances than using all burned structures across a range of certainty levels versus all destroyed structures classified at the highest level of certainty. The main difference between the 200 and 100-m buffer analysis was that housing density was somewhat less important while distance to nearest housing cluster and southwestness were somewhat more important using the 200-m buffer in the Santa Monica Mountains. In San Diego County, housing dispersion and distance to the edge of housing cluster were somewhat more important using the 200-m buffer. We also found no substantial difference in results for the Maxent models.

After adding a spatial term, spatial autocorrelation was no longer present in the residuals of any of the models (Table 2). Also, although there were small differences in the coefficients between spatial and non-spatial models, the direction of influence consistently remained the same. The only variables that were no longer significant after accounting for spatial autocorrelation included the CDF communities at risk map, the distance to the nearest housing cluster, southwestness, and road length for the Santa Monica Mountains, and southwestness for San Diego County.

Discussion

Wildfire is a key process that interacts with all major components of the earth system, but fire frequency, extent, and/or severity are on the rise [1,2,21,22]. Residential losses to wildfire have also escalated despite enormous investments in wildland fuel manipulation, improvements in fire-safe codes and building regulations, and advanced fire suppression tactics. Therefore, our finding that housing arrangement and location were the most important contributors to property loss supports the notion that patterns of land use may be partly responsible for property loss in the wildland-urban interface [13].

One reason that property loss is related to the arrangement of housing across the landscape may be that the amount and arrangement of human infrastructure also strongly and non-linearly influence wildfire ignitions and frequency [7,23,24]. Therefore, the places where homes are most likely to burn may also be the places where fires are most likely occur, which is partly a function of the distribution of people. Thus, there may be spatial interactions and feedbacks between fire and housing patterns.

In southern California, as in many regions, humans cause most fires [7,23–25]. Thus, population growth and housing development increase fire frequency. Yet, although urban expansion increases fire frequency in general, the highest hazard tends to be in low-density housing areas, where structures are interspersed with wildland vegetation [9]. Scattered, isolated structures are more difficult for firefighters to defend, and poor firefighter access may explain why housing clusters with fewer roads were more vulnerable in San

Table 2. Model coefficients for generalized linear models (GLMs) estimated with and without autocovariate terms in the Santa Monica Mountains and San Diego County.

	Linear	*Autocovariate linear*	*Quadratic*	*Autocovariate quadratic*	*P-value*
Santa Monica Mountains					
Fire frequency 2001	0.860	0.440			<0.001
Distance coast	0.004	0.002	−7.0E-07	−4.0E-07	<0.001
CDF Fire threat	5.900	2.880	−8.5E-01	−3.9E-01	<0.001
CDF Fire threat people	3.070	1.540			<0.01
CDF Communities risk	−0.540	−0.280			NS
Housing density	1.010	1.130	−3.9E-01	−4.0E-01	<0.001
Distance housing cluster	0.006	0.004	−1.0E-05	−7.0E-06	NS
Housing dispersion	2.280	2.670			<0.001
Distance structure	0.020	0.020	−3.0E-05	−2.0E-05	<0.001
Distance edge	−0.021	−0.017			<0.001
Area housing cluster	−2.0E-07	−8.0E-08			<0.001
Slope	0.033	0.016			<0.001
Elevation	−0.001	−0.001			0.01
Southwestness	−0.002	0.002			NS
Road length	−2.0E-05	−2.0E-05			NS
San Diego County					
Fire frequency 2001	1.53	1.05	−0.33	−0.22	<0.001
Distance to coast	3.0E-04	3.0E-09	2.0E-04	2.0E-09	<0.001
CDF Fire threat	−0.54	−0.68	0.189	0.17	<0.001
CDF Fire threat people	2.27	1.69			<0.001
CDF Communities risk	−0.93	−0.51			<0.001
Housing density	−0.99	−0.47			<0.001
Distance housing cluster	0.005	0.004	−4.0E-06	−1.0E-06	<0.001
Housing dispersion	−3.08	−1.68	0.865	0.542	<0.001
Distance structure	0.007	0.004	−5.0E-06	−2.0E-06	<0.001
Distance edge	−0.02	−0.01			<0.001
Area of housing cluster	−2.0E-08	−7.0E-09			<0.001
Slope	0.17	0.12			<0.001
Elevation	0.001	0.003			<0.001
Southwestness	−0.005	−0.003			NS
Road length	−1.0E-06	−7.0E-07			<0.001

Quadratic terms were evaluated for all models, and coefficients are only provided for those models in which the quadratic term was significant in the non-spatial model.
doi:10.1371/journal.pone.0033954.t002

Diego County. However, there can also be situations in which high housing density contributes to structure-to-structure fire spread e.g., [26], depending on their flammability [27].

The importance of a structure's location on the landscape relative to the coast and historical patterns of fire frequency shows that certain places are more fire-prone than others, which in turn reflects how biophysical and human variables together create conditions that are particularly conducive to wildfire occurrence [2]. In our study areas, these relationships are also likely a function of a structure's location relative to predominant wind patterns and direction [28]. In the Santa Monica Mountains, certain fire corridors tend to burn repeatedly, and winds funnel down these corridors toward vulnerable structures located directly in their path. Here, the high-density coastal strip is narrow, and homes are closer to continuous vegetation than in San Diego County, where high-density development extends inland for much greater distances. This may be why houses were more likely to burn at a closer distance to the coast in the Santa Monica Mountains than in San Diego County. The low-density, high-risk areas in San Diego County are located farther inland where, if an ignition occurs there under extreme wind conditions, the fire is in its initial stages. Santa Ana winds blow from west toward the coast, and they are particularly dangerous in the beginning because they are usually most explosive and fast-moving right after they start, and it takes time to mobilize firefighting resources. Thus, the significance of distance to coast may be a proxy for other variables, such as the juxtaposition of housing density, contiguous fuels, and location relative to predominant wind patterns.

The importance of historical fire frequency suggests that, at least in non-forested ecosystems, fuel age may not be an important predictor of home loss [25], despite the fact that fuel age and time-since-fire maps are often used to delineate fire hazard. In fact, substantial property loss occurred when the primary surrounding fuel type was low fuel-volume grasslands. Although this result may seem counter-

Table 3. Percent deviance explained in generalized additive models (GAMs) for structures that were destroyed or damaged (Burned) and destroyed with the highest certainty (Destroyed); and for burned structures analyzed using a 200 m buffer distance (200 m).

	Burned	*Destroyed*	*200 m*	*Relationship*
Santa Monica Mountains				
Fire frequency 2001	35.59	31.63	NA	Positive
Distance coast	24.86	22.85	NA	Intermediate
CDF fire threat	6.23	4.37	NA	Intermediate
CDF fire threat people	5.69	5.01	NA	Positive
CDF Communities at risk	0.42	0.81	NA	Negative
Housing density	36.68	33.19	14.04	Intermediate
Distance housing cluster	1.08	1.46	14.23	Intermediate
Housing dispersion	3.18	2.23	4.24	Positive
Distance structure	1.85	2.17	NA	Intermediate
Distance edge	24.92	33	16	Negative
Area of housing cluster	13.47	12.88	18.06	Negative
Surrounding fuel type	4.3	3.18	NA	NA
Slope	19.66	17.79	18.31	Positive
Elevation	2.04	0.78	1.62	Negative
Southwestness	7.93	8.91	16.1	NA
Road length	11.4	11.2	13.98	Negative
San Diego County				
Fire frequency 2001	10.2	10.6	NA	Intermediate
Distance coast	30.0	28.19	NA	Intermediate
CDF fire threat	21.8	20.4	NA	Intermediate
CDF fire threat to people	23.9	24.1	NA	Positive
CDF Communities at risk	0.0	0.02	NA	Negative
Housing density	31.0	28.16	21.59	Negative
Distance housing cluster	3.2	2.92	0.97	Intermediate
Housing dispersion	3.3	2.85	8.62	Parabolic
Distance structure	18.7	15.73	NA	Intermediate
Distance edge	30.5	28.74	54.76	Negative
Area of housing cluster	20.1	16.41	10.63	Negative
Surrounding fuel type	6.5	4.90	NA	NA
Slope	11.4	13.94	10.61	Positive
Elevation	16.6	25.5	19.75	Positive
Southwestness	7.3	6.98	4.17	NA
Road length	20.9	19.6	15.4	Negative

The buffer distance used in all other analysis was 100 m. Relationship describes the shape of the response curve for all models. Ïntermediate signifies a nonlinear relationship in which values were highest at intermediate levels of the variable. Values listed as NA in 200 m were for variables that were only analyzed at the level of the individual house.

doi:10.1371/journal.pone.0033954.t003

intuitive, herbaceous fuels tend to have low fuel moisture, facilitate high wind speeds and fire spread, and have low heat requirements for ignition, thus promoting longer fire seasons and high fire frequency [29,30]. Grasslands also tend to ignite quickly, then carry fires into shrublands or woodlands [31]. These results suggest a need to reexamine the assumptions used in existing hazard maps and the management practice of converting shrublands to grasslands.

Fire hazard in the CDF statewide maps, as with most hazard maps [17–19,32], depends largely on the assumption that fuel properties are the primary contributors to fire danger. However, our empirical data indicate that, at least at the local scale considered here, fuel was not as significant as measurable factors related to the arrangement and location of structures. This is likely because the influence of fuel is complex and interacts with other risk factors [33]. Therefore, our empirical maps developed using a more comprehensive set of predictor variables, including fuel type, housing arrangement and location, and other environmental variables, performed better in distinguishing hazardous from non-hazardous areas.

Another reason for the discrepancy in map performance may be related to differences in mapping approach: while our approach used empirical data on actual structure loss, the statewide maps were developed based on a priori assumptions of where hazard is expected to be highest. At larger scales, such as the state level, the CDF fuel-based maps would likely perform better at picking out where homes are most vulnerable to fires. We also did not evaluate the CDF maps developed for local responsibility areas, which may better capture finer-scale patterns of hazard in local jurisdictions.

The fact that unburned structures in our analysis were more likely to be located in ''communities at risk,'' whereas burned structures were more likely to be located outside of high-risk areas is potentially due to two reasons. At the most basic level, this may simply be caused by an incorrect identification of communities at risk. However, we caution that the discrepancy may also be due to scale effects and the definition of ''community at risk.'' At a broad scale, ''communities at risk'' are likely located within areas that generally have the potential for hazardous fires, and places with more houses in such a danger zone are more likely to be identified as a ''community at risk.'' However, at the structure level, low-housing density significantly increases the chance a house will burn – while it decreases the likelihood that at home will be included in a ''community at risk.'' In summary, our results support the notion that property loss is a function of many physical and biological factors, in addition to characteristics of home construction and maintenance that we did not consider, such as roofing, construction materials, and home landscaping.

The effects of housing arrangement and location on the likelihood that a house will be destroyed or damaged by wildfire suggest that land use planning may be a critical tool for reducing fire hazard. Restricting development from hazardous locations has been effective for other hazards, such as flooding and the prevention of building on floodplains [34]. In the case of fire, new structures should be located and arranged in ways that not only minimize their exposure to hazard, but may also limit the increase in fire occurrence that often accompanies urban development. For example, our results suggest that in both study areas, new development would have a lower likelihood of burning if it were located away from fire-prone areas, such as wind corridors or steep slopes, and if new structures were arranged in intermediate-to high-density neighborhoods designed to minimize the amount of interface between homes and wildland vegetation. New development within large, existing urban areas, which typically also have better firefighter access, would also lower the likelihood of burning, compared to new development in more isolated, remote settings. Land use planning that considers minimizing future structure loss and prioritizing other fire prevention actions would be more informed with maps that reliably differentiate the most hazardous locations than with maps currently used for this purpose. Although the direction of influence was the same for most variables in the two study regions, the relative importance varied, and the distance from coast and elevation had opposite effects. This supports the notion that hazard is place-specific [35], and fire hazard mapping should therefore be individualized for specific landscapes.

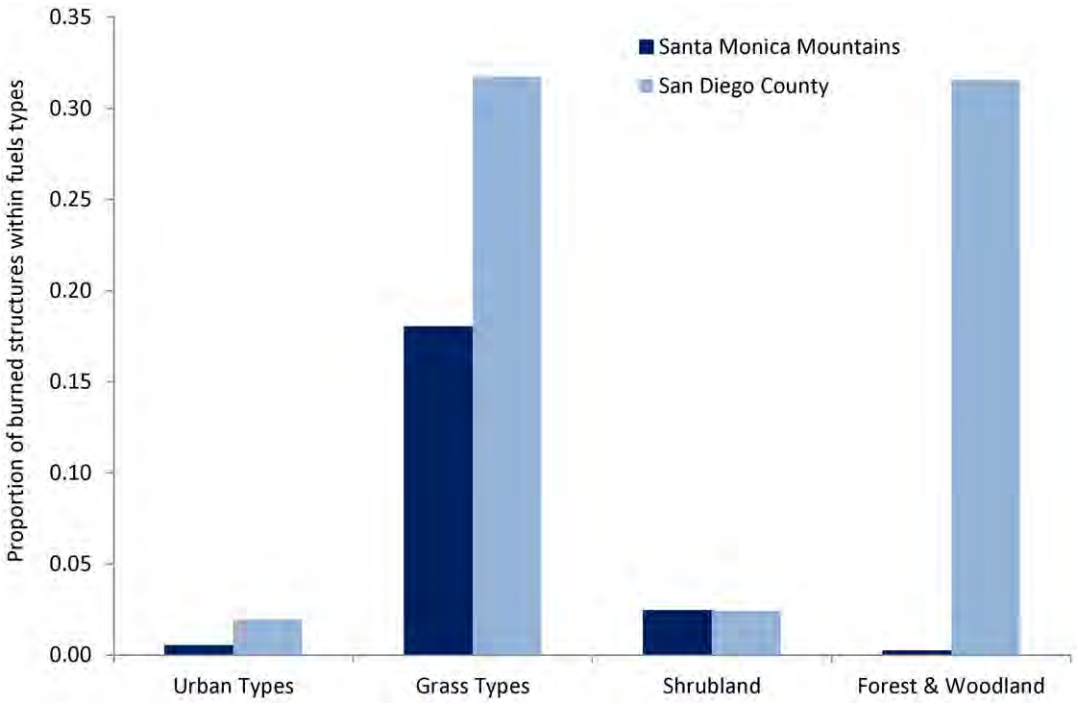


Figure 4. Proportion of burned structures within broad fuels types in the Santa Monica Mountains and San Diego County.
doi:10.1371/journal.pone.0033954.g004

Materials and Methods

Data and digitizing structures

We explained property loss by comparing structures that were burned (i.e., destroyed or damaged) by wildfires to those structures that were unaffected. The likelihood of a house burning in a fire has two major components: the first is the likelihood that there will be a fire, and the second is the likelihood that a structure will burn if there is a fire. That 'total' likelihood required us to include both structures inside and outside of fire perimeters in the model. We

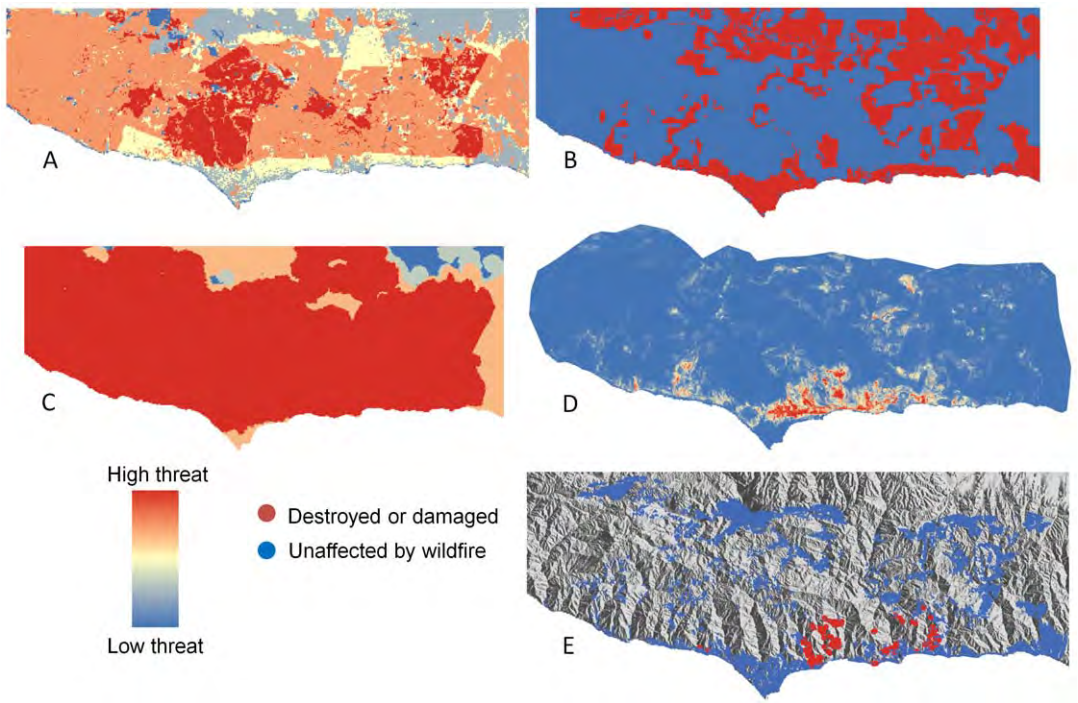


Figure 5. Fire hazard maps versus actual burned structures in the Santa Monica Mountains. (A) CDF "Fire threat" (B) CDF "Communities at risk" (C) CDF "Fire threat to people (D) Empirically based map showing probability of structure being burned by fire (E) Structures that were destroyed or damaged (red) and unaffected (blue) by wildfire from 2001–2010. CDF – California Department of Forestry and Fire Protection.
doi:10.1371/journal.pone.0033954.g005

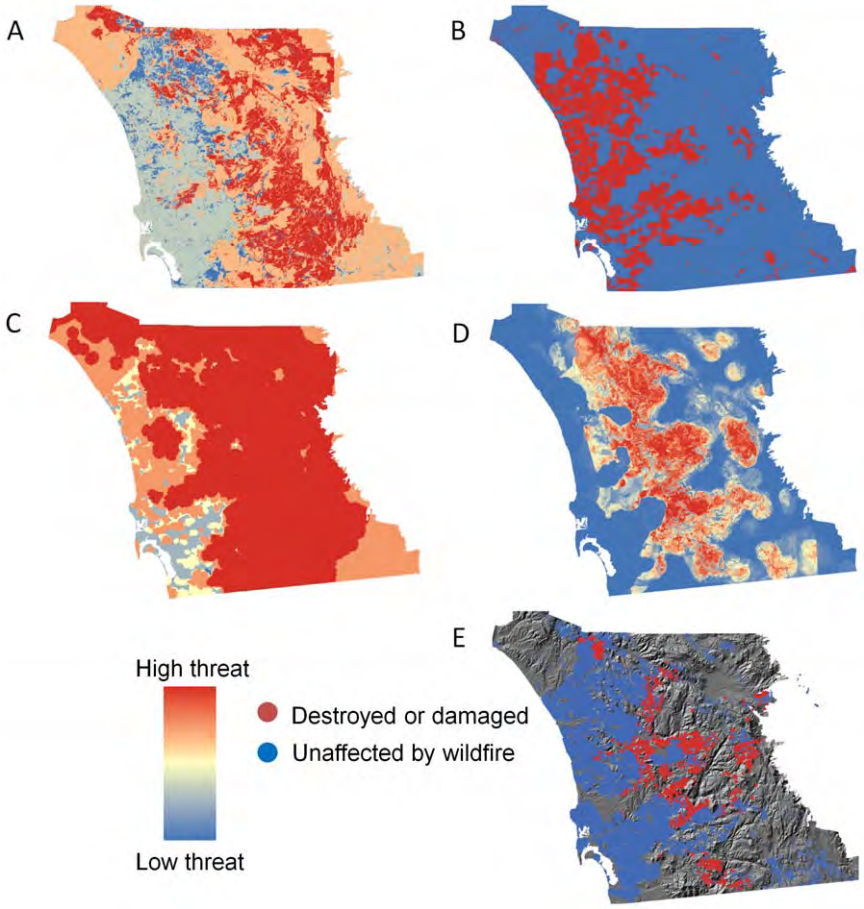


Figure 6. Fire hazard maps versus actual burned structures in San Diego County. (A) CDF "Fire threat" (B) CDF "Communities at risk" (C) CDF "Fire threat to people (D) Empirically based map showing probability of structure being burned by fire (E) Structures that were destroyed or damaged (red) and unaffected (blue) by wildfire from 2001–2010. CDF – California Department of Forestry and Fire Protection.
doi:10.1371/journal.pone.0033954.g006

also wanted to account for the full range of variation for the explanatory variables because planning decisions occur at a landscape scale, not just for a subset of structures within fire perimeters. Therefore, we digitized and analyzed all residential structures within the Santa Monica Mountains National Recreation Area in Ventura and Los Angeles counties, California as well as the portion of San Diego County that falls within the South Coast Ecoregion. Using onscreen digitizing, we carefully scanned the most recent aerial imagery available in Google Earth for each study area and placed a point over every visible structure. We digitized all structures, including homes, outbuildings, and guest houses, because we assumed that the factors explaining which homes burned were similar to those explaining the burning of other structures. Because most of the vegetation in our study areas is non-forested, there were very few occasions in which vegetation canopy obscured structures in the imagery. Structures were in all cases at least partly visible, even if they were covered by vegetation, and we looked at earlier images available in Google Earth to confirm where structures were located. The canopy cover was generally lower farther back in time.

Due to the large number of structures in San Diego County, many of which are located in high-density urban core areas, we used a parcel map to facilitate the digitizing process. For small parcels (area <900 m^2, equivalent to one 30×30 m pixel of the environmental data, see below), we placed the point representing the structure in the centroid of the polygon instead of digitizing the exact location of the structure within the parcel boundary. We assumed the location of the structure within the boundary of small parcels would not significantly alter the overall calculations of spatial pattern among structures. However, for large parcels, the location of the structure within the parcel boundary may be important because the parcel may include more than one pixel, and thus, the environmental data are associated with the structure may depend on structure location. Distance calculations to other structures could also be more substantially influenced by the location of structures in large parcels, which is why we analyzed the Google Earth imagery to place those structures accurately. We did not digitize houses under construction at the date the remote sensing imagery was recorded.

To identify burned structures, we developed an initial address list and spatial database of structures destroyed or damaged by fires from a variety of records, including official incident reports, county assessors' offices, public works departments, city records, and newspaper reports. Because these records were incomplete, we also used Google Earth imagery for a systematic visual analysis to correct geocoded locations and to identify additional structures that had not been documented. For this analysis, we identified burned structures by comparing pre-fire to post-fire images that are available in Google Earth. To develop a data set of houses to inspect for property loss, we selected all structures that fell within and up to 80 m outside any perimeter of a fire that occurred since 2001 in both study areas. We used 80 m because it is twice the distance beyond which flame fronts are not expected to ignite

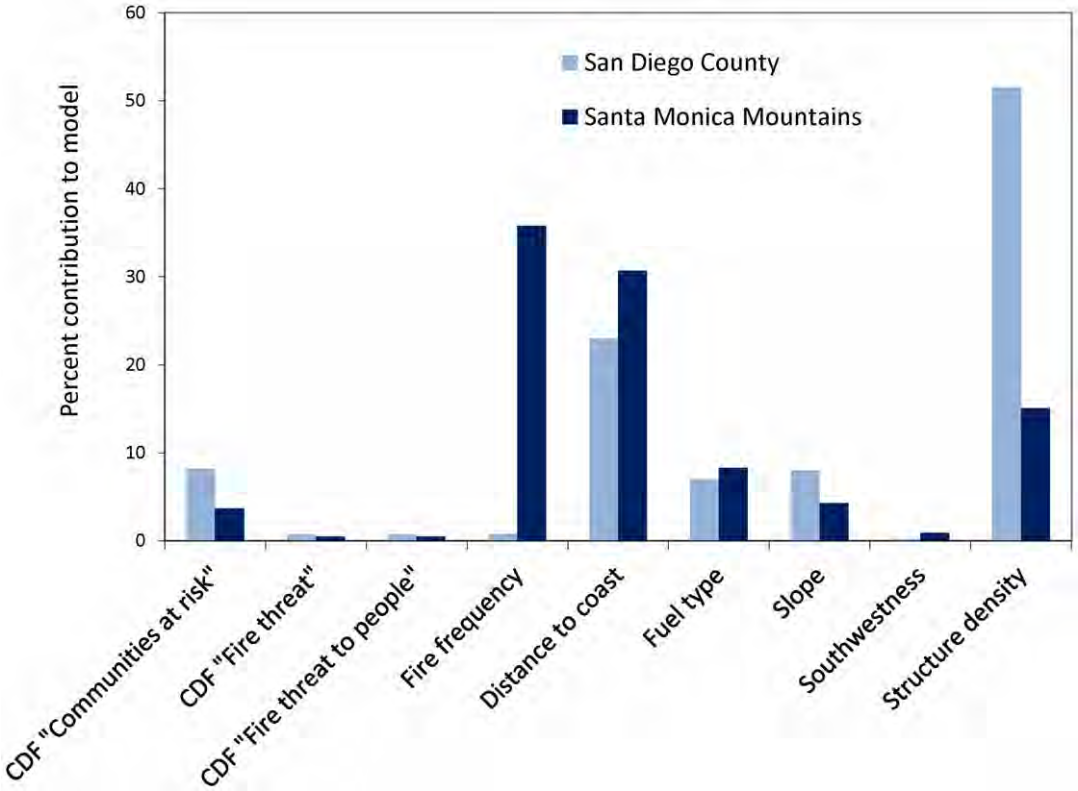


Figure 7. The percent contribution of explanatory variables in Maxent empirical fire hazard model. CDF – California Department of Forestry and Fire Protection.
doi:10.1371/journal.pone.0033954.g007

wood [36].The determination of destroyed or damaged structures was based on data collected from official records combined with visual inspection of imagery. Destroyed structures were those in which the house had completely burned to the ground, whereas damaged structures where those that had partially burned. Because damaged structures were more difficult to identify in the imagery, we ruled that if a fire had clearly burned into the property (i.e., if vegetation had visibly been burned), the structure was classified as damaged.

For both the destroyed and damaged structures, we assigned an estimate of certainty for the classification and conducted sensitivity analyses to test if results were similar for destroyed structures that were classified with the highest level of certainty versus a complete dataset with all destroyed and damaged homes at all certainty levels. In our classification, we indicated "1" for uncertain if the house was damaged or destroyed; "2" for fairly certain; "3" for absolutely certain. Since the results were similar (Table 3), we used the full dataset in our analyses to obtain the largest sample size. Although rare, if two buildings burned on a parcel, we only included one in our analysis. For those structures that burned in more than one fire, which only occurred in San Diego, we only used the data for the first fire to avoid double counting of structures in the spatial analysis.

Explanatory variables

To fully explore the influence of housing arrangement and pattern, we analyzed both the spatial relationships among individual structure locations and the arrangement of structures within housing clusters. Housing clusters were defined as groups of houses with a maximum distance of 100 m from each house to any other house [24]. We calculated these housing clusters by creating a 100 m buffer around each structure and dissolving overlapping boundaries. Thus, areas with many homes within 100 m of each other constituted one large housing cluster, while smaller housing clusters contained fewer or more isolated homes. This allowed spatial analysis based on the spatial and biophysical properties of the structure locations as well as spatial and biophysical properties of the housing clusters within which structures were located. Thus, some variables were calculated for the housing cluster in which the structure was located and the values for that housing cluster were assigned back to the structure. Other variables were calculated only for the location in which the structure was located.

Because our objective was to better understand the landscape factors that significantly contribute to the likelihood that a house will burn in a wildfire, particularly focusing on those factors that are relevant to land use planning, we only assessed variables affecting exposure of structures to wildfires (i.e., fires spreading into the property and reaching the structure, or embers landing on a structure). We did not consider factors such as urban landscaping or housing construction materials within the home ignition zone that determine whether the house survived the exposure. To evaluate the influence of housing arrangement and location on susceptibility to wildfire, we considered a suite of variables representing different spatial configurations and locations of structures as well as additional environmental variables that may affect property loss due to their potential control over fire spread behavior, fuel moisture, or flammability [23,37] (Table 1).

Housing arrangement variables. We evaluated the area of the housing cluster to test the hypothesis that small, isolated groups of structures are more susceptible to wildfire than large groups of structures. Housing density was calculated as the number of structures divided by the area of the housing cluster. For every

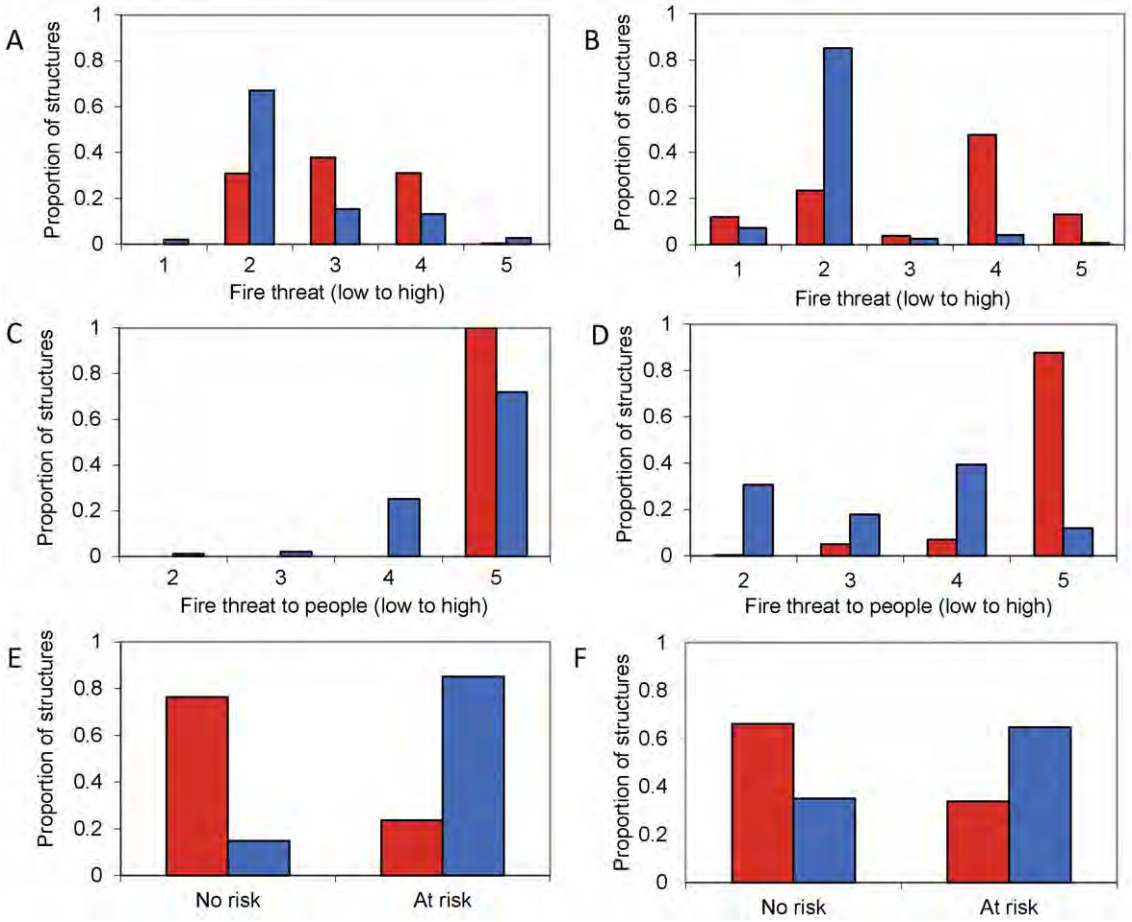


Figure 8. Distribution of actual burned structures in classes of statewide fire hazard maps. Proportion of structures burned (in red) or unaffected (in blue) distributed within map classes of: (A) CDF "Fire threat" in Santa Monica Mountains. (B) CDF "Fire threa" in San Diego County. (C) CDF "Fire threat to people" in Santa Monica Mountains (D) CDF "Fire threat to people" in San Diego County (E) CDF "Communities at risk" in Santa Monica Mountains (F) CDF "Communities at risk" in San Diego County. CDF – California Department of Forestry and Fire Protection.
doi:10.1371/journal.pone.0033954.g008

structure, we calculated the distance to the edge of the housing cluster to evaluate whether structures in the interior of housing clusters were less susceptible to wildfire than structures at the edge. To assess local spatial patterns, we calculated the distance from each structure to its nearest neighbor, and for overall landscape configuration of structures, we calculated the distance from each housing cluster to the next nearest housing cluster. Finally, we calculated the coefficient of variation, or, the standard deviation of distance among structures in a housing cluster divided by the mean to assess housing dispersion, or, regularity of housing pattern.

Housing location variables. To test whether structures located in fire-prone parts of the landscape were more likely to be burned, we overlaid fire perimeter polygons compiled by the California Department of Forestry (CDF)-Fire and Resource Assessment Program and created a continuous raster map representing the number of times an area had burned from the beginning of record-keeping, 1878, until 2001. We did not include any fires that occurred after 2001 to ensure that our count of fire frequency was independent of those fires that burned the structures in our analysis. We calculated the distance from the coast for every structure as another way to test whether a structure's location influences its likelihood to be burned. In southern California, a number of variables that influence fire patterns, including climate, terrain, and vegetation distribution, are correlated with the distance to the coast. Distance to the coast is also correlated with housing patterns, and may influence how a house is arranged relative to the major wind corridors in the region [38]. Although the inclusion of weather data at the time of fires would be more directly related to fire behavior and danger, the high variability of weather over space and time limits the ability to relate specific weather data to the place and time that fires burn structures. First, we did not know the exact time that fires burned structures, and thus could not retrieve the temporally matching weather data. Second, weather stations are generally located too far away from where fires burned homes to reflect local variability in weather conditions.

Biophysical variables. Terrain-derived variables included the average elevation and percent slope of the housing cluster as well as a cosine-transformation of aspect to create an index of 'southwestness,' which could account for the influence of solar radiation and aspect on fuel properties and fire behavior. For each structure, we also determined fuel type in the surrounding by identifying the most common fuel model within a 1 km buffer of the structure. This buffer allowed us to identify the vegetation types fires spread through before reaching the property. Our objective for this analysis was to determine which broad-based fuel classes were most closely associated with structure loss. If more than one fuel type occurred in the buffer, we used the fuel type present in the majority of the area. We obtained spatial fuel model

data, developed for fire behavior modeling, from statewide maps developed by the U.S. Forest Service (N. Amboy) at 30 m resolution. The fuel models provided in the USFS maps were created through remote sensing and classified according to Scott and Burgan [39]. From this map, we grouped together the fuel models from broad fuel types (representing grassland, shrubland, and timber). We also grouped agriculture, barren land, and urban land into one type representing mostly urban landscaping and impervious surface (i.e., with little wildland vegetation).

Firefighter access. As a way of indirectly assessing firefighter access to the structure, we calculated the length of road within each housing cluster using the 2000 US Topologically Integrated Geographic Encoding and Referencing system TIGER/line files from the US Census.

Statewide fire hazard maps

Statewide fire hazard maps were available online from the California Department of Forestry and Fire Protection (CDF) [20].We downloaded the Wildland Urban Interface (WUI) "fire threat" data product that includes a series of maps that rank the wildland fire threat to human development. The term "fire threat" in these maps is used analogously to the way we use the term fire "hazard" or, a phenomenon or place where harm is likely to occur.

The "fire threat" map is based on the hazard ranking of different fuels types combined with the fire rotation period, or, the average area burned during the period of record for different vegetation types. Fuels types with higher fuel loads and vegetation types that burned most frequently were considered most hazardous. The "fire threat to people" map is based on a cost-distance calculation that estimates distances from areas of high fire hazard. As an example, the highest "fire threat to people" is calculated as a maximum of 2400 m from "extreme threat" in the fire threat map. Finally, the "communities at risk" map depicts U.S. Census communities with more than 1 house per 8.09 ha (20 acres) that are located in areas with "high fire threat to people."

The CDF provides additional fire hazard severity maps developed separately for state and local responsibility areas. The finer-scale maps for local responsibility areas, which include incorporated cities, cultivated agricultural lands, and portions of the desert, are limited in extent and only overlap a small portion of our study areas. Due to the limited extent of the local responsibility area maps, and the fact that the state responsibility maps were still being refined, we did include these in our analysis. Their proposed modeling approach will be based upon the existing fire threat and communities at risk maps and will be refined to include additional methods that characterize brand production from vegetative fuels.

To evaluate how well the CDF statewide fire hazard maps corresponded to actual burned structures, we included the three maps as predictor variables in our statistical analyses and quantified the distribution of burned and unaffected structures within the different classes of each map.

Analysis

To identify the variables that best explain property loss and to estimate the relative contribution of each variable, we developed generalized additive models (GAMs) using a binary response (i.e., house burned or unaffected by fire) and logit link. We used three target degrees of freedom for smoothing splines for our continuous explanatory variables. Because we wanted to compare the independent relative variance explained for all explanatory variables, we estimated separate regression models for each variable. However, we also calculated the correlation coefficients among all variables and developed multiple-regression models with non-correlated variables for each study area. We used a stepwise selection procedure, entering variables according to amount of deviance explained and exploring both forward and backwards directions. We used AIC as the selection criterion for variable selection. To develop the models, we split the data for training and testing (withholding 20% of the data for testing) so we could calculate the area under the curve (AUC) of receiver operating characteristic (ROC) plots on an independent dataset to quantify model performance.

We used GAMs because prior studies reported nonlinear relationships between fire patterns and many of our predictor variables [7,23,24]. Unlike parametric statistical methods, such as generalized linear models (GLMs), in which nonlinear relationships are specified *a priori* (e.g., through polynomial terms) in the model, GAMs allow the structure of the data to determine the shape of the response curves. Thus, GAMs provide a more flexible and automated approach for identifying and describing nonlinear relationships [40,41]. We used the GAMs to estimate the shape of response curves and to calculate deviance explained (D^2, analogous to R-squared in linear regression) for all explanatory variables.

Although non-parametric methods, such as GAMs, tend to be less sensitive to the effects of spatial autocorrelation than other model approaches [42], we wanted to ensure that spatial autocorrelation did not significantly influence the results of our analysis. The main concerns about spatial autocorrelation in regression models are inflated significance values and biased coefficients [42,43]. GAMs do not estimate regression coefficients, which are replaced with smoothing functions. This is why we also fit GLMs to our data because they are parametric models similar to GAMs, but they estimate coefficients. Therefore, the GLMs allowed us tocheck the influence of autocorrelation on both coefficients and the significance of variables. The GLMs also allowed us to test whether our results were robust by comparing two modeling methods. We first developed non-spatial GLMs, and fit linear and quadratic terms for all variables (except for fuel type, which was categorical). After detecting residual autocorrelation in these nonspatial models using Moran's I [43], we calculated an autocovariate term to account for the influence of neighboring values on predictions, and included as the term as an additional explanatory variable in models. To calculate the autocovariate term, we specified a neighborhood radius of 1, which finds the minimum distance for which all observations (i.e., structure locations) are linked to at least one neighbor. The influence of structures located within any neighborhood radius was weighted by inverse distance. . After fitting these autocovariate models, we used Moran's I to recheck for spatial autocorrelation of model residuals, compared the coefficients to the nonspatial models, and checked variable significance after incorporating the autocovariate term..All model fitting and evaluation were accomplished using the gam, spdep, vegan, and ROCR packages for R [44].

Empirical fire mapping

To develop empirical fire hazard models and maps, we selected Maxent [45], a machine-learning method that is best recognized for creating species distribution models and maps. We selected Maxent because it outperforms other presence-only and presence-background species distribution modeling methods [41] and has been applied successfully to map the distribution of fire [46]. Maxent assumes that the best approximation of an unknown distribution (e.g., fire hazard) is the one with maximum entropy. The model iteratively evaluates contrasts between values of explanatory variables at locations of the response variable (i.e.,

burned structures) and for averages of the explanatory variables across the entire study area. The output is an exponential function that assigns a hazard probability (i.e., probability of structure being burned) to each site or cell of a map. In the output map, areas of predicted high risk that do not have structures on them represent environmental conditions similar to those in which structures have actually burned.

Because mapped predictor variables were required for the modeling, so that conditions similar to those where structures were burned could be delineated continuously across the landscape, we created maps representing a subset of the variables that we explored with the regression analysis. These variables represented a combination of structure arrangement, location, and biophysical variables, including: interpolated structure density, distance to coast, fuel type, slope, historical fire frequency, and southwestness. We developed models that included CDF fire hazard maps as predictors to test their importance relative to the other predictor variables. However, for generating maps and quantifying model performance, we only used models that did not include CDF predictor variables.

Sensitivity tests

The results of our analysis may have been affected by the size of the buffer that we used around structures to create housing clusters, the degree of impact of fire on the structure (i.e., destroyed or damaged), and certainty of the classification (i.e., 1–3). Therefore, to evaluate how sensitive our results were to these variables, we created housing clusters around structures using a 200 m buffer and compared the regression results for which housing cluster was relevant in the to those obtained when using a 100 m buffer. We also performed separate regressions using only those structures that had been destroyed with complete certainty (a "3") and compared those to the regressions of all burned structures at all certainty levels. For the Maxent analysis, we also compared models using only structures that were destroyed with the highest level of certainty to models using all burned structures at all certainty levels.

Acknowledgments

We thank S.I. Stewart and three anonymous reviews for comments and insights; P. Gordon-Reedy and C.J. Fotheringham for data on wildfire losses; D. Bucklin, N. Staus, and J. Tutak for assistance with the spatial database; and R. Taylor and M. Witter for data and guidance. Any use of trade names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Author Contributions

Conceived and designed the experiments: ADS JEK ABM TJB VCR. Performed the experiments: ADS ABM TJB. Analyzed the data: ADS JEK ABM. Wrote the paper: ADS JEK ABM TJB VCR.

References

1. Westerling AL, Hidalgo HG, Cayan DR, Swetnam TW (2006) Warming and earlier spring increase western US forest wildfire activity. Science 313: 940–943.
2. Bowman DMJS, Balch JK, Artaxo P, Bond WJ, Carlson JM, et al. (2009) Fire in the Earth System. Science 324: 481–484.
3. Cohen JD (2000) Home ignitability in the wildland-urban interface. J Forest 98: 15–21.
4. Boschetti L, Roy D, Barbosa P, Justice C (2008) A MODIS assessment of the summer 2007 extent burned in Greece. International J Remote Sens 29: 2433–2436.
5. Blanchi R, Lucas C, Leonard J, Finkele K (2010) Meteorological conditions and wildfire-related house loss in Australia. Int J Wildland Fire 19: 914–926.
6. Mell WE, Manzello SL, Maranghides A, Butry DT, Rehm RG (2010) The wildland-urban interface fire problem – current approaches and research needs. Int J Wildland Fire 19: 238–251.
7. Syphard AD, Radeloff VC, Hawbaker TJ, Stewart SI (2009) Conservation Threats Due to Human-Caused Increases in Fire Frequency in Mediterranean-Climate Ecosystems. Conserv Biol 23: 758–769.
8. Calfire (2000) Final Report on FEMA. Sacramento (California): California Division of Forestry and Fire Protection.
9. Radeloff VC, Hammer RB, Stewart SI, Fried JS, Holcomb SS, et al. (2005) The wildland-urban interface in the United States. Ecol Applic 15: 799–805.
10. Schoennagel T, Nelson CR, Theobald DM, Carnwath GC, Chapman TB (2009) Implementation of National Fire Plan treatments near the wildland–urban interface in the western United States. Proc Natl Acad Sci 106: 10706–10711.
11. United States Government Accountability Office (2007) Wildland Fire Management: Lack of Clear Goals or a Strategy Hinders Federal Agencies' Efforts to Contain the Costs of Fighting Fires. Washington (D.C): United States Government Accountability Office.
12. Winter G, McCaffrey S, Vogt CA (2009) The role of community policies in defensible space compliance. Forest Policy Econ 11: 570–578.
13. Pincetl S, Rundel PW, DeBlasio JC, Silver D, Scott T, et al. (2008) It's the land use, not the fuels: fires and land development in southern California. Real Estate Rev 37: 25–43.
14. Schwab J, Meck S (2005) Planning for wildfires. Chicago: American Planning Association.
15. California Department of Housing and Community Development website. Available: http://www.hcd.ca.gov/hpd/hrc/rtr/chp2r.htm. Accessed 2011 May 11.
16. Gude P, Rasker R, van den Noort J (2008) Potential for future development on fire-prone lands. J Forestry 106: 198–2005.
17. National Association of State Foresters (2003) Field Guidance Identifying and Prioritizing Communities at Risk. Washington (D.C.): National Association of State Foresters.
18. Haight RG, Cleland DT, Hammer RB, Radeloff VC, Rupp TS (2003) Assessing fire risk in the wildland-urban interface. J Forest 104: 41–47.
19. Buckley D, Berry JK, Spencer T, Carlton D (2005) Quantifying Wildland Fire Risk. GeoWorld 18: 34–37.
20. California Department of Forestry and Fire Protection website. Available: http://frap.cdf.ca.gov/data/frapgisdata/select.asp. Accessed 2011 May 11.
21. Keeley JE, Safford HD, Fotheringham CJ, Franklin J, Moritz MA (2009) The 2007 southern California wildfires: Lessons in complexity. J Forest 107: 287–296.
22. Pausas JG, Keeley JE (2009) A burning story: The role of fire in the history of life. Bioscience 59: 593–601.
23. Syphard AD, Radeloff VC, Keeley JE, Hawbaker TJ, Clayton MK, et al. (2007) Human influence on California fire regimes. Ecol Applic 17: 1388–1402.
24. Lampin-Maillet C, Jappiot M, Long M, Bouillon C, Morge D, et al. (2010) Mapping wildland-urban interfaces at large scales integrating housing density and vegetation aggregation for fire prevention in the South of France. Journal Environ Manage 91: 732–741.
25. Keeley JE, Fotheringham CJ, Morais M (1999) Reexamining fire suppression impacts on brushland fire regimes. Science 284: 1829–1832.
26. Murphy K, Rich T, Sexton T (2007) An assessment of fuel treatment effects on fire behavior, suppression effectiveness, and structure ignition on the Agora Fire. Vallejo (California): USDA Pacific Southwest Region, Gen. Tech. Rep. R5-TP-025.
27. Spyratos V, Bourgeron PS, Ghil M (2007) Development at the wildland-urban interface and the mitigation of forest-fire risk. Proc Natl Acad Sci 104: 14272–14276.
28. Moritz MA, Moody TJ, Krawchuk MA, Huges M, Hall A (2010) Spatial variation in extreme winds predicts large wildfire locations in chaparral ecosystems. Geophys Res Lett 37: L04801.
29. Brooks ML, D'Antonio CM, Richardson DM, Grace JB, Keeley JE, et al. (2004) Effects of invasive alien plants on fire regimes. Bioscience 54: 677–688.
30. Barro SC, Conard SG (1987) Use of ryegrass seeding as an emergency revegetation measure in chaparral ecosystems. Berkeley (California): USDA Forest Service, Pacific Southwest Forest and Range Experiment Station, Gen. Tech. Rep. PSW-102.
31. Radtke KWH (1983) Living More Safely in the Chaparral-Urban Interface. Berkeley (California): USDA Forest Service, Pacific Southwest Forest and Range Experiment Station, Gen. Tech. Rep. GTR-PSW-067.
32. Keane RE, Drury SA, Karau EC, Hessburg PF, Reynolds KM (2010) A method for mapping fire hazard and risk across multiple scales and its application for fire management. Ecol Model 221: 2–18.
33. Peng R, Schoenberg F (2001) Estimation of wildfire hazard using spatial-temporal history data. Technical report. Los Angeles (California): UCLA Statistics Department.
34. Abt SR, Witter RJ, Taylor A, Love DJ (1989) Human stability in a high flood hazard zone. J Am Wat Resour As 25: 881–890.
35. Beverly JL, Bothwell P, Conner JCR, Herd EPK (2010) Assessing the exposure of the built environment to potential ignition sources generated from vegetative fuel. IntJ Wildland Fire 19: 299–313.

36. Cohen JD (2000) Home ignitability in the wildland-urban interface. J Forest 98: 15–21.
37. Pyne SJ, Andrews PL, Laven RD (1996) Introduction to wildland fire. New York: Wiley.
38. Moritz MA, Moody TJ, Krawchuk MA, Huges M, Hall A (2010) Spatial variation in extreme winds predicts large wildfire locations in chaparral ecosystems. Geophys Res Lett 37: L04801.
39. Scott JH, Burgan RE (2005) Standard fire behavior fuel models: a comprehensive set for use with Rothermel's surface fire spread model. Fort Collins, CO: USDA Forest Service Rocky Mountain Research Station, Gen. Tech. Rep. RMRS-GTR-153.
40. Yee TW, Mitchell ND (1991) Generalized additive models in plant ecology. J Vegetat Sci 2: 587–602.
41. Elith J, Graham CH, Anderson RP, Miroslav D, Ferrier S, et al. (2006) Novel methods improve prediction of species' distributions from occurrence data. Ecography 29: 129–151.
42. Dormann CF, McPherson JM, Araújo MB, Bivand R, Bolliger J, et al. (2007) Methods to account for spatial autocorrelation in the analysis of species distributional data: a review. Ecography 30: 609–628.
43. Franklin J (2009) Mapping species distributions: spatial inference and prediction. Cambridge (UK): Cambridge University Press.
44. R Development Core Team (2011) R: A language and environment for statistical computing. Vienna (Austria): R Foundation for Statistical Computing, ISBN 3-900051-07-0.
45. Phillips SJ, Anderson RP, Schapire RE (2006) Maximum entropy modeling of species geographic distributions. Ecol Model 190: 231–259.
46. Parisien M-A, Moritz MA (2009) Environmental controls on the distribution of wildfire at multiple spatial scales. Ecol Applic 79: 127–154.

Global Environmental Change 56 (2019) 41–55

Contents lists available at ScienceDirect

Global Environmental Change

journal homepage: www.elsevier.com/locate/gloenvcha

The relative influence of climate and housing development on current and projected future fire patterns and structure loss across three California landscapes

Alexandra D. Syphard[a,b,*], Heather Rustigian-Romsos[a], Michael Mann[b], Erin Conlisk[c], Max A. Moritz[d,e], David Ackerly[f]

[a] Conservation Biology Institute, 136 SW Washington Ave, Suite 202, Corvallis, OR, 97333, United States
[b] 4250 Executive Square # 250, La Jolla, CA 92037, United States
[c] Point Blue Conservation Science, 3820 Cypress Dr #11, Petaluma, CA, 94954, United States
[d] University of California Cooperative Extension, Agriculture and Natural Resources Division, Oakland, CA, 94607, United States
[e] Bren School of Environmental Science & Management, University of California, Bren Hall, Santa Barbara, CA, 93106, United States
[f] Departments of Integrative Biology and Environmental Science, Policy, and Management, University of California, Berkeley, CA, 94720, United States

ARTICLE INFO

Keywords:
Fire risk
Climate change
Land use change
Wildfire
Housing density
Geography

ABSTRACT

Climate and land use patterns are expected to change dramatically in the coming century, raising concern about their effects on wildfire patterns and subsequent impacts to human communities. The relative influence of climate versus land use on fires and their impacts, however, remains unclear, particularly given the substantial geographical variability in fire-prone places like California. We developed a modeling framework to compare the importance of climatic and human variables for explaining fire patterns and structure loss for three diverse California landscapes, then projected future large fire and structure loss probability under two different climate (hot-dry or warm-wet) and two different land use (rural or urban residential growth) scenarios. The relative importance of climate and housing pattern varied across regions and according to fire size or whether the model was for large fires or structure loss. The differing strengths of these relationships, in addition to differences in the nature and magnitude of projected climate or land use change, dictated the extent to which large fires or structure loss were projected to change in the future. Despite this variability, housing and human infrastructure were consistently more responsible for explaining fire ignitions and structure loss probability, whereas climate, topography, and fuel variables were more important for explaining large fire patterns. For all study areas, most structure loss occurred in areas with low housing density (from 0.08 to 2.01 units/ha), and expansion of rural residential land use increased structure loss probability in the future. Regardless of future climate scenario, large fire probability was only projected to increase in the northern and interior parts of the state, whereas climate change had no projected impact on fire probability in southern California. Given the variation in fire-climate relationships and land use effects, policy and management decision-making should be customized for specific geographical regions.

1. Introduction

As one of the most fire-prone places in the world, California is globally recognized for its long history of wildfire-related losses of homes and human lives. Wildfire is also important for shaping ecological structure and function (van Wagtendonk, 2018), but many of California's diverse fire regimes, as those across the world, are changing in response to past fire management (e.g., Steel et al., 2015), invasive species (e.g., Syphard et al., 2017a), land use change (e.g., Mann et al., 2016), and climate change (e.g., Westerling and Bryant, 2008). Climate and land use patterns, in particular, are expected to change dramatically in the coming century, raising concern about their effects on fire regimes and subsequent impacts to human communities across the world. California is expected to embody a wide range of these changes and their impacts, and the risk to human communities is complex because it requires predicting how and where climate or land use change will alter fire patterns, i.e., the long-term spatial and temporal characteristics of fire events on a landscape. Manifestation of change will depend upon both the nature and

* Corresponding author at: Conservation Biology Institute, 136 SW Washington Ave, Suite 202, Corvallis, OR, 97333, United States.
E-mail address: asyphard@sageunderwriters.com (A.D. Syphard).

https://doi.org/10.1016/j.gloenvcha.2019.03.007
Received 22 November 2018; Received in revised form 27 February 2019; Accepted 27 March 2019
0959-3780/ © 2019 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/BY-NC-ND/4.0/).

strength of the drivers and their relative impacts in different regions.

There is evidence from historical patterns and modeling studies that climate change will lead to large changes in fire extent and severity (e.g., Westerling et al., 2006; Jolly et al., 2015; Abatzoglou and Williams, 2016; Restaino and Safford, 2018). However, the relationships between climate and fire are nuanced and complex (Krawchuk et al., 2009; Bradstock, 2010; Doerr and Santín, 2016) and vary in nature and strength geographically (Littell et al., 2009; Hessl, 2011; Keeley and Syphard, 2017). One of the clearest factors that determines whether a fire becomes large is wind speed (Abatzoglou et al., 2018). Large, wind-driven fire events have been responsible for the vast majority of structures lost in California wildfires (Keeley et al., 2009), including the recent fires in 2017 and 2018. Beyond weather, climate controls fire size directly via temperature, and also via its short and long-term effects on fuel volume and moisture content, which are important controls on fire behavior (Keeley and Syphard, 2016). Thus, given that hot, dry conditions are generally associated with fire, and that temperatures and moisture deficit are projected to increase globally, there is widespread concern that climate change will lead to greater fire activity. However, feedbacks between climate, vegetation, and fire are likely to mediate these effects (Bowman et al., 2014; Parks et al., 2016; Syphard et al., 2018).

Adding to the complexity, changes in human land use and population are also expected to alter spatial and temporal characteristics of future wildfires, and these effects may also interact with climate-driven effects. Humans affect fire patterns in a variety of ways, including deliberate or accidental ignitions, prescribed burning and mechanical vegetation treatments, and suppression activities; humans also change fire behavior and extent through landscape fragmentation, cultivation practices, landscaping, and flammability of buildings. Given the diversity of these effects, recent studies highlight that one of the main problems for prediction of fire patterns and related human impact is that human presence may dampen or override the influence of climate in driving fire activity (Higuera et al., 2015; Ruffault and Mouillot, 2015; Mann et al., 2016; Syphard et al., 2017b). Another complexity is that the anthropogenic and biophysical factors that influence patterns of small fires have been shown to differ from the factors that drive large fires, particularly in areas where most fires are caused by humans (Syphard et al., 2008, 2017, Barros and Pereira, 2014). This is likely due to inherent geographical and biophysical differences between those fires that are easily suppressed and those that escape control (Moritz, 1997; Hantson et al., 2015).

In California, the vast majority of fires are human-caused (Syphard et al., 2007; Balch et al., 2017), but the spatial and temporal pattern of ignition causes and patterns varies widely across the state (Keeley and Syphard, 2018). Contrary to what might be expected, fire activity is not highest where population is highest. Instead fire frequency, and to a lesser extent, area burned, tend to peak at low- to intermediate population and housing density (Syphard et al., 2007; Westerling and Bryant, 2008; Mann et al., 2016); this relationship has also been observed in other areas across the globe (Syphard et al., 2009; Aldersley et al., 2011; Bistinas et al., 2013). This hump-shaped relationship reflects, in part the increased ignitions in rural and residential areas (compared to wildlands), balanced against lower potential for fire spread and/or greater suppression in urban areas (Butsic et al., 2015).

Beyond housing density's effect on fire patterns, studies have shown that structure loss in southern California is significantly correlated with low-to-intermediate housing density (Syphard et al., 2012, 2013, 2016). Other work in southern California and Colorado (Alexandre et al., 2016a), and a national analysis across the U.S. (Alexandre et al., 2016b), identified the spatial arrangement of housing development, in addition to topographic conditions, as consistently more important than vegetation-related variables in explaining structure loss to wildfire. Although small, isolated clusters of development were consistently associated with structure loss, in some cases, high housing density in those clusters contributed to higher structure loss. In addition, high-density development has been implicated in structure loss in some fires due to fire spread among structures (Cohen and Stratton, 2008; Price and Bradstock, 2013), as seen recently in the Coffey Park neighborhood in Sonoma County, CA in 2017 (Nauslar et al., 2018). House-to-house spread is also suspected for contributing to massive structure loss in the Camp Fire in Butte County in 2018. The role of building codes and ignition resistance has yet to be examined in such loss patterns, however.

Despite clear evidence of a nonlinear relationship between housing density and patterns of fire, and subsequently on patterns of structure loss, much is unknown regarding the scale and potential thresholds that define the relationship between housing density and fire. For example, Bistinas et al. (2013) reported regionally varying thresholds determining the shape of the nonlinear relationship between population density and area burned across the globe. Much more work is needed to identify the relative roles of climate and human presence in determining fire and structure loss patterns, and to determine the extent to which these relationships vary regionally. This is particularly critical considering there have already been rapid changes in both climate patterns (Swain et al. (2018)) and land use patterns in flammable landscapes (Radeloff et al. (2018)).

To better understand the relative importance of climatic and land use factors on long-term spatial and temporal patterns of fire and structure loss and how these patterns vary from region to region, we developed an integrated modeling framework to quantify variable importance and to map the distribution of current and future projected probability of fires and structure loss in three California study areas. These regions vary biophysically but have all experienced substantial residential losses from wildfire. We first developed statistical models and maps based on the association of climate, biophysical, and anthropogenic variables with small and large fire patterns, and then we modeled structure loss as a function of those variables and the projected probabilities of large fires. After quantifying and mapping current relationships, we projected future large fire and structure loss probability under different climate and housing growth scenarios. We address the following questions:

1) How do fire patterns vary by housing density and climate?
2) How do structure loss patterns vary by housing density and climate?
3) Do these relationships vary from region to region?
4) Which is likely to be the most influential driver of future change, climate or housing development, across our study regions?

2. Methods

2.1. Study areas

The northern coastal study area (NC) includes more than 1.4 million ha of land spanning all of Lake, Sonoma, and Napa Counties, in addition to small parts of Mendocino, Glenn, Colusa, Yolo, and Solano Counties (Fig. 1). The vegetation is characterized by a mosaic of oak woodlands, grassland, chaparral, and Douglas fir/hardwood ("mixed evergreen") forests, with montane conifer forests at higher elevations. Extensive exurban development has occurred in recent decades, and numerous homes have been destroyed by fire here; in particular, the 2017 'wine country' wildfires in this region resulted in 44 lost lives and nearly 9000 destroyed buildings.

The Butte and Plumas Counties study area (BP) included the full counties, plus a 20 km buffer to incorporate a larger urban-wildland gradient (2.2 million ha). Across this gradient spanning from the Central Valley to the northern cismontane Sierra Nevada, the vegetation transitions from grassland and chaparral to mixed evergreen and then pine- and fir-dominated forests, with a very small component of subalpine forest on the highest peaks (Fig. 1). Although the higher-elevation forests are mostly protected by the U.S. Forest Service and National Park Service, substantial residential development has been

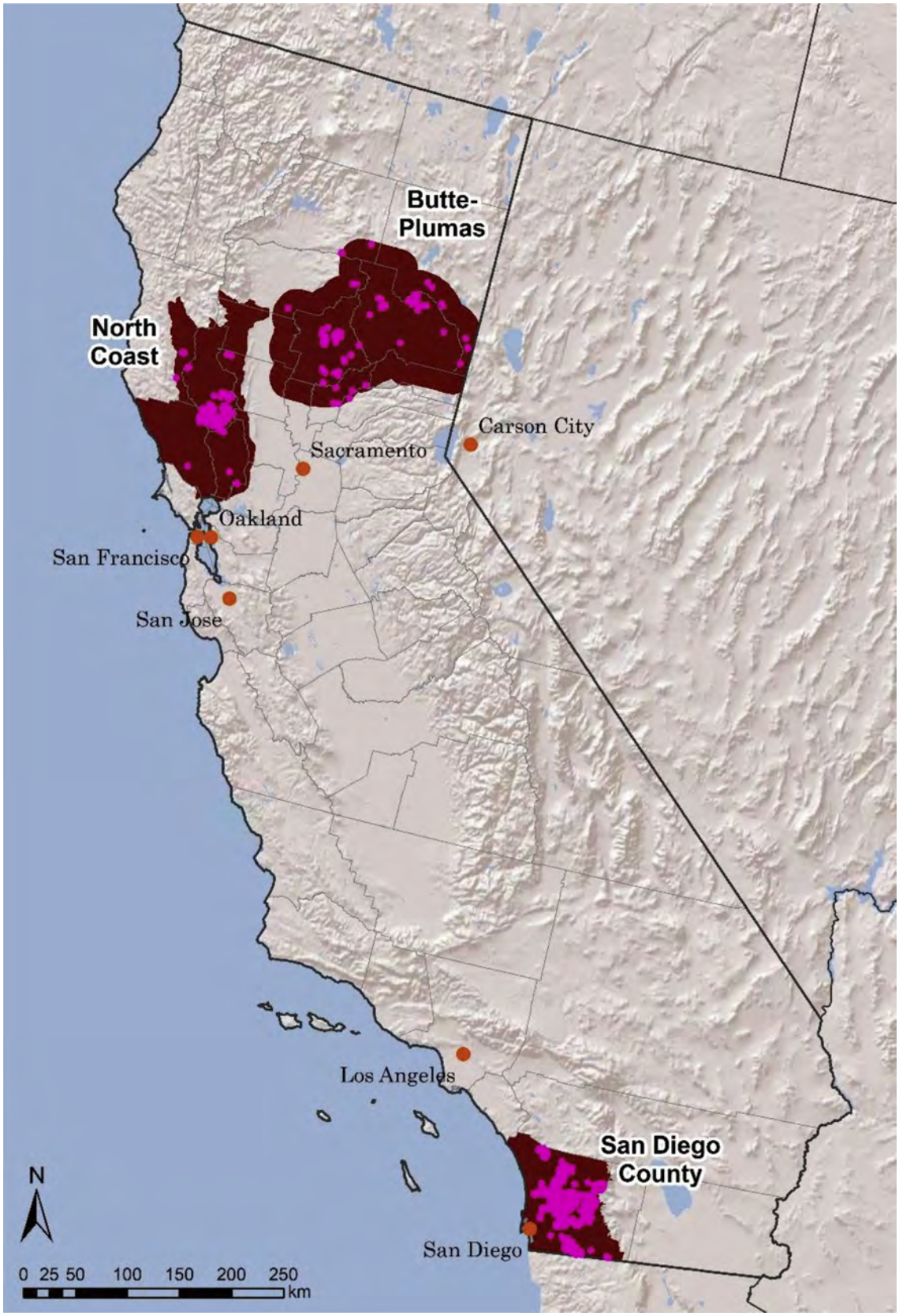


Fig. 1. Boundaries of three California study areas, with destroyed structure locations (2000–2015) in pink (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article).

occurring in the foothills. Wildfires destroyed more than 1000 structures here between 2000 and 2015 (the period we used for modeling); in 2018, the Camp Fire alone resulted in 86 fatalities and more than 18,000 destroyed structures. While all three study areas are characterized by Mediterranean climates, with warm to hot, dry summers and wet winters, BP is the only study area to receive substantial precipitation in the form of snowfall.

The third study area, coastal San Diego County (SD), is a rapidly developing, highly fire-prone region with an extensive wildland-urban interface. The majority of the study area is dominated by coastal sage and chaparral shrublands intermixed with grasslands and mixed oak woodlands, and some montane conifer forests at the highest elevations. Native shrubs are threatened by too-frequent fire, typically human-caused, which could lead to extensive replacement with more fire-prone herbaceous vegetation (Syphard et al., 2018b). Thousands of structures have been destroyed during large, Santa Ana wind-driven fire events (Keeley et al., 2009).

2.2. Data

For all dependent and independent variables (Table 1), we first assembled consistent statewide spatial data coverage, which we then clipped to the boundaries of the three study areas. We also rasterized all vector data, or resampled all grid data, to match the resolution of the climate variables (270 x 270 m).

2.2.1. Fire data

To determine whether different factors influence fire ignitions and large fire patterns across the study areas, we created statistical models based on two sources of data (Table 1). The first dataset included the location of origin for all fires of any size from the most recent decade of data available, 2003–2013 and was available via spatial coordinates indicating the point location of fire ignition. The data, from the National Interagency Fire Program Analysis, Fire-Occurrence Database (FPA FOD), include fire size and date as attributes and are publicly available for the whole country (Short 2014). Spatial clustering of points has the potential to lead to autocorrelation, which can inflate the accuracy of statistical distribution models (Veloz, 2009). Although we were less interested in model accuracy than we were in variable importance and maintaining comparability of model results, we nevertheless spatially filtered the presence data to ensure no duplicate points within a 500-m radius, as spatial filtering can reduce the effect of sample bias (Veloz, 2009). While this distance was not systematically determined, this was the radius used in Syphard et al. (2018) that best attained the appropriate number of samples per fire, using the method described in Davis et al. (2017).

We developed a second dataset for large fire locations using a separate comprehensive statewide fire perimeter database, provided by the State of California Fire and Resource Assessment Program (FRAP, http://frap.fire.ca.gov/data/frapgisdata-subset). We only considered large fires from these data ($>=40$ ha), and, based on the method developed by Davis et al. (2017), we generated a random sample of points within all fire perimeters from a baseline period of 1985–2015, the most recent 30 years available. That is, to calculate the number of random points to generate for each fire in the database, we took the square root of the ratio of the given fire's area to the area of the smallest fire in the study area as recorded in this dataset. Because a filter distance of 500 m resulted in too-small sample sizes for many of the fires, we reduced the filter distance to 400 m.

We considered the two fire datasets to capture two different processes, where each process potentially has its own set of drivers. The 'fire ignitions' dataset reflects the spatial patterns of ignitions (which is an outcome of fire initiation processes), whereas the 'large fires' dataset reflects a discrete sample of burnt locations (which is an outcome of fire spread processes).

2.2.2. Structure loss data

The dependent variable for the structure loss models was the location of any structure that had been destroyed in a fire from 2000 to 2015 (Table 1). The baseline data were developed by Alexandre et al. (2016), and included all destroyed structure locations across fires in the U.S. from 2000 – 2010. These data were created by examining, for all wildfires recorded in the Monitoring Trends and Burn Severity dataset (MTBS, https://mtbs.gov), Google Earth historical imagery from the closest dates before and after the fires. Within each fire perimeter, Alexandre et al. digitized all buildings before the wildfire; then, any building that had been completely removed in the post-fire image was considered destroyed. To update and extend these data, we followed the same methods using pre- and post-fire Google Earth imagery and digitized buildings in all three study areas that were present through 2015. Additionally, we selected all fires from the most recent Cal Fire historical perimeter database (2015 at the time of completion) and added new structures that may have been missed by Alexandre et al. (e.g., due to small fire size) or had occurred after 2010.

2.2.3. Topographic data

Terrain-related variables are typically included in fire behavior and distribution models due to their direct influence on fire behavior and indirect influence on fuel characteristics and flammability (Bond and van Wilgen 1996, Pyne 1996); and they have also been significantly associated with structure loss to wildfire due to exposure (Syphard et al., 2012, Alexandre et al. 2016). Therefore, we considered a range of topographic variables in both the fire and structure loss models, including slope, topographic variability, and topographic position (Table 1).

2.2.4. Climate data

We considered a range of historical and projected future climate variables, which were developed by Flint and Flint (2012) and updated through 2017 using the California Basin Characterization Model (https://ca.water.usgs.gov/projects/reg_hydro/basin-characterization-model.html (Table 1). The data were available annually at 270 m resolution. We processed the annual data to create 30-year baseline statistical summaries from 1981 to 2010 as well as decadal future projections from 2020 to 2050. To ensure consistency with state recommendations (Kravitz, 2017), we compared two scenarios of future climate conditions from complementary CMIP-5 General Circulation Model projections regarded as relevant for California. The scenarios were CNRM-CM5 and MIROC5, which represent "warm/wet" and "hot/dry" conditions, respectively. Despite this characterization both scenarios have substantial spatial and temporal variation in projected conditions, but should still provide meaningful bookends for representative climate spaces. For both scenarios, we used the RCP 8.5 "business as usual" emissions scenario (RCP scenarios are generally similar through 2050 and only diverge in the second half of the century).

For the fire models, we considered a combination of temperature and moisture-related climate variables that have had significant associations with fire patterns in other studies due to their effects on energy and moisture gradients that influence wildland fuel condition and abundance (e.g., Whitman et al., 2015; Parisien et al., 2016; Davis et al., 2017). We also included actual evapotranspiration (AET) and climatic water deficit (CWD) in all models, as these variables have been used to account for changes in fuel abundance (AET) and moisture (CWD) (Krawchuk et al., 2014, Parks et al., 2016, Mann et al., 2016). We did not include temperature and precipitation in the structure loss models because we assumed their influence on structure loss would be indirect, via their effects on large fire probability. On the other hand, given that AET and CWD served as proxies for vegetation, and that vegetation adjacent to structures could be influential beyond the effect on large fire probability, we did include these variables.

Table 1
Dependent and explanatory variables used to model fire and structure loss distribution in three California study areas.

Category	Fire models	Structure loss model	Data layer	Description and source	Time Variant
Dependent variable	x		Fire ignitions	Fire occurrence locations delineating point of ignition from 2003 - 2013 (Short 2014)	NA
	x		Large fires	Cal Fire fire perimeter database 1985 – 2015 (Department of Forestry and Fire Protection	NA
		x	Structure loss	Digitizing, Alexandre et al. (2016)	NA
Terrain					
	x	x	Slope	LANDFIRE, 30-m native resolution, aggregated by mean to 270m	No
	x	x	Topographic roughness	Range of slope values within 810-m radius from center cell (Derived from 30-m digital elevation model)	No
	x	x	Topographic position index	Index of slope position and landform, Jenness 2006 (Derived from 30-m digital elevation model)	No
	x	x	Topographic heterogeneity	Range of elevation values within 810-m radius from center cell (Derived from 30-m digital elevation model)	No
Climate					
	x		Temperature seasonality	Coefficient of variation across calendar year of temperatures (Derived from Flint and Flint, 2014)	Yes
	x		Annual precipitation	Sum over calendar year (mm) (Flint and Flint, 2014)	Yes
	x		Summer precipitation	Sum over June, July, August (mm) (Flint and Flint, 2014)	Yes
	x		Annual minimum temperature	Mean low temperature of coldest month (degrees C) (Flint and Flint, 2014)	Yes
	x	x	Actual evapotranspiration	Total annual water evaporated from surface and transpired by plants (Flint and Flint, 2014)	Yes
	x	x	Climatic water deficit	Annual evaporative demand exceeding water availability (Flint and Flint, 2014)	Yes
Land use					
	x	x	Housing density	Based on 2000 U.S. Census data using the baseline projection at 2009 (Mann et al., 2014)	Yes
		x	Housing cluster area	Boundaries around areas with housing density > = 0.02 units per ha (Derived)	Yes
		x	Distance to cluster edge	Mean Euclidean distance to boundary of housing clusters (Derived)	Yes
	x	x	Distance to populated places	Census populated places of at least 10,000 inhabitants in 2010 (Derived)	No
	x	x	Distance to roads	TIGER line files 2015, U.S. Department of Commerce, U.S. Census Bureau	No
	x	x	Distance to public land	Cal Fire land ownership database 2015 (Department of Forestry and Fire Protection)	No
Fire					
		x	Predicted large fire suitability	Output from large fire model (this paper)	Yes

2.2.5. Land use projections and anthropogenic data

Our primary source of land use data were maps of current and future projected housing density that were published in Mann et al. (2014). The historical data were collected from the U.S. Census long form with models trained using historical trends from 1940 to 2000 (the latest date that the long form was available). The predictions of housing density were provided in decadal time steps, and we used the 2009 forecast as our baseline here. Created using longitudinal census data, the model calculated the total number of new houses based on demographic forecasts at the national level, and then allocated them to split-block units based on a spatio-temporal estimate of housing density. We considered two scenarios, one with concentrated urban development ("urban scenario") and the other that favored rural expansion ("rural scenario"). In the "urban development" scenario, an additional 25% of all new housing was added into urban areas (density greater than 1 house per acre), while the "rural growth" scenario pushed the 25% into areas with less than 1 house per acre.

Housing density data were initially provided as vector data, with housing density listed as an attribute for each polygon. We converted these data into 270 m raster layers using housing density as the value to grid. In previous studies of structure loss to wildfire, two additional variables, the size of the housing cluster and the distance from each structure to the edge of development, were found to be highly significant (Syphard et al., 2012; Alexandre et al., 2016a, 2016b). Given that those data had been created using point locations of all structures, we developed an approach to devise similar housing clusters by thresholding and creating borders around polygons with at least 0.01 housing units per ha, which was the value that resulted in the best fit to the data created for San Diego County (Syphard et al., 2012). The housing density variables were available for the same time periods as the climate data, with 2009 representing current conditions, and decadal projections until 2050 for the two growth scenarios. Thus, for models using baseline climate data for 1981–2010, we used housing data from 2009; and for models using climate projections from 2019 to 2029, we used the housing projection for 2029, etc.

In addition to the housing projections, we included three other variables that have been significantly associated with fire occurrence patterns in other studies (e.g., Mann et al., 2016; Syphard et al., 2018). These included proximity to primary and secondary roads, which are often associated with human-caused ignitions (Syphard and Keeley, 2015); proximity to public land, which typically consists of large uninterrupted swaths of wildland vegetation; and distance to census populated places where the city includes at least 10,000 residences (Mann et al., 2016). These maps remained static for future projections.

2.3. Statistical modeling

We used Maxent 3.3.3k to estimate variable importance and project mapped probabilities of current and future fires and structures loss (Phillips and Dudik, 2008; Elith et al., 2011). A statistical machine learning method, MaxEnt estimates the best approximation of a distribution via iterative comparisons between values of the environmental predictor variables at the location of presence locations (i.e., all fires, large fires, destroyed structures) versus the values of the same variables at 10,000 randomly located background points. The best distribution is identified as the one with maximum entropy, and the model outputs a continuous grid with each cell assigned a relative suitability of occurrence from an exponential function. Recognized as one of the top-performing species distribution models (Elith et al., 2006), MaxEnt has also been successfully used in a range of wildfire analyses and mapping applications (e.g., Bar-Massada et al., 2012; Batllori et al., 2013; Parisien et al., 2016; Davis et al., 2017; Tracy et al., 2018).

We developed separate models for all fires and large fires to investigate potential differences in variable importance. We also tested the output of both models as potential predictors for the structure loss model, but we found significant correlation between the output of the small fire model and distance to roads. Given that most homes are destroyed in large fires, we decided to only use the output of the large fire probability model as a predictor variable for the structure loss model.

We initially developed all models with the full range of climatic, topographic, and anthropogenic explanatory variables to compare variable importance. For projecting future conditions, we employed a variable selection and model tuning process separately for each of the three study regions to ensure the best model fit. We first used ENMTools (Warren et al., 2010) to calculate Pearson correlation coefficients for all explanatory variables using current conditions (baseline) in each study area. For any pair of variables with a correlation coefficient of $r >= 0.8$, we retained the one that had a higher mean cross-validated receiver operating characteristic curve (AUC, Fielding and Bell, 1997), based on univariate models.

We used most of the default parameters for the MaxEnt modeling, except that we used only linear, quadratic, and product features for all models, and selected regularization multipliers, that avoid overfitting by penalizing complex solutions, by running models in 0.5 increments from 0.5 to 5. The final model was chosen by selecting the multiplier that resulted in the lowest Bayesian Information Criterion (BIC). For the baseline models of all and large fires, and structure loss, we ran five cross-validated model replicates to obtain mean permutation importance values and mean out-of-sample AUCs. We averaged the predicted values from the five replicate output maps to produce the baseline maps, which are interpreted as grids of mean predicted probability of large fires or structure loss given the environment in each study area.

After conditioning the models on the baseline time period, we then projected the averaged baseline models of large fires and structure loss onto maps representing future conditions at each time step for all combinations of future climate (two scenarios) and land use (two scenarios) projections. For each future time step, we first projected large fires, and then used those projections as input to the structure loss models.

2.4. Analysis

We averaged large fire probability and structure loss probability for all maps generated as model output by first summarizing the predicted probabilities across all grid cells in every map, then dividing this sum by the total number of cells in the maps of the three study areas. We calculated these numbers for all model replicates in all time periods and for all climate/land use scenario combinations. The probability averages for current conditions served as a baseline to compare with the probability averages of future scenarios, which allowed an overall estimate of whether fire or structure loss probability went up or down across the region.

To identify the housing density where most structure loss occurs in each study area, we extracted the housing density of destroyed structures from the baseline housing density maps generated by Mann et al. (2014). We then compared the mean housing density of destroyed structures in each study area with the underlying housing density in each region (i.e., all burned and unburned structures), which we determined by multiplying the area of each polygon in the study area by its housing density as indicated in the attribute table. This calculation assumed housing density was evenly distributed across polygons. For polygons that overlapped the study area boundary, we calculated the number of units in the entire polygon, then prorated by the percentage

of the polygon within the study area. For both destroyed and the total structures in each study area, we plotted and compared their mean and distribution across housing density classes.

To compare the mean housing density data in our study areas to the recent destructive fire events of 2017 and 2018, we additionally acquired point locations for the destroyed structures in the 2017 Tubbs, Nunn, Atlas, and Pocket Fires in Sonoma and Napa Counties (number destroyed = 8022; http://sonomamap.maps.arcgis.com/apps/webappviewer/index.html?id=5af1dd01cb9b446db928abe51a259763), the 2018 Camp Fire in Butte County (number destroyed = 18,804; https://calfire.app.box.com/s/z03vd6hoikxa94ey25m0kuq2fsq2ln5e/folder/64813192070), the 2018 Carr Fire in Shasta County (number destroyed = 1614; https://www.arcgis.com/home/item.html?id=17d44552e0ea4c6ab2c43e80246e05b9), and the 2018 Woolsey Fire in Los Angeles and Ventura Counties (number destroyed = 1673; provided from Cal Fire to the National Park Service, Robert Taylor personal communication). All of these data were provided as part of the Cal Fire Damage Assessment and Fatality Totals (**DINS**) program. We used the same methods as above to calculate the mean housing density for destroyed and total number of structures. We calculated the total number of structures within the county boundaries where the fires were located.

To map geographical variation in structure loss probability by land use scenario, we subtracted the mapped probability of structure loss projected in the rural growth scenario models for year 2049 from the corresponding mapped probability of structure loss in the urban growth scenarios.

3. Results

3.1. Baseline statistics

From 2000–2015, there were 2081 structures destroyed in the NC study area. These destroyed structures were distributed across 17 out of a total of 202 fires during the same time period (based on the Cal Fire perimeter data). The mean size of fires where structures were destroyed (includes entire perimeters of those intersecting study area) was 5525 ha versus an overall mean fire size of 896 ha. In the BP study area, there were 451 destroyed structures that burned through 2015 in 39 out of 241 fires. The mean fire size with destroyed structures was 4018 ha versus a mean of 905 ha overall. In SD, 4338 structures were destroyed, across 20 fires out of a total 206 fires. The mean fire size when structures were destroyed was 150,647 ha versus a total mean of 1877 ha.

The mean density of destroyed structures was much lower than that of all structures in all study areas, by orders of magnitude (Fig. 2). This pattern was the same for density of destroyed structures versus all structures within counties in the recent fire events of 2017 and 2018 (Fig. 2), although the difference between destroyed and all structures was only about half for the Camp Fire and about a third for the 2017 North Coast fires. The distribution of housing density for both destroyed and all structures varied by study region, but destroyed structures were consistently located in low-density classes (Fig. 3).

Projected future trends in temperature and precipitation varied across regions for the two different climate scenarios, as did the overall housing density change. In the NC and BP study areas, the mean annual precipitation resulted in conditions with consistently more moisture in the CNRM scenario and consistently drier conditions in the MIROC scenario by 2049, with slight geographical variability (Fig S1a&b). Both GCMs projected decreased annual precipitation in the SD study area, but the drying was stronger for the MIROC scenario (Fig. S1c). The changes in summer precipitation showed much more geographical variability within study regions, but the differences in GCMs were flipped such that CNRM was projected to be drier in the summer than MIROC (Fig. S2a-c). Annual temperature was projected to increase much more substantially in the MIROC than the CNRM scenario for all three study areas by 2049, with substantially more geographical variation in the CNRM scenario (Fig. S3a-c). Decadal fluctuations, reflecting idiosyncrasies of the model run, were strongest in MIROC in the North Coast.

Changes in projected housing density patterns from 2009 to 2049 show substantial geographical variability across all three study regions (Fig. 4). For all regions, the rural scenario showed a larger areal increase of housing densities within the range where houses have been destroyed historically (Fig. 4); but the difference in rural versus urban scenarios was most substantial in NC, followed by SD, then BP. In the rural scenario, most of this increase in low-density housing occurred via growth (i.e., increased housing density) across more rural parts of the landscape, whereas in the urban scenario, a larger portion of exurban areas declined in housing density as there was a shift to more

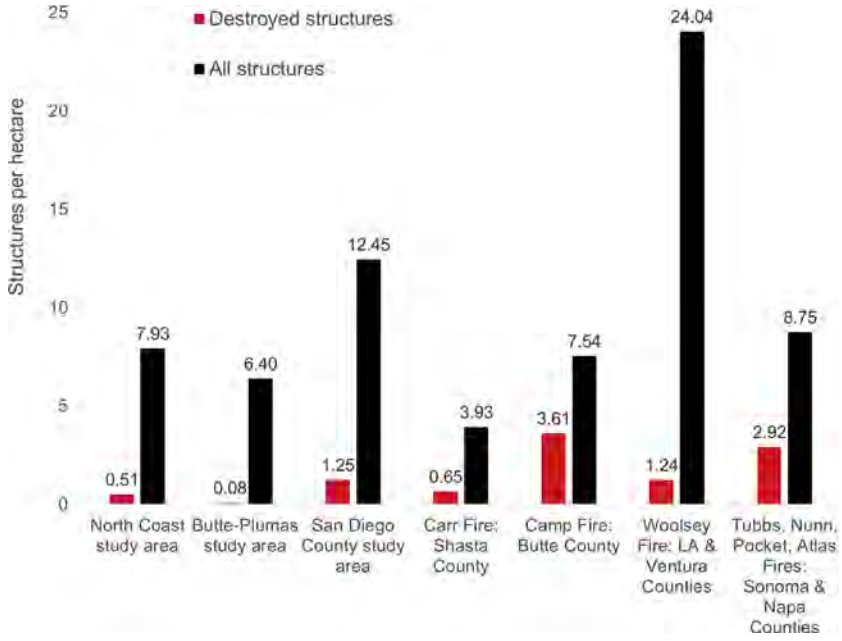


Fig. 2. Mean housing density for destroyed and all structures in three California study areas (using data through 2015) and for the four largest destructive fire events in 2017 and 2018.

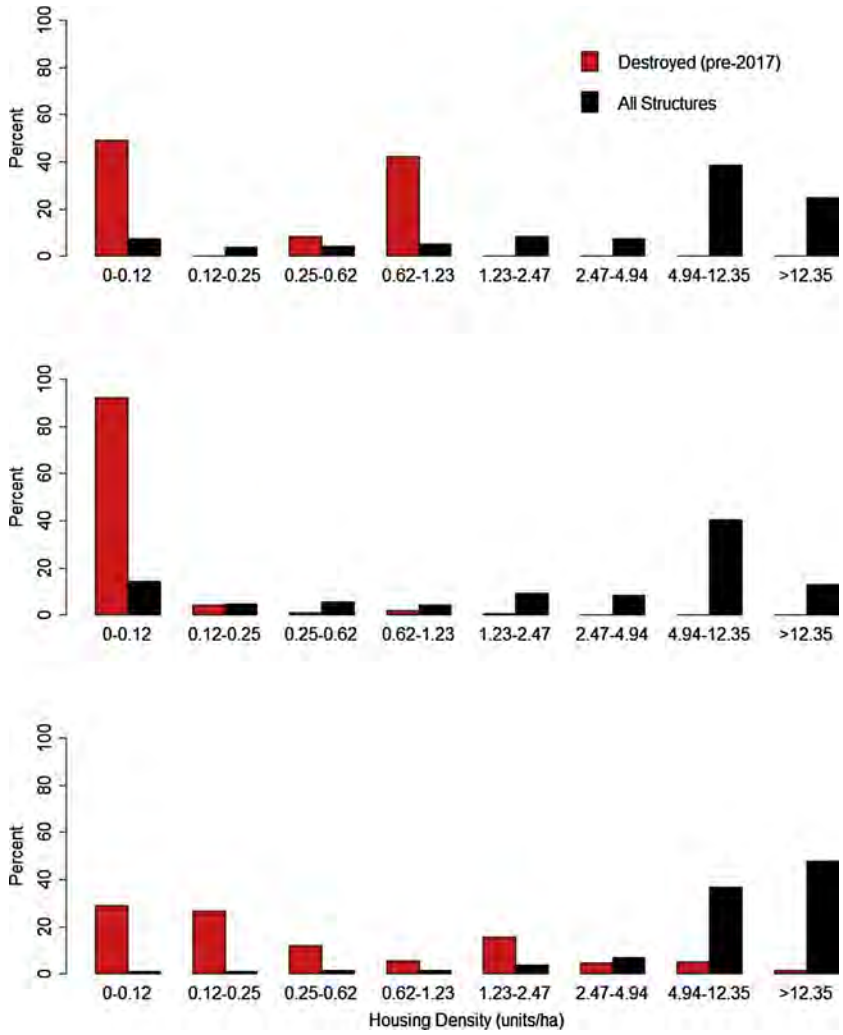


Fig. 3. Distribution of housing density classes (structures/ha) for destroyed and all structures in the a) North Coast, b) Butte-Plumas, and c) San Diego County study areas.

concentrated high-density housing near urban areas (Fig.4). One exception is the northern coastal portion of the SD study area, where there was some housing density decline in the rural scenario.

3.2. Variable importance

There were large differences in model variable importance for fire ignitions vs. large fires for all three study areas, and these were much larger than differences among regions (Table S1 – S2,Fig. 5). In particular, anthropogenic variables, particularly proximity to roads, dominated the patterns of fire ignitions, whereas topography and climate variables dominated the patterns of large fires, except in SD, where both housing density and distance to roads had about the same importance as topography and climate for large fires. In SD, housing density was almost equally as important as climate for explaining large fires. The directions of relationships differed such that fire ignitions tended to occur in close proximity to roads or populated places, but large fires occurred closer to public lands and farther from roads and populated places.

Whereas climate variables had a strong influence on fire ignitions and especially large fires, the vegetation productivity and moisture variables (AET and CWD) were not important for explaining structure loss patterns in NC or BP (Table S3 – S4, Fig. 5), and were less important than fire suitability for SD. Instead, housing variables and large fire suitability were the two most important factors explaining structure loss across all regions, with higher structure loss Univariate response curves showing the probability at low housing density (Fig. 6). SD was again different than NC or BP in that housing variables were more important than fire suitability.

3.3. Future projections

Overall, NC had a slightly lower baseline probability of large fires across the study area (Fig. 7a) than BP or SD, which had similar baselines (Fig. 7 b & c). Projections of future large fire probability were higher than the baseline for most time periods and climate scenarios for both the NC and BP study areas, except for MIROC in 2029 and 2049 in NC and CNRM 2019 in BP, and the results from these decades reflected oscillations that stemmed from decadal variability in the climate model projections. Large fire probability did not significantly change under either climate scenario in SD (Fig. 7c), but there was also slight decadal variability in the model run for CNRM. In all cases, differences in projected large fire suitability between the two land use scenarios were virtually absent due to the small relative importance of these variables to the model.

Compared to NC and BP (Fig. 8a & b respectively), SD had a relatively high baseline structure loss probability across the landscape (Fig. 8 c). Differences in structure loss probability for the two climate scenarios in NC and BP generally mimicked the large fire probability results in ranking and magnitude, and the decadal variability in fire

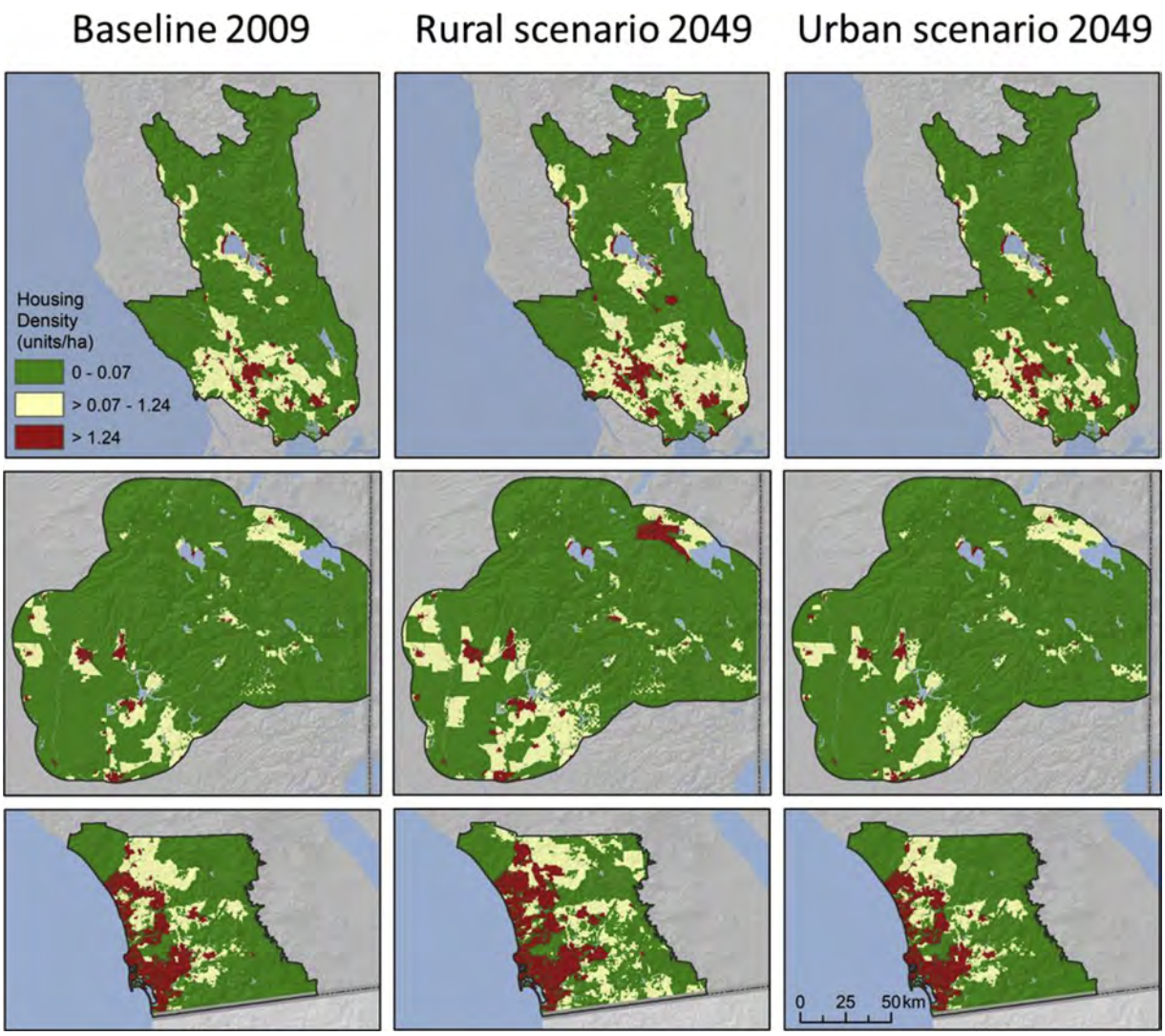


Fig. 4. Classified housing density in 2009, 2049 for the rural, and 2049 for the urban scenarios in the a) North Coast, b) Butte-Plumas, and c) San Diego County study areas. The middle (yellow) class represents the housing density range across the three study areas where structures have been destroyed in the past (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article).

probability for SD that came from climate model projections was reflected in the CNRM result. Compared to large fire probability, there was a much stronger effect of land use scenario on structure loss projections, and more variation in which scenarios exceeded baseline for NC (Fig. 8a) and SD (Fig. 8b). BP showed little variation in either climate or land use scenario probabilities. In NC, the rural land use scenario had a much larger probability of structure loss overall, and for CNRM, this difference generally determined whether probability would increase or decrease relative to the baseline. The rural scenario also resulted in higher overall structure loss probabilities in SD, but this was mostly apparent in 2049.

While structure loss was higher overall across regions and climate scenarios in the rural land use scenario (Fig. 8), there was considerable spatial heterogeneity in the effect of the land use scenario (Fig. 9). Comparing the rural land use scenario to the urban scenario in NC and SD, there were small changes to structure loss probabilities across most of the currently semi-urban and urban areas and large increases in structure loss probabilities in the currently rural areas (compare Fig. 9 to Fig. 4). In contrast, BP had locations of large increases and decreases in structure loss probabilities under the rural land use scenario compared to the urban land use scenario. However, all three regions had higher predicted structure loss in areas where there was an increase in low-density housing.

4. Discussion

Our projections suggest that both climate and land use will drive future changes in patterns of wildfire and subsequent likelihood of structure loss; but the relative importance and strength of different drivers will vary across and within different regions. Future changes will depend upon the nature and degree of change in both climate and land use relative to current conditions. For example, locations with increased low density rural housing are likely to see increased structure loss even in decades with lower large fire probabilities (compare decades 2029 and 2049 in Figs. 7a and 8a). Changes will also vary according to the strength and nature of regional relationships among climate, land use, fire patterns, and structure loss, with potential feedbacks among these drivers. Despite these complexities, which underscore the importance of customizing policy and management by geographical location (Keeley et al., 2009; Moritz et al., 2014), there were also key commonalities across regions. In particular, structure loss mostly occurred at fairly low housing densities. While more work needs to be done to create models that incorporate short-term weather conditions, such as wind, and feedbacks among drivers, we believe that the central importance of housing density to structure loss may be generally applicable to fire-prone landscapes.

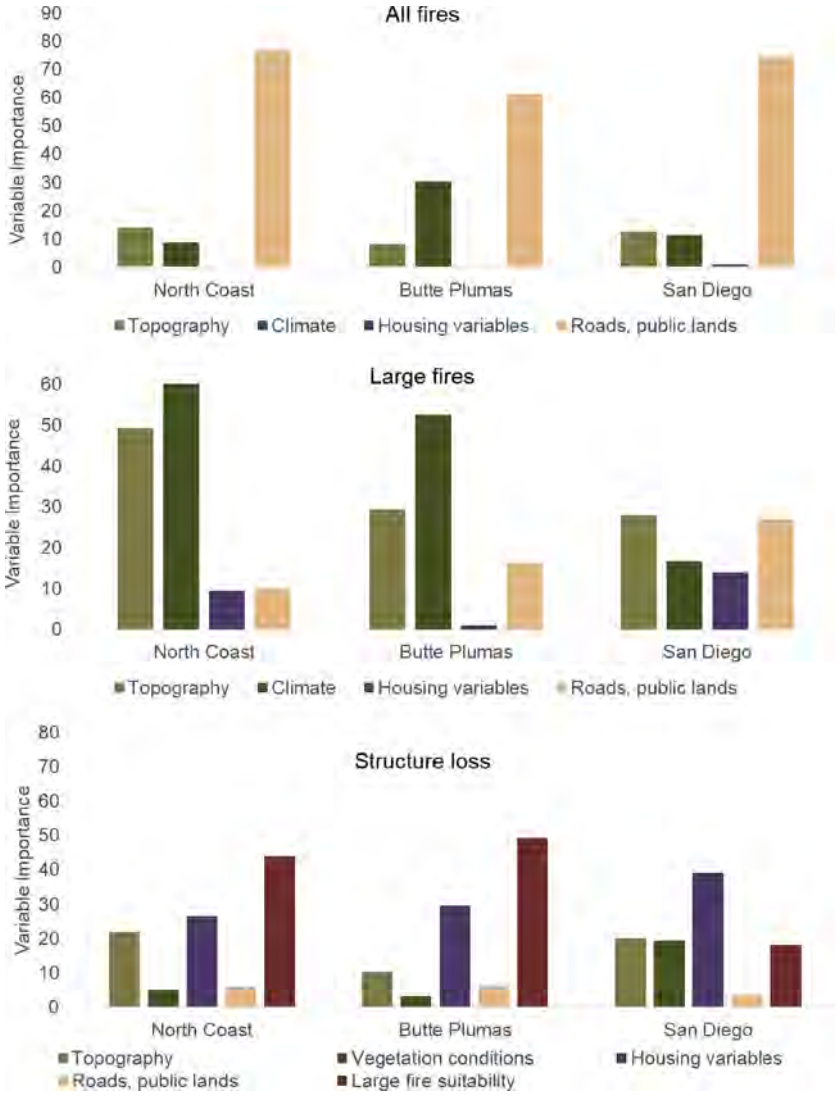


Fig. 5. MaxEnt variable permutation importance for fire and structure loss models in three California study areas, with variables grouped into categories. The fuel category for structure loss consisted of actual evapotranspiration and climatic water deficit.

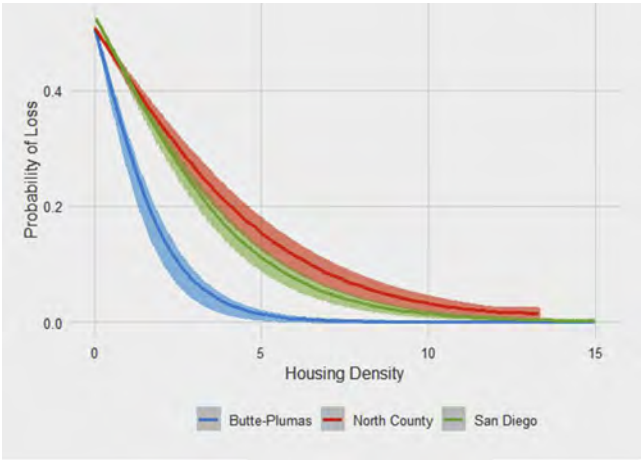


Fig. 6. Probability of structure loss relative to housing density (units/ha) for three California study areas, averaged across 5 model replicates.

4.1. High anthropogenic variable importance for fire ignitions, but not large fires

One commonality across regions was that anthropogenic variables were most important in explaining patterns of fire ignitions, whereas large fires were more related to topography, climate, and fuel (via AET and CWD). This finding is not surprising given that most fires in California are started by humans (Syphard et al., 2007; Balch et al., 2017), near human infrastructure (Syphard and Keeley, 2016). The finding is also consistent with other studies that have shown differences between the drivers of small and large fires (e.g., Syphard et al., 2008, 2016, Barros and Perreira, 2014; Abatzoglou et al., 2018) and that large fires are more likely to occur in remote areas where fuel continuity is greater, with severe winds better able to propagate fires via long-distance ember production, and access to suppression is lower (Gray et al., 2014). The consistency with other studies, and across divergent regions in this study, has important considerations for management. For example, ignition prevention efforts may be most effective if geographically concentrated near roads and development. Thus, land use change may generally be the biggest concern for preventing fires from starting; but climate change, in addition to weather and fuel patterns, may be more critical in the consideration of large fire behavior. One exception is that, unlike other human-caused fire sources, powerline-

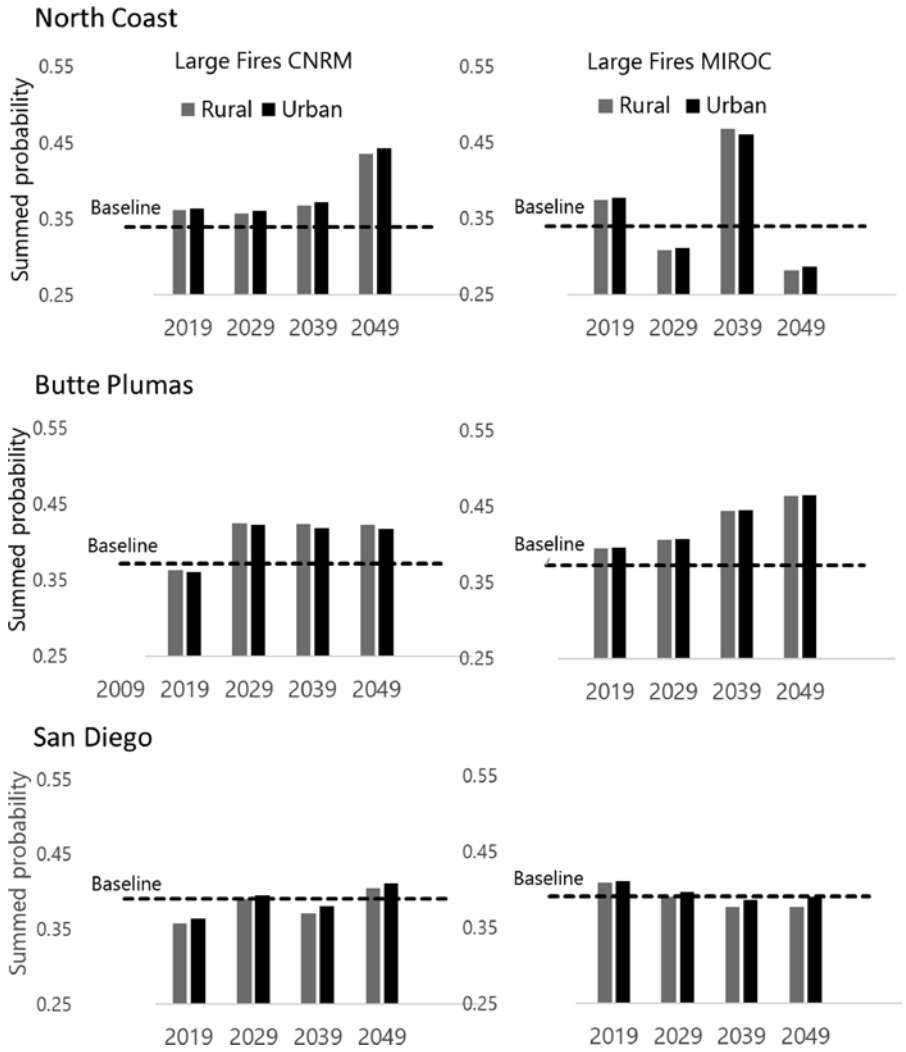


Fig. 7. Total projected probability of large fires under two climate and two land use scenarios for a) North Coast, b) Butte Plumas, and c) San Diego.

ignited fires tend to occur in more remote areas during severe weather, and these fires often result in large areas burned with substantial human losses (Keeley and Syphard, 2018). Understanding the relative importance of anthropogenic variables is critical given expected changes in human land use with resulting downstream impacts on deliberate or accidental ignitions, prescribed burning, mechanical vegetation treatments, and fire suppression.

The timing of ignitions, particularly corresponding with extreme fire weather, may be the most important variable to consider in determining whether fires become large and potentially destructive to human assets (Syphard et al., 2016; Abatzoglou et al., 2018). Historical analysis has also shown there to be an overall low correlation between fire frequency and area burned in California (Keeley and Syphard, 2018). Thus, small, frequent fires caused by human ignitions do not necessarily lead to highly destructive fires. Instead, the fires most likely to cause structure loss tend to be ignited in low-intermediate population or housing density (Syphard et al., 2007, 2009), adjacent to areas of high fuel loading.

Studies of historical fire-climate relationships in California (Keeley and Syphard, 2015, 2016) and across the U.S. (Littell et al., 2009; Parisien and Moritz, 2009; Syphard et al., 2017a; Littell et al., 2018) show differences in the strength and nature of climatic control over fire activity. In particular, those areas where fire is most strongly explained by climate in California are in northern, higher-elevation parts of the state, whereas in southern CA, fire-climate relationships have historically been weak (Keeley and Syphard, 2016). Other studies have shown fire-climate relationships to be weaker in areas with higher human presence (Higuera et al., 2015; Ruffault and Mouillot, 2015; Mann et al., 2016; Syphard et al., 2017b), and this is supported in our results, with the SD study area having both the highest overall housing density and the weakest link between climate and large fire suitability. SD was also the study area with the strongest relationship between anthropogenic variables and patterns of large fire suitability.

4.2. *Predicted future wildfire varied less across scenarios than structure loss*

Given the weak ties between climate and large fire suitability in SD, there were no major changes projected for large fires here, which is an important result given widespread concern that climate change will be responsible for increasing future fire activity across the western U.S. (Westerling et al., 2006; Barbero et al., 2015; Abatzoglou and Williams, 2016). Nevertheless, there could be other types of indirect climate change effects on fires in southern CA, such as long-term drought (Keeley and Zedler, 2009), vegetation type conversion facilitated by drier conditions (Jacobsen et al. (2007); Park et al., 2018; Syphard et al., 2018b), or changes in wind patterns (Guzman-Morales et al. (2016)). For the other two study areas, climate change was projected to increase large fire probability by the middle of the century, which corresponded to at least part of the increase in structure loss probability in these regions. In all regions, it is important to acknowledge that,

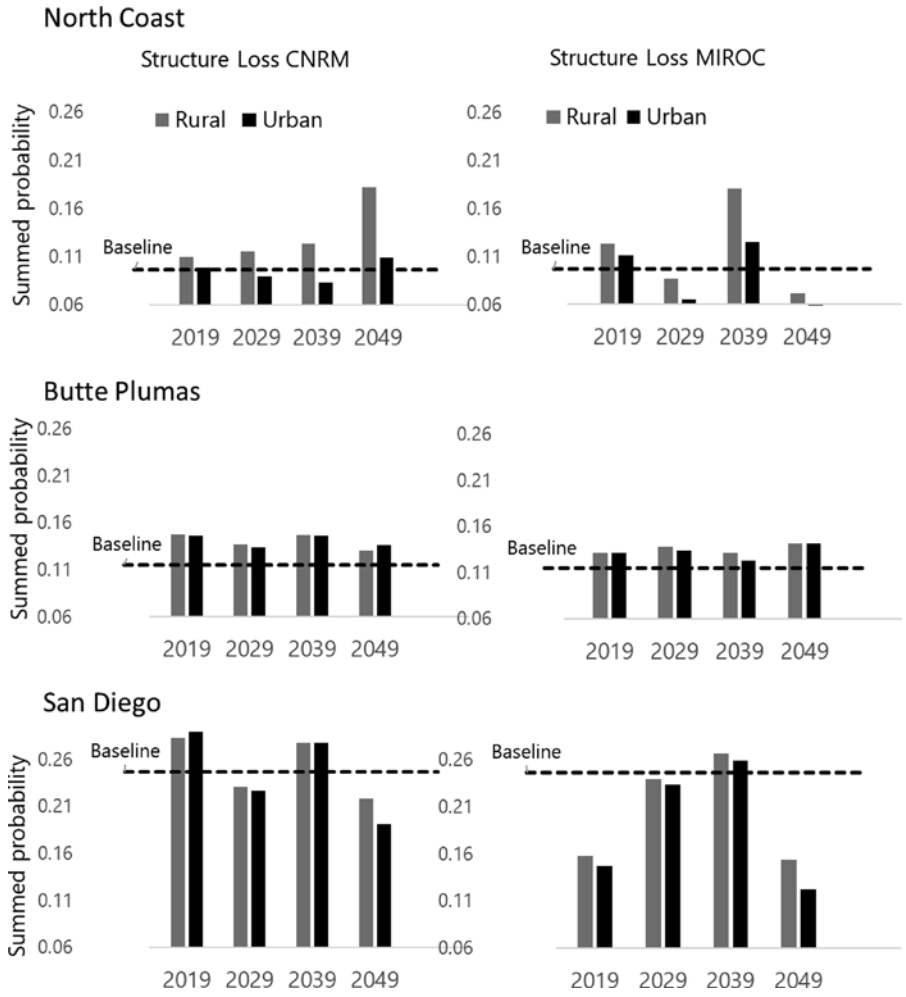


Fig. 8. Total projected probability of structure loss under two climate and two land use scenarios for a) North Coast, b) Butte Plumas, and c) San Diego.

despite inclusion of AET and CWD as proxies for fuel amount and condition, fire-vegetation feedbacks or vegetation type changes were not accounted for, and these could play an important, yet undetermined role in future fire activity (Syphard et al., 2018).

Particularly in the NC study area, land use change scenario played a major role in differences in structure loss probability, due to the significant relationships found in the baseline models as well as the nature of projected change in the rural versus urban scenarios. That is, there was substantially more expansion of low-density housing in the rural scenario versus the urban scenario in the NC study area, corresponding with the densities where most structures have been destroyed (i.e., the middle class in Fig. 4). This was true in BP and SD as well, but to a lesser extent. Also, for the urban scenario projections in all regions, and the rural projections for SD, there were both increases and decreases in housing density across the landscape; this patchwork of change may have dampened the apparent effect of land use on future projections of either fire or overall structure loss probability. Another important consideration is that structure loss probability may shift over time in response to changing density patterns. In other words, as some lower-density developments fill in with new homes, they may become less susceptible in the future; this is the likely reason that structure loss probability was projected to decline in some scenarios and time periods.

In modeling the decadal projections, we attempted to understand how different growth trajectories influenced model outcomes. For example, a region may initially experience low-density housing development in 2020–2030 that transitions to high density development by 2050. We hypothesized that either large fire or structure loss probability might thus vary through time as a function of the underlying housing density. However, given that land use was not one of the most important predictors of large fires, we did not observe a strong effect of oscillating housing density on fire projections. Instead, the up and down behavior in large fires, particularly in NC under MIROC, was due to idiosyncratic oscillations in climate projections that resulted from the climate model. For projections of structure loss, there was continued growth of low-density housing in the rural scenario for NC, which resulted in consistently higher structure loss probabilities over time. On the other hand, some areas of low-density development converted into high density development in San Diego County, which led to a net decline of structure loss probability by 2049. Overall, however, the biggest differences in effect of housing density was via the higher concentration of high-density development in the urban versus rural scenarios.

It is important to clarify that the land use scenarios were not meant to reflect precise changes but were designed to emphasize possible differences based on housing density and general trends towards urban or rural development. The land use change model tended to emphasize temporal and spatial spillovers; that is, any projection of housing density change in largely uninhabited areas first required either a history of growth or a spillover of growth from neighboring polygons, and this may have limited spatial expansion of housing in those areas. In other words, the model results, particularly for the rural growth scenario may understate the risks associated with low-density development. Further, we also assumed that road proximity, the distance to urban areas (areas with $\geq$10,000 residences), and the proximity to public land would remain unchanged over time, suggesting the results here are conservative.

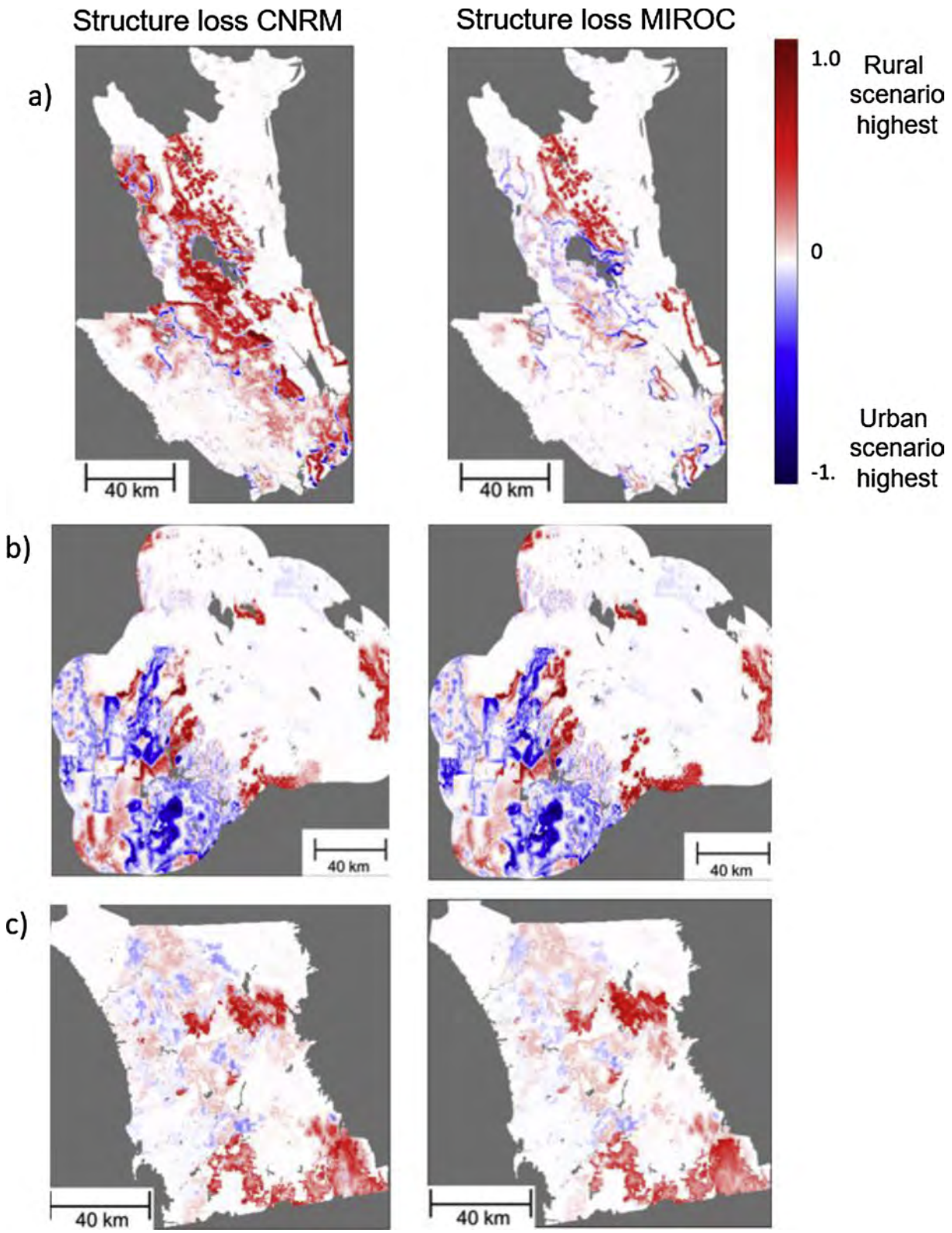


Fig. 9. Projected differences in structure loss probability at 2049 between the rural and urban density land use scenarios for CNRM and MIROC in the a) North Coast, b) Butte Plumas, and c) San Diego study areas.

4.3. Higher structure loss was seen in low density development

Regardless of future projections, one of the striking commonalities in the results was that observed structure loss occurred in larger fires and at lower housing densities than the averages for the regions. There are two different statistics related to housing density that are closely related but distinct. The first is the probability of structure loss for any house given its density (i.e., Fig. 6), and the other is the total number of structures lost at different housing densities (i.e., Fig. 3). Our results showed that probability of structure loss is negatively related to

housing density in all regions, and while most destroyed structures were located in lower housing density classes, some structures were also destroyed at high densities. The association between structure loss and housing pattern has been documented in recent studies (Syphard et al., 2012, Alexandre et al. 2016, Kramer et al., 2018), and there has long been an assumption that fire risk is highest at the Wildland-Urban Interface (WUI), where houses meet or intermingle with wildland vegetation, both in the U.S. (e.g., Radeloff et al., 2018, Mell et al., 2010) and internationally (e.g., Lampin-Maillet et al., 2010; Montiel Molina and Galiana-Martín, 2016; Argañaraz et al. (2017)). However, the occurrence of several highly catastrophic wildfire events within high-density developments (e.g., Cohen and Stratton, 2008; Price and Bradstock, 2013; Nauslar et al., 2018), including recent California events, combined with previous lack of data associating changes in fire losses to changes in development patterns (McCaffrey et al. https://fireadaptednetwork.org/fire-narratives-accurate/) have led to questions and debate over which are the most dangerous development patterns.

Thus, one of the most important results of this study is that, even considering the massive numbers of structures that were destroyed in the last two years in wind-driven fire events, the overall mean housing density where houses are most likely to be destroyed (0.08 to 2.01 structures/ha pre-2015 and 1.24–3.61 in recent events) was more than an order of magnitude lower than the average housing density on the landscape for most cases (except the Camp Fire where the destroyed structure density was about 50% lower and the 2017 North Coast Fires, where the destroyed structure density was about 66% lower than total structures). The recent wildfires were uncharacteristic in the sheer number of structures and lives lost relative to historical numbers, in addition to the fact that wildfires did reach and enter parts of high-density urban areas in Coffey Park (Tubbs Fire), Paradise (Camp Fire), and the city of Malibu (Woolsey Fire). Thus, a lot more research is needed to understand how and why so many structures were lost. One clear factor were the wind speeds in these events, in addition to apparently substantial structure-to-structure spread and incendiary ember ignitions in which the houses themselves were more flammable than the nearby vegetation. Nevertheless, the losses in urban areas were still only a portion of the total number of structures destroyed in these fires, and thus they do not change the main conclusions of our study: overall, most structure loss tends to occur in areas of low-density development. One caveat is that we calculated housing density using data from the 2000 Census projected to 2009 as a baseline, and thus housing density has likely changed since then. However, the relative comparisons likely still hold because we consistently used the same housing data. Another recent study reported that the majority of threatened and destroyed structures from the last 30 years in the U.S. were located within the WUI; furthermore, when destroyed houses were not located in the WUI, the most common reason was that the housing density was lower than that in the WUI definition (Kramer et al., 2018).

The most likely explanation for this striking consistency is that housing patterns largely reflect exposure to wildfire. That is, wildfires typically burn through vegetation; and thus, those homes most interspersed with vegetation are most likely to encounter a wildfire in the first place, or be hit by incendiary embers. The reason for occasional catastrophic wildfire losses in high density areas is that, once exposed to a fire, a community with closely spaced homes made of flammable materials can lead to rapid house-to-house spread, particularly during severe weather conditions. In these cases, like the Tubbs fire in 2017 and Camp fire in 2018, the house itself becomes the fuel that propagates the fire.

Therefore, in terms of addressing conflicts between housing and wildfire in the future, the most effective mitigation may be land use and urban planning decisions that reduce the exposure of homes to wildfires (Syphard et al., 2013, 2016, Butsic et al., 2017). However, mitigation measures focused on defensible space and fire-safe construction materials, particularly when houses are closely spaced, are also critical for preventing future losses (Syphard et al., 2015, 2017c), as are other traditional fire management practices such as fire suppression and strategic location of fuel breaks to allow safe firefighter access to defend homes.

4.4. Conclusion

Looking at fire ignitions, large fires, and structures burned, we explored the importance of climatic and human variables for explaining fire and structure loss patterns across three diverse California landscapes, under current and future climate (hot-dry or warm-wet) and land use (rural or urban residential growth) scenarios. Across regions, we found that housing and human infrastructure were more responsible for explaining fire ignitions and structure loss probability. Large fires were better explained by climate, topography, and fuel variables. The differing strengths of these relationships interacted with the climate and land use scenarios, resulting in variability across regions in the relative importance of climate and housing patterns on fire and structures burnt. Focusing only on empirical housing density and structures burnt, we found that most structure loss occurred in areas with low housing density (from 0.08 to 2.01 units/ha), and as such, expansion of rural residential land use generally increased projected structure loss probability in the future. Both the historical results and the future projections highlight that future changes are likely to be complex and will result from a range of interacting factors. Climate change will be important to consider for managers and policy makers in some, but not all regions. In all areas, land use change merits increased attention, as local policy decisions can influence future patterns of development and exposure of structures to risk of loss in large wildfires.

Acknowledgments

Thanks to Tim Sheehan for taking the time to generate summary statistics and to create maps showing differences in scenarios, and thanks to Ken Ferschweiler who helped compile the climate data. We are also grateful to Stefania Di Tommaso for helping us to assemble many spatial layers for our three study areas.Funding provided by the Berkeley Energy and Climate Institute.

Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:https://doi.org/10.1016/j.gloenvcha.2019.03.007.

References

Abatzoglou, J.T., Williams, A.P., 2016. Impact of anthropogenic climate change on wildfire across western US forests. Proc. Natl. Acad. Sci. U. S. A. 113 (42), 11770–11775.
Abatzoglou, J.T., et al., 2018. Human-related ignitions concurrent with high winds promote large wildfires across the USA. Int. J. Wildland Fire 27 (6), 377–386.
Aldersley, A., Murray, S.J., Cornell, S.E., 2011. Global and regional analysis of climate and human drivers of wildfire. Sci. Total Environ. 409 (18), 3472–3481.
Alexandre, P.M., et al., 2016a. The relative impacts of vegetation, topography and spatial arrangement on building loss to wildfires in case studies of California and Colorado. Landsc. Ecol. 31 (2).
Alexandre, P.M., et al., 2016b. Factors related to building loss due to wildfires in the conterminous United States. Ecol. Appl. 26 (7).
Argañaraz, J.P., et al., 2017. Assessing wildfire exposure in the wildland-urban interface area of the mountains of central Argentina. J. Environ. Manage. 196, 499–510.
Balch, J.K., et al., 2017. Human-started wildfires expand the fire niche across the United States. Proc. Natl. Acad. Sci. 114 (11), 2946–2951. https://doi.org/10.1073/pnas.1617394114. Available at:.
Barbero, R., et al., 2015. Climate change presents increased potential for very large fires in the contiguous United States. Int. J. Wildland Fire 24 (7), 892–899.
Bar-Massada, A., et al., 2012. Wildfire ignition-distribution modelling: a comparative study in the Huron–manistee National Forest, Michigan, USA. Int. J. Wildland Fire 22, 174–183. Available at: [Accessed November 18, 2013]. http://www.publish.csiro.au/?paper=WF11178.
Barros, A.M.G., Pereira, J.M.C., 2014. Wildfire selectivity for land cover type: does size

matter? PLoS One 9 (1), e84760..
Batllori, E., et al., 2013. Climate change-induced shifts in fire for Mediterranean ecosystems. Glob. Ecol. Biogeogr. 22 (10), 1118–1129.
Bistinas, I., et al., 2013. Relationships between human population density and burned area at continental and global scales. PLoS One 8 (12), e81188.
Bowman, D.M.J.S., et al., 2014. Pyrogeographic models, feedbacks and the future of global fire regimes. Glob. Ecol. Biogeogr. 23 (7), 821–824.
Bradstock, R.A., 2010. A biogeographic model of fire regimes in Australia: current and future implications. Glob. Ecol. Biogeogr. 19 (2), 145–158.
Butsic, V., et al., 2015. Land use and wildfire: a review of local interactions and teleconnections. Land 4, 140–156.
Butsic, V., et al., 2017. Modeling the impact of private land conservation on wildfire risk in San Diego County. CA. Landscape and Urban Planning 157, 161–169.
Cohen, J., Stratton, R., 2008. Home Destruction Examination: Grass Valley Fire. Lake Arrowhead, California, Vallejo, CA.
Davis, R., et al., 2017. The normal fire environment—modeling environmental suitability for large forest wildfires using past, present, and future climate normals. For. Ecol. Manage. 390, 173–390186. https://doi.org/10.1016/j.foreco.2017.01.027. Available at:.
Doerr, S.H., Santín, C., 2016. Global trends in wildfire and its impacts: perceptions versus realities in a changing world. Philos. Trans. Biol. Sci. 371 (1696).
Elith, J., et al., 2006. Novel methods improve prediction of species' distributions from occurrence data. Ecography 29 (2), 129–151.
Elith, J., et al., 2011. A statistical explanation of MaxEnt for ecologists. Divers. Distrib. 17 (1), 43–57. https://doi.org/10.1111/j.1472-4642.2010.00725.x. Available at:.
Fielding, A., Bell, J., 1997. A review of methods for the assessment of prediction errors in conservation presence/absence models. Environ. Conserv. 24 (1), 38–49.
Flint, L.E., Flint, A.L., 2014. California Basin Characterization Model: A Dataset of Historical and Future Hydrologic Response to Climate Change, (ver.1.1, May 2017): U.S. Geological Survey Data Release. https://doi.org/10.5066/F76T0JPB.
Gray, M.E., Dickson, B.G., Zachmann, L.J., 2014. Modelling and mapping dynamic variability in large fire probability in the lower Sonoran Desert of south-western Arizona. Int. J. Wildland Fire 23 (8), 1108–1118.
Guzman-Morales, J., et al., 2016. Santa Ana Winds of Southern California: their climatology, extremes, and behavior spanning six and a half decades. Geophys. Res. Lett. 43 (6), 2827–2834.
Hantson, S., et al., 2015. Anthropogenic effects on global mean fire size. Int. J. Wildland Fire 24 (5), 589–596. https://doi.org/10.1071/WF14208. Available at:.
Hessl, A.E., 2011. Pathways for climate change effects on fire: models, data, and uncertainties. Prog. Phys. Geogr. 35 (3), 393–407.
Higuera, P., et al., 2015. The changing strength and nature of fire-climate relationships in the Northern Rocky Mountains, U.S.A., 1902-2008. PLoS One 10 (6) e01277563.
Jacobsen, A.L., et al., 2007. Cavitation resistance and seasonal hydraulics differ among three arid Californian plant communities. Plant Cell Environ. 30 (12), 1599–1609.
Jolly, M.W., et al., 2015. Climate-induced variations in global wildfire danger from 1979 to 2013. Nat. Commun. 6, 7537.
Keeley, J.E., Syphard, A.D., 2016. Climate change and future fire regimes: examples from California. Geosciences (Switzerland) 6 (3).
Keeley, J.E., Syphard, A.D., 2017. Different historical fire-climate patterns in California. Int. J. Wildland Fire 26 (4), 253–268.
Keeley, J.E., Syphard, A.D., 2018. Historical patterns of wildfire ignition sources in California ecosystems. Int. J. Wildland Fire 26 (4), 253–268.
Keeley, J.E., et al., 2009. The 2007 southern California wildfires: lessons in complexity. J. For. 107, 287–296.
Keeley, J.E., Zedler, P.A., 2009. Large, high intensity fire events in southern California shrublands: debunking the fine-grained age-patch model. Ecol. Appl. 19, 69–94.
Kramer, H.A., et al., 2018. Where wildfires destroy buildings in the US relative to the wildland–urban interface and national fire outreach programs. Int. J. Wildland Fire 27 (5), 329–341.
Kravitz, R., 2017. Projected Climate Scenarios Selected to Represent a Range of Possible Futures in California Description: Projected Climate Scenarios Selected to Represent a Range of Possible Futures in California Projected Climate Scenarios Selected to Represent a Range, Sacramento, CA. Available at:. http://docketpublic.energy.ca.gov/PublicDocuments/16-IEPR-04/TN215798_20170207T111409_Projected_Climate_Scenarios_Selected_to_Represent_a_Range_of_Po.pdf.
Krawchuk, M.A., Moritz, M.A., 2014. Burning issues: statistical analyses of global fire data to inform assessments of environmental change. Environmetrics 25 (6), 472–481. https://doi.org/10.1002/env.2287. Available at:.
Krawchuk, M.A., et al., 2009. Global pyrogeography: the current and future distribution of wildfire. PLoS One 4.
Lampin-Maillet, C., et al., 2010. Mapping wildland-urban interfaces at large scales integrating housing density and vegetation aggregation for fire prevention in the South of France. J. Environ. Manage. 91 (3), 732–741.
Littell, J.S., et al., 2009. Climate and wildfire area burned in western U.S. ecoprovinces, 1916–2003. Ecol. Appl. 19 (4), 1003–1021.
Littell, J.S., et al., 2018. Climate change and future wildfire in the Western United States: an ecological approach to Nonstationarity. Earths Future 6, 1097–1111.
Mann, M.L., et al., 2014. Modeling residential development in California from 2000 to 2050: integrating wildfire risk, wildland and agricultural encroachment. Land Use Policy 41, 438–452. https://doi.org/10.1016/j.landusepol.2014.06.020. (June 2009)Available at:.
Mann, M.L., et al., 2016. Incorporating anthropogenic influences into fire probability models: effects of human activity and climate change on fire activity in California. PLoS One 11 (4), 1–21.
Mell, W.E., et al., 2010. The wildland-urban interface fire problem – current approaches and research needs. Int. J. Wildland Fire 19, 238–251.
Montiel Molina, C., Galiana-Martín, L., 2016. Fire scenarios in Spain: a territorial approach to proactive fire management in the context of global change. Forests 7 (11), 273.
Moritz, M.A., 1997. Analyzing extreme disturbance events: fire in Los Padres National Forest. Ecology 7 (4), 1252–1262.
Moritz, M.A., et al., 2014. Learning to coexist with wildfire. Nature 515 (7525).
Nauslar, N., Abatzoglou, J., Marsh, P., 2018. The 2017 North Bay and Southern California Fires. A Case Study. Fire 1 (1).
Parisien, M.A., Moritz, M.A., 2009. Environmental controls on the distribution of wildfire at multiple spatial scales. Ecol. Monogr. 79, 127–154 ST–Environmental controls on the distri.
Parisien, M.-A., et al., 2016. The spatially varying influence of humans on fire probability in North America. Environ. Res. Lett. 11 (7), 75005 Available at: http://stacks.iop.org/1748-9326/11/i=7/a=075005.
Park, I.W., et al., 2018. Impacts of climate, disturbance and topography on distribution of herbaceous cover in Southern California chaparral: insights from a remote-sensing method. Divers. Distrib. 24 (4), 497–508. https://doi.org/10.1111/ddi.12693. Available at:.
Parks, S., et al., 2016. How will climate change affect wildland fire severity in the western US? Environ. Res. Lett. 11, 035002.
Phillips, S.J., Dudik, M., 2008. Modeling of species distributions with Maxent: new extensions and a comprehensive evaluation. Ecography 31 (2), 161–175.
Price, O., Bradstock, R., 2013. Landscape scale influences of forest area and housing density on house loss in the 2009 Victorian bushfires. PLoS One 8 (8), e73421.
Radeloff, V.C., et al., 2018. Rapid growth of the US wildland-urban interface raises wildfire risk. Proc. Natl. Acad. Sci. U. S. A. 115 (13).
Restaino, C.R., Safford, H.D., 2018. "Fire and Climate Change." Fire in California's ecosystems, second edition. University of California Press, Berkeley, California, USA, pp. 493–505.
Ruffault, J., Mouillot, F., 2015. How a new fire-suppression policy can abruptly reshape the fire-weather relationship. Ecosphere 6 (10) E15–00182.1.
Steel, Z.L., Safford, H.D., Viers, J.H., 2015. The fire frequency-severity relationship and the legacy of fire suppression in California forests. Ecosphere 6 (1), 1–23.
Swain, D.L., et al., 2018. Increasing Precipitation Volatility in Twenty-first-century California.Increasing Precipitation Volatility in Twenty-first-century California.
Syphard, A.D., Keeley, J.E., 2015. Location, timing, and extent of wildfire varies by cause of ignition. Int. J. Wildland Fire 24 (1), 37–47.
Syphard, A.D., et al., 2007. Human influence on California fire regimes. Ecol. Appl. 17 (5), 1388–1402. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17708216.
Syphard, A.D., et al., 2008. Predicting spatial patterns of fire on a southern California landscape. Int. J. Wildland Fire 17 (5), 602.
Syphard, A.D., et al., 2012. Housing arrangement and location determine the likelihood of housing loss due to wildfire. PLoS One 7 (3), 1–13.
Syphard, A.D., et al., 2013. Land use planning and wildfire: development policies influence future probability of housingloss B. Bond-Lamberty. ed. PLoS ONE 8 (8), e71708 Available at: http://dx.plos.org/10.1371/journal.pone.0071708.
Syphard, A.D., et al., 2016. Setting priorities for private land conservation in fire-prone landscapes: Are fire risk reduction and biodiversity conservation competing or compatible objectives? Ecol. Soc. 21 (3).
Syphard, A.D., Keeley, J.E., Abatzoglou, J.T., 2017a. Trends and drivers of fire activity vary across California aridland ecosystems. J. Arid Environ. 144, 110–122. https://doi.org/10.1016/j.jaridenv.2017.03.017. Available at:.
Syphard, A.D., et al., 2017b. Human presence diminishes the importance of climate in driving fire activity across the United States. Proc. Natl. Acad. Sci. U. S. A. 114 (52).
Syphard, A.D., Brennan, T.J., Keeley, J.E., 2017c. The importance of building construction materials relative to other factors affecting structure survival during wildfire. Int. J. Disaster Risk Reduct. 21.
Syphard, A.D., et al., 2018. Mapping future fire probability under climate change: does vegetation matter? PLoS One 13 (8), e0201680.
Syphard, A.D., Brennan, T.J., Keeley, J.E., 2018b. Drivers of chaparral type conversion to herbaceous vegetation in coastal Southern California. Divers. Distrib.
Tracy, J.L., et al., 2018. Random subset feature selection for ecological niche models of wildfire activity in Western North America. Ecol. Modell. 383, 52–68.
van Wagtendonk, J.W. (Ed.), 2018. Fire in California's Ecosystems. Univ of California Press.
Veloz, S.D., 2009. Spatially autocorrelated sampling falsely inflates measures of accuracy for presence-only niche models. J. Biogeogr. 36, 2290–2299.
Warren, D.L., Glor, R.E., Turelli, M., 2010. ENMTools: a toolbox for comparative studies of environmental niche models. Ecography 33 (3), 607–611.
Westerling, A.L., Bryant, B.P., 2008. Climate change and wildfire in California. Clim. Change 87, S231–S249 ST–Climate change and wildfire in Cal.
Westerling, A.L., et al., 2006. Warming and earlier spring increase western US forest wildfire activity. Science 313 (5789), 940–943.
Whitman, E., et al., 2015. The climate space of fire regimes in north-western North America. J. Biogeogr. 42 (9), 1736–1749.

fire

MDPI

Article

Factors Associated with Structure Loss in the 2013–2018 California Wildfires

Alexandra D. Syphard [1,*] and Jon E. Keeley [2,3]

1 Sage Insurance Holdings LLC, San Francisco, CA 94102, USA
2 USGS Western Ecological Research Center, Three Rivers, CA 93271, USA
3 Department of Ecology & Evolutionary Biology, University of California, Los Angeles, CA 90095, USA
* Correspondence: asyphard@sageunderwriters.com; Tel.: +1-619-865-9457

Received: 15 August 2019; Accepted: 24 August 2019; Published: 2 September 2019



Abstract: Tens of thousands of structures and hundreds of human lives have been lost in recent fire events throughout California. Given the potential for these types of wildfires to continue, the need to understand why and how structures are being destroyed has taken on a new level of urgency. We compiled and analyzed an extensive dataset of building inspectors' reports documenting homeowner mitigation practices for more than 40,000 wildfire-exposed structures from 2013–2018. Comparing homes that survived fires to homes that were destroyed, we investigated the role of defensible space distance, defensive actions, and building structural characteristics, statewide and parsed into three broad regions. Overall, structural characteristics explained more of a difference between survived and destroyed structures than defensible space distance. The most consistently important structural characteristics—having enclosed eaves, vent screens, and multi-pane windows—were those that potentially prevented wind-born ember penetration into structures, although multi-pane windows are also known to protect against radiant heat. In the North-Interior part of the state, active firefighting was the most important reason for structure survival. Overall, the deviance explained for any given variable was relatively low, suggesting that other factors need to be accounted for to understand the full spectrum of structure loss contributors. Furthermore, while destroyed homes were preferentially included in the study, many "fire-safe" structures, having > 30 m defensible space or fire-resistant building materials, were destroyed. Thus, while mitigation may play an important role in structure survival, additional strategies should be considered to reduce future structure loss.

Keywords: defensible space; building construction; homeowner mitigation; firefighting; defensive actions; fire safety

1. Introduction

California has long been recognized for its fire-prone ecosystems and fire-related losses to human lives and property [1]. In the last several years, however, this recognition has turned into bewilderment and terror as tens of thousands of structures and hundreds of human lives have been lost in fire events throughout the state [2]. Deadly and destructive wildfires have been occurring in other regions across the globe as well, such as Portugal [3], Australia [4], and Southern Europe [5]. The increased frequency and magnitude of these fire events have contributed to the recent claim that we are entering a "new normal" phase of wildfires [6]. Most of these catastrophic fires are started by humans, so as populations steadily increase and people are pushed farther into hazardous wildlands, the problem could get even worse. Thus, the need to understand why and how structures are being destroyed during wildfires has taken on a new level of urgency.

Fully understanding why recent California wildfires were so destructive will likely require many years of research focusing on a range of factors at different scales, from fire behavior and climatology to

fire management and land development. Answering questions pertaining to fire behavior will require different data and methodological approaches, compared to answering the questions related to why homes were destroyed, although the actual outcome will be a combination of the two.

In California, there has been a long-standing interest in understanding how local and regional responses are needed to reduce damage from wildfires [7,8]. In terms of understanding why homes are destroyed, there is an emerging literature that includes studies focused on local, property-level factors as well as studies on landscape-scale factors such as vegetation management and fuel characteristics, fire suppression, topography, and housing development patterns (e.g., [9,10]). These studies have significantly advanced our understanding of home safety, but the majority have been conducted through computer simulations and laboratory experiments, and thus, there remains a need for pre- and post-fire empirical data to document and validate what happens under actual wildfire conditions [11]. Recent fire events have generated more data on structure losses, and the number of empirical studies is increasing, particularly relative to understanding spatial patterns of structure loss at a landscape scale [12–15].

In terms of defensible space, the state of California requires fire-exposed homeowners to create a minimum of 30 m (100 ft) of defensible space around structures, and some localities are beginning to require at least 60 m (200 ft) in certain circumstances (e.g., [16]). Of the few studies that have empirically tested the relative benefits of defensible space, the authors demonstrated that up to 30 m (100 ft) of vegetation reduction around a structure can significantly increase the chance of structure survival (e.g., [17–20]). However, in these case studies, the most effective distance of defensible space was much less than regulations require (e.g., [19,21,22]), and other factors, such as housing density, landscape position, proximity of vegetation to the house, irrigation and water bodies, and building construction materials, were equally or more important [20,23,24].

Regarding fire safety in building construction materials, there have been many detailed studies conducted via carefully designed laboratory experiments [25–27]; and recent building codes in California have been designed to reflect these studies. Despite the solid laboratory evidence, few empirical studies have documented building characteristics associated with structure loss in real wildfire situations. In one study, Syphard et al. [23] found several significant relationships among building construction materials and structure loss in San Diego County, CA, USA, with window framing material and number of windowpanes being more protective than roofing or exterior siding material, and year of construction also being a significant proxy for building characteristics. The sample size in this study was somewhat limited, however, and other factors like structure density and vegetation characteristics were found to be equally or more important, depending on the location of the structure.

In addition to knowing whether certain mitigation actions can be statistically significantly associated with structure destruction, it is important to understand how often these homeowner 'best practices' actually translate into structure survival. Statistical significance is not a safety guarantee and does not necessarily translate into probability. While it is important for homeowners to have the best protection available, it is also important for them to understand the extent to which these actions tend to result in a positive outcome. Without large datasets of actual structure losses, it has until now been impossible to know the frequency at which best practices translate into structure survival, and whether those results are generalizable across different landscapes.

As of now, most guidance on homeowner 'best practices' is derived from limited empirical studies and assumptions based on fire behavior, and thus, the relative efficacy of these practices remains largely theoretical. Empirical studies on the effects of local homeowner mitigation practices, including defensible space or building materials, have been mostly in the form of case studies for a selection of wildfires on specific landscapes (e.g., [19,23,28,29]). Although these studies provide insights, we need a broader understanding across multiple fire events, and thus we need a database that captures characteristics of structures exposed to many fires across a variety of ecosystems.

The California Department of Forestry and Fire Protection (Cal Fire) began a statewide building inspection program in the late 1980s that has been continually upgraded and improved over time, and recent large catastrophic wildfires have added enormously to the amount of data available. The Cal Fire Damage INSpection Program (DINS) was founded with the goal to collect data on damaged, destroyed, and unburned structures during and immediately after fire events to assist in the recovery process, to validate defensible space regulations, and to provide local governments and scientists information for analyzing why some structures burned and why some survived [30]. For all fire events in the state that involve the damage or destruction of buildings worth $10,000 or more, a team of trained inspectors visit during and immediately after the wildfire to collect, for all structures exposed to the fire, a range of information including the extent of damage, defensible space before the fire, building characteristics, and other items.

Through a public records request, we acquired DINS data for more than 40,000 structures that survived, were damaged, or were destroyed across all California wildfires from 2013–2018, making this potentially the largest combined dataset of its sort. Our objective was to summarize these data statewide and across three broad California regions (San Francisco Bay Area, Northern Interior forests and foothills, and Southern California) to a develop a more generalized understanding of local-scale factors characterizing and differentiating destroyed or majorly damaged structures ("destroyed") from those that survived or only had minor damage ("survived") during wildfires. Although other studies have shown landscape-scale and other spatial factors such as topography, fuels, and housing arrangement to significantly affect structure loss probability, we focused here exclusively on the homeowner mitigation practices quantified by the building inspectors to answer:

1. How important was the extent of defensible space in distinguishing destroyed and survived structures?
2. What structural characteristics of homes were associated with increased susceptibility to destruction?
3. Did these patterns vary by region?

2. Materials and Methods

2.1. Data and Summary Statistics

The Cal Fire DINS data were collected for all wildfires, of any size, that resulted in structure damage or destruction. Once building inspection teams arrived at a fire, they recorded information on every exposed structure, including damaged, destroyed, and unburned homes, valued at a minimum of $10,000 or greater than 120 square feet (11 square meters), which is the size at which a permit is required for building. The inspection process occurred by dividing active wildfires into geographical zones as the fire was burning, then a designated number of two-person teams of trained inspectors were assigned to the zone and went to the field to record data. Data were collected for surviving structures in addition to damaged and destroyed structures, and the level of structural damage was recorded in different percentage classes.

Given that most recent structure losses in California have occurred in three distinct regions of the state [2], with most losses occurring within single fire events, we divided the dataset into three regions to compare potential regional differences. Thus, we assigned each county with structure loss to either the "Bay Area", which included counties surrounding the San Francisco Bay; the "North-Interior", which included primarily the northern Sierra Nevada but also other northern coastal and interior counties; and "Southern CA", including coastal counties south of San Luis Obispo County (Table 1).

Building inspectors grouped the structures into classes of damage corresponding to unburned; minor (cosmetic or nonstructural damage); moderate (partial to complete failure of structural building elements); and destroyed. The vast majority of structures were in either the minor or destroyed classes (94% in the Bay Area, 99% in the North-Interior, and 95% in Southern CA), so we lumped

unburned with minor and called them "survived," and lumped moderate with destroyed and called those "destroyed."

The types of data collected included features of the property and vegetation, and inspectors also started to use pre-fire ancillary data, such as assessors' parcel information, to add details for badly damaged or destroyed structures. Most data fields were categorical to ensure consistency in recording, and the teams used phone applications and GPS data to enter information in the field. For this study, we summarized data for most categories in the inspection report, including distance of defensible space, roof type, exterior siding, eaves, windowpanes, vent screens, and deck or porch material.

The distance of defensible space around structures was recorded as one of several ordinal categories, including 0; 0–9 m (0–30 ft); 9–18 m (30–60 ft); 9–30 m (30–100 ft); 18–30 m (60–100 ft); and >30 m (100 ft). We therefore labeled defensible space into four classes in which 5 m (15 ft) were added to the lowest number of each class and used as the label. We merged the class 9–30 m (30–100 ft) with the 18–30 m (60–100 ft) class. Therefore, 0 or 0–9 m were labeled as "5 m", 9–18 m was labeled "14 m," 9–30 m or 18–30 m were labeled "22 m," and >30 m was labeled "35 m." We also used these numeric values to calculate average defensible space distances.

In the 2018 fires (including the Camp Fire and Woolsey Fire in the North-Interior and Southern CA regions, respectively), some new variables were added, including defensive action taken and home age. For defensive action, the inspectors recorded whether it was firefighters, civilians, or both who protected the structures during the wildfires, or, they recorded when the information was unknown. For all years, roof type was most frequently recorded as either "combustible" or "resistant" in the Bay Area, but it was broken into different material classes in the other two regions, so for each region we analyzed data according to the most commonly used classification for that variable. Vent screens were also characterized differently for different fires in which the "screened" class was broken into "fine" or "mesh > 1/8" in some cases, and "unscreened" was referred to as "no" or "none" in some cases. We lumped these together into "screened" and "unscreened".

Building data were collected for different occupancy types (e.g., single- and multi-family residences, outbuildings, commercial buildings, and barns), so we conducted an initial sensitivity analysis using the full dataset comparing rankings of proportions using all structures versus single-family residential structures only, and we found similar rankings for most variables. The variables in which the ranking between single-family residential and other buildings was different were those which would likely characterize non-residential structures (e.g., buildings having no windowpanes, vents, or eaves). Therefore, to preserve the integrity of these classes and for a more robust dataset we used all structures for our analyses in the different regions.

For all variables, there were a substantial number of blank fields where no data were recorded, so there are unequal numbers of data points in all data categories (Table S1). Therefore, we summarized and analyzed all data fields based only on the data that were available for those fields. For comparison purposes we calculated two types of proportions for different perspectives. First, we determined the proportion of the category in each burn class (i.e., for both survived and destroyed structures, what proportion belonged to each category of the variable); and second, we determined the proportion of burn class within each category (i.e., for each category in the variable, what proportion survived or were destroyed) (Figures S1–S8).

2.2. Analysis

To assess the relative importance of each variable, we developed simple generalized linear regression models (GLMs) [31] using defensible space or building characteristics as single predictor variables and survived versus destroyed structures as the bivariate dependent variable. For each model, we used a logit link and specified a binomial response, then calculated and compared the deviance explained (D^2), which is analogous to R-squared in linear regression for each variable. For the statewide analyses of defensive action and structure age, we used the combined data for the North-Interior and Southern CA regions only. We did not model roof type statewide (i.e., only ran

models for individual regions) because the classification system varied from region to region. For these regions, we used data from whichever classification was most common in each region (roof type 1 for North-Interior and Southern CA and roof type 2 for the Bay Area, Table 1). Given the large amount of missing data in the different explanatory variables, we did not perform multiple regression, as our objective was to create a relative importance ranking of the variables using only the data available.

Table 1. Number of destroyed and survived structures from 2013–2018 by county and region in California. Dash marks indicate no structure outcomes recorded. The bold totals report the sums of destroyed and survived structures for each region.

Region	County	Number Destroyed	Number Survived
Bay Area	Contra Costa	1	–
	Lake	2588	89
	Mendocino	566	32
	Monterey	88	4
	Napa	1123	587
	Santa Clara	29	700
	Santa Cruz	6	19
	Solano	11	56
	Sonoma	6764	470
	Yolo	24	88
	Total	**11,200**	**2045**
North-Interior	Amador	1	
	Butte	19,061	740
	Calaveras	936	31
	Fresno	10	2
	Humboldt	5	–
	Inyo	2	–
	Lassen	4	1
	Madera	16	4
	Mariposa	142	20
	Mono	58	6
	Nevada	63	4
	Shasta	1889	260
	Siskiyou	339	18
	Tehama	26	4
	Trinity	142	7
	Tuolumne	1	–
	Yuba	274	8
	Total	**22,969**	**1105**
Southern	Kern	398	21
	Kings	1	–
	Los Angeles	1667	339
	Orange	38	43
	Riverside	53	10
	San Diego	246	67
	San Luis Obispo	81	7
	Santa Barbara	110	42
	Ventura	1075	200
	Total	**3669**	**729**

Because defensible space distance classes can be hypothetically considered as progressively protective against harm (i.e., that more defensible space is more protective), we used a calculation common in medical research, the relative risk [32], to compare adjacent pairs of shorter and longer distance classes of defensible space in addition to comparing the protective effect of the shortest versus longest distance classes (0–30 ft vs. >100 ft). Relative risk is a ratio between proportions of classes having a good outcome (here, structure survived wildfire) versus proportions of classes having a bad outcome (here, structure was destroyed) and indicates whether there is either no relationship (a

value of 1) or if the exposed group (structures with shorter distances of defensible space) has either a significantly higher (values >1) or significantly lower (with values <1) risk of surviving the fire given the data available.

We also calculated the relative risk for most of the building inspection variables. For those with more than one independent category, we calculated the relative risk based on the proportion of survived structures in each category relative to the combined proportion of survived structures in all other categories. For variables with binary classes of "combustible" or "resistant", (Table 1), we calculated the relative risk using the combustible class as the exposure group.

3. Results

From 2013 to 2018, building inspectors examined 41,717 structures, with 37,838 (~90%) damaged or destroyed by fires in 36 California counties, with the largest number destroyed in Butte County in the North-Interior Region, followed by the Bay Area, then Southern California (Table 1). Of the total number of structures inspected, 18% (n = 2045) in the Bay Area, 5% (n = 1105) in the North-Interior, and 20% (n = 729) in Southern CA survived the fires.

3.1. Defensible Space and Defensive Actions

The relative importance of defensible space, as quantified by deviance explained in the regression models, was virtually nil statewide, and the only region in which defensible space had a deviance explained of at least 1% was the Bay Area (Figure 1). Statewide, home survival was associated with slightly longer average distances of defensible space, and this distinction was more pronounced for the Bay Area (Figure 2). On the other hand, when averaging mean values of defensible space classes across survived and destroyed homes, there was a slightly higher mean defensible space distance for destroyed structures in the North-Interior, and virtually no difference in Southern CA (Figure 2).

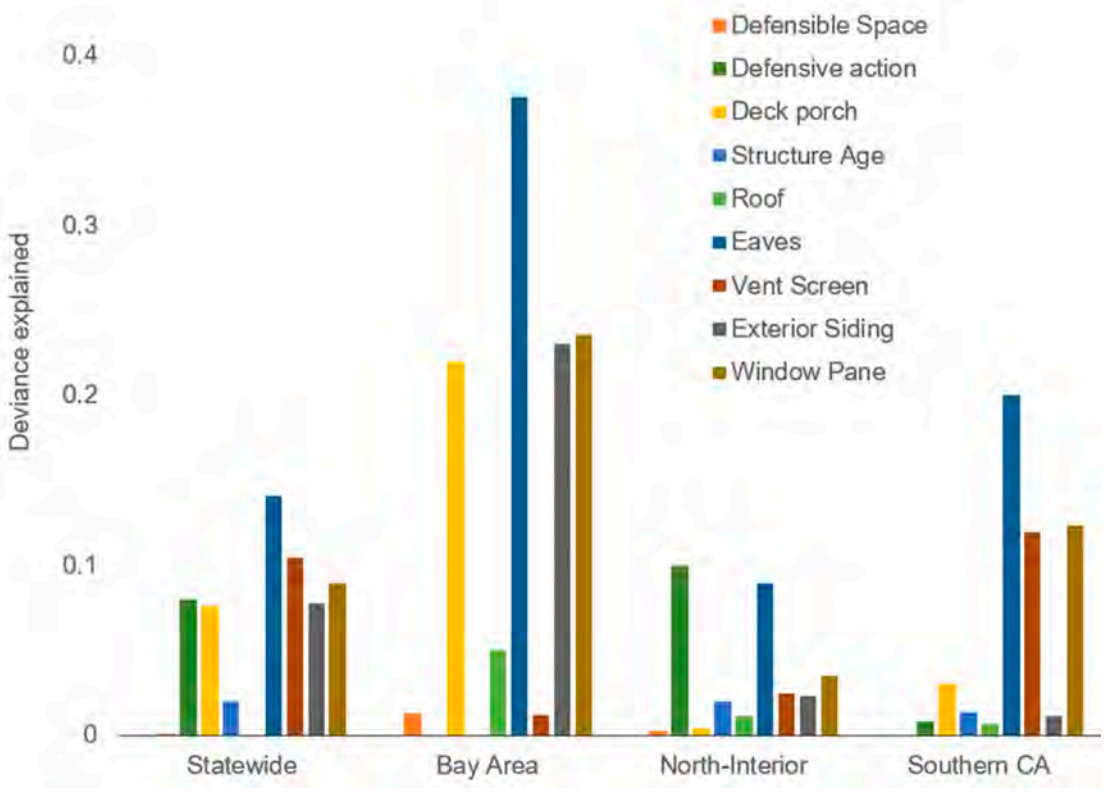


Figure 1. Deviance explained for building inspection variables statewide in three California regions. Defensive action and structure age were only available for North-Interior and Southern CA.

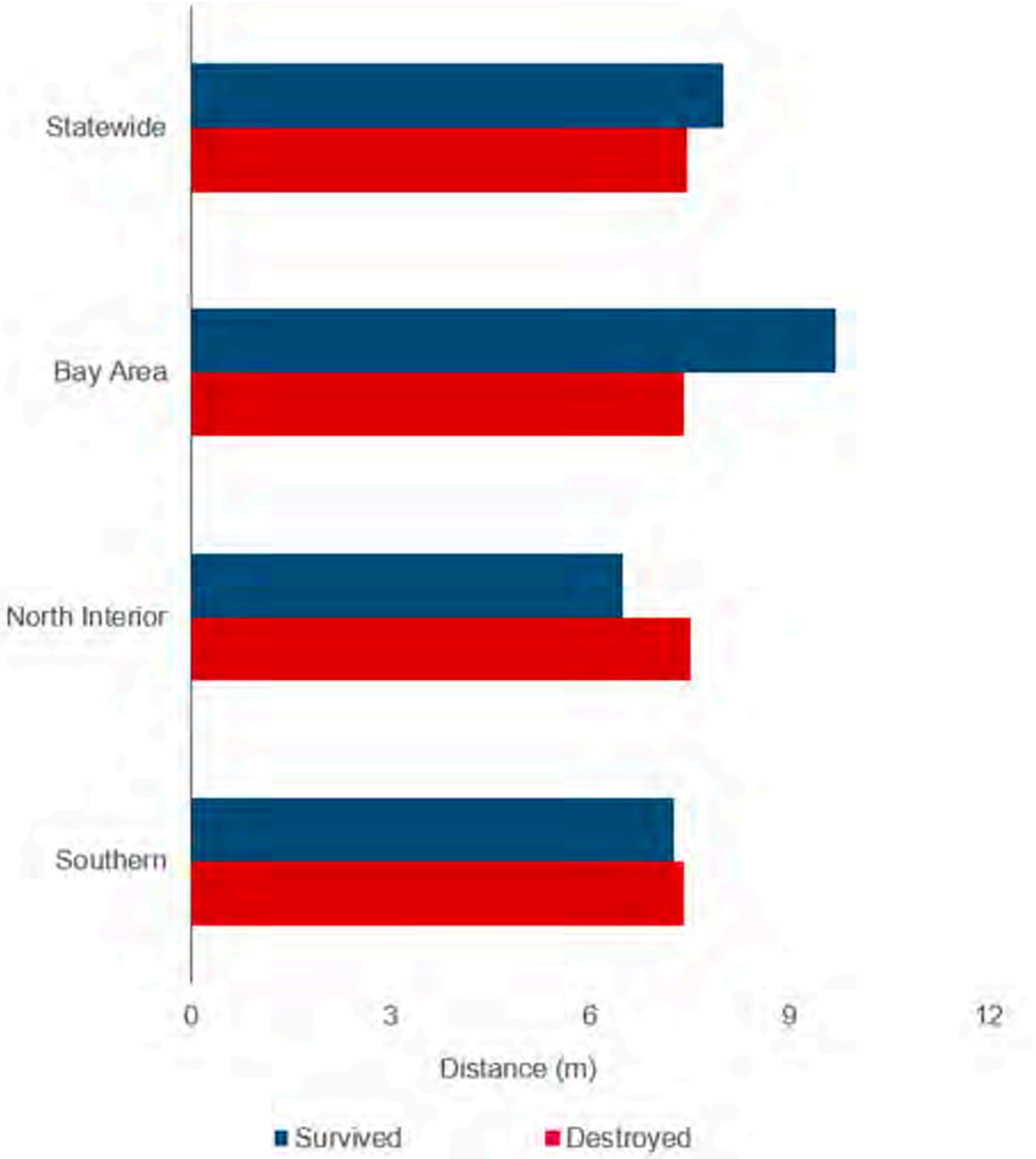


Figure 2. Average distance of defensible space for survived and destroyed structures statewide and in three California regions.

Figure 2. Average distance of defensible space for survived and destroyed structures statewide and in three California regions.

Except for the comparison between 22 m (75 f) vs. 14 m (45 ft) of defensible space statewide, the relative risk ratios for the statewide and Bay Area data showed consistently lower relative risk when comparing classes of longer distance intervals with shorter distance intervals (Table 2). In the North Interior, there was a higher relative risk of destruction with more defensible space when comparing 22 m (75 f) vs. 14 m (45 ft), but there was a significantly lower relative risk when comparing 35 m (115 ft) vs. 22 m (75 ft) (Table 2). There were no significant differences in relative risk among any defensible space distance classes in Southern California (Table 2).

Except for the comparison between 22 m (75 f) vs. 14 m (45 ft) of defensible space statewide, the relative risk ratios for the statewide and Bay Area data showed consistently lower relative risk when comparing classes of longer distance intervals with shorter distance intervals (Table 2). In the North Interior, there was a higher relative risk of destruction with more defensible space when comparing 22 m (75 f) vs. 14 m (45 ft), but there was a significantly lower relative risk when comparing 35 m (115 ft) vs. 22 m (75 ft) (Table 2). There were no significant differences in relative risk among any defensible space distance classes in Southern California (Table 2).

Although defensive action was only recorded in the 2018 fires in the North Interior and Southern CA regions, it was more important than any other variable for North-Interior, and it was less important in the Southern California data (Figure 1). Statewide (using these two regions and comparing the importance to other variables), it had a medium-high relative importance (Figure 1). The relative risk

Table 2. Relative risk (RR) among building inspection variables statewide and for three California regions. A relative risk of 1 indicates no difference between classes; > 1 means the relative risk of destruction is higher in the first category listed; < 1 means the relative risk of destruction is lower than in the other classes. Dashes indicate where no data were available for certain categories.

ratios for both regions showed that civilian, fire department, and both types of defensive actions were significantly more protective than unknown action (Table 2). In the North-Interior, the fire department providing defensive action provided better protection than civilian actions, but either both or civilian defensive actions provided a slightly better relative risk ratio for Southern CA.

Table 2. Relative risk (RR) among building inspection variables statewide and for three California regions. A relative risk of 1 indicates no difference between classes; >1 means the relative risk of destruction is higher in the first category listed; <1 means the relative risk of destruction is lower than in the other classes. Dashes indicate where no data were available for certain categories.

Variable	Statewide		Bay Area		North-Interior		Southern	
Defensible Space	**RR**	***p*-Value**	**RR**	***p*-Value**	**RR**	***p*-Value**	**RR**	***p*-Value**
14 m (45 ft) vs. 5 m (15 ft)	0.95	0.0001	0.98	0.06	0.97	0.09	0.97	0.24
22 m (75 ft) vs. 14 m (45 ft)	1.08	0.0001	0.98	0.19	1.07	0.003	1.07	0.06
35 m (15 ft) vs. 22 m (75 ft)	0.88	0.0001	0.79	0.0001	0.95	0.0001	0.98	0.61
35 m (15 ft) vs. 5 m (15 ft)	0.91	0.0001	0.76	0.0001	0.98	0.09	1	0.89
Defensive Action								
Both vs. others	0.95	0.0001	–	–	0.68	0.004	0.69	0.04
Civilian vs. others	1.08	0.0001	–	–	0.81	0.0001	0.68	0.04
Fire Department vs. others	0.88	0.0001	–	–	0.44	0.0001	0.81	0.03
Unknown vs. defensive action	0.91	0.0001	–	–	1.02	0.0001	1.01	0.39
Deck, Porch Material								
Composite vs. others	0.85	0.0001	0.93	0.007	0.92	0.03	0.78	0.04
Masonry vs. others	1.002	0.48	1.17	0.0001	0.99	0.03	1	0.78
Wood vs. others	0.98	0.01	1	0.6	1.01	0.002	0.97	0.27
None	1.01	0.10	0.35	0.0001	1	0.24	1.02	0.25
Roof Type								
Asphalt vs. others	1.05	0.0001	–	–	1.03	0.0001	1.02	0.4
Concrete vs. others	0.89	0.0007	–	–	0.94	0.05	0.82	0.04
Metal vs. others	0.97	0.0001	–	–	0.98	0.001	1.04	0.14
Tile vs. others	0.88	0.0001	–	–	0.89	0.0001	0.97	0.25
Wood vs. others	1	0.84			0.99	0.96	1.06	0.38
Combustible vs. resistant	–	–	1	0.75	–	–	–	–
Eaves								
Enclosed vs. others	0.79	0.0001	0.88	0.0001	0.95	0.0001	0.83	0.0001
None vs. others	1.06	0.0001	0.49	0.0001	1.02	0.004	1.35	0.0001
Unenclosed vs. others	1.04	0.0001	1.15	0.0001	1.5	0.0001	0.99	0.86
Vent Screen								
Screened vs. unscreened	0.94	0.0001	0.76	0.0001	0.97	0.0001	0.95	0.23
Exterior Siding								
Combustible vs. resistant	1.05	0.0001	1.03	0.0002	1.04	0.0001	1.07	0.0001
Window Panes								
Multi vs. others	0.94	0.0001	0.94	0.0001	0.97	0.0001	0.74	0.0001
None vs. others	1.01	0.12	0.25	0.0001	0.98	0.04	1.14	0.01
Unenclosed vs. others	1.06	0.0001	1.05	0.0001	1.02	0.0001	1.12	0.0001

3.2. Building Inspection Characteristics

Home construction materials explained a substantial amount of variation in housing losses statewide and across regions (Figure 1). Overall, eaves consistently explained more than any other structural parameters, and having enclosed eaves versus no eaves or unenclosed eaves had a highly significant protective effect as seen in the relative risk ratios (Table 2). The structural variable with the second highest deviance explained across all regions was windowpanes (Figure 1), although statewide this variable was ranked slightly lower than vent screens, and vent screens were also nearly as important as windowpanes in Southern California (Figure 1). The relative risk of having single pane windows was consistently and significantly higher than having multiple pane windows statewide and across all areas (Table 2). Structures that had no windows were not significantly different in relative risk compared to structures with windows statewide, but they had a lower relative risk than structures with windowpanes in the Bay Area and North-Interior, and this was reversed in Southern CA (Table 2). There was a consistent and significantly lower relative risk for structures with screened versus unscreened vents across the state and regions (Table 2).

Aside from eaves, windowpanes, and vent screens, the importance and relative risk of structural parameters associated with structure survival varied across the state and regions. Statewide and in the Bay Area, fire-resistant exterior siding material and deck or porch material were nearly as important as windowpanes (Figure 1), with consistently lower relative risk ratios for fire-resistant siding material (Table 2). In terms of deck or porch material, the most consistently significant effect was the significantly lower relative risk of having composite decking material versus other materials (Table 2). Although roofing material did not explain substantial variation in any of the regions (Figure 1), for the North-Interior and Southern CA regions, where the material types were broken out, concrete and tile both had lower relative risk ratios, although tile was not significant for Southern CA (Table 2). In the North-Interior, metal roofs also had slightly lower significant relative risk (Table 2).

Although structure age, a proxy for all building construction materials, was only recorded for the North-Interior and Southern CA regions, it did not explain substantial variation in structure survival relative to individual building characteristics (Figure 1). On average, however, older homes were consistently more likely to be destroyed than younger homes (Figure 3).

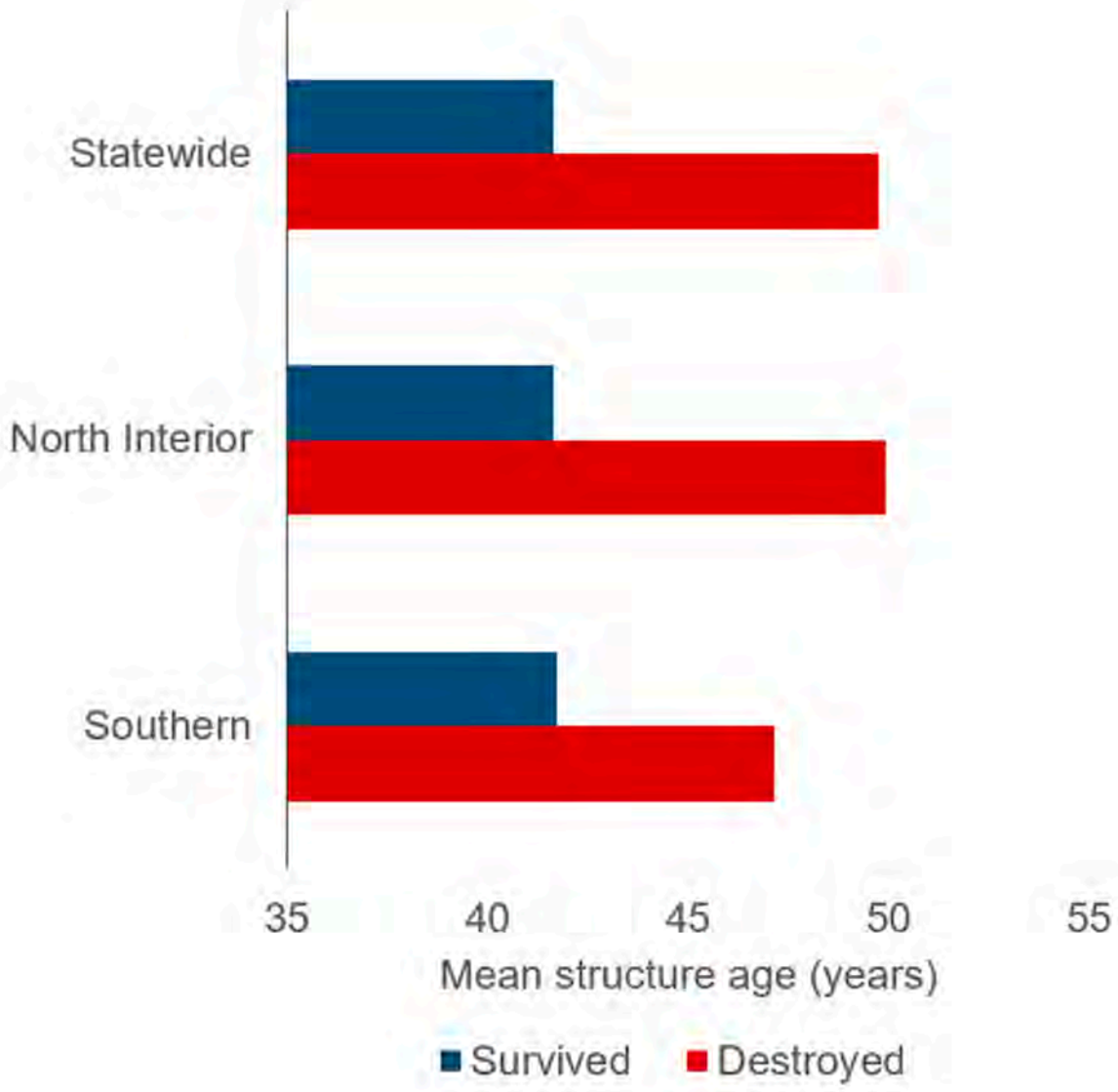


Figure 3. Mean age of structure for survived and destroyed homes in two California regions. The statewide calculations are based on combined totals of both regions (i.e., the Bay Area did not include this variable).

Figure 3. Mean age of structure for survived and destroyed homes in two California regions. The statewide calculations are based on combined totals of both regions (i.e., the Bay Area did not include this variable).

4. Discussion

In terms of mitigation practices for protecting homes against wildfire, perhaps the most widely recognized and regarded action that homeowners can take is to create defensible space around structures [20,33]. In fact, defensible space and "hardening homes" via building construction

4. Discussion

In terms of mitigation practices for protecting homes against wildfire, perhaps the most widely recognized and regarded action that homeowners can take is to create defensible space around structures [20,33]. In fact, defensible space and "hardening homes" via building construction practices or structure retrofits, collectively referred to as the home ignition zone (HIZ), have often been considered the primary factors that matter in terms of structures surviving wildfire [34,35]. Despite the widespread advocacy of these practices, there has been little empirical study of their effectiveness under actual wildfires, and there is still debate on how much defensible space is critical to home survival despite the regulated distance of 30 m (100 ft).

In this study based on more than 40 k records of structures exposed to wildfires from 2013 to 2018, we found that, overall, defensible space distance explained very little variation in home survival and that structural characteristics were generally more important. Although the relative importance and relative risk ratios of different factors recorded by building inspectors varied slightly from region to region, there were also general similarities, particularly in that structure survival was highest when homes had enclosed or no eaves; multiple-pane windows, and screened vents.

The only region in which defensible space distance explained at least 1% variation in structure survival was the Bay Area, where survived structures had an average of 9.7 m (~32 ft) of defensible space versus 7.4 m (~24 ft) for destroyed structures. Although there were significant differences in relative risk between most pairs of distance classes of defensible space statewide and for the North-Interior, there were some conflicting patterns in the Bay Area and North-Interior, and there was no significant effect of defensible space distance for any comparison in Southern California. The other surprising finding was that, of the structures that did have more than 30 m of defensible space, the vast majority were destroyed in these fires (Figures S1–S8). This of course reflects the large proportion of destroyed structures in the dataset, but it also suggests that structures with greater amounts of defensible space are often still vulnerable.

One potential explanation for the limited importance of defensible space in these data may be that the defensible space distance classes were defined rather broadly, too broad to discern critical details that may have a much bigger impact. Of the few studies quantifying the most effective distance of defensible space for making a significant difference in structure survival probability, Syphard et al. and Miner [19,21] both found the optimum distance to be much shorter than the required 30 m, with the ideal range between 5–22 m. Distances longer than that provided no additional significant protection. Furthermore, these and other studies have shown that more nuanced characteristics of landscaping are most critical for structure protection, including vegetation touching the structure or trees overhanging the roof [36]. The arrangement of vegetation and irrigation are also important factors not accounted for [20]. In fact, despite defensible space traditionally being divided into zones, with the first being from 0–9 m (30 ft) from the structure, newer recommendations are beginning to isolate and focus heavily on the first zone being from 0–1.5 m (5 ft) [37], which may be the most critical zone to account for.

Most structures are lost in wildfires that are burning under severe weather and wind conditions [2], such that burning embers are capable of crossing large, multi-lane freeways and have been reported to blow as far as 1–2 km ahead of a fire front [2,25]. Therefore, one of the primary reasons for the importance of vegetation modification directly adjacent to homes as opposed to longer distances, is that homes are generally not ignited by the fire front but more often by wind-driven embers landing on combustible fuels in or on the house [17,29,38]. Material closest to the house is thus the most likely to cause a proximate spark that can penetrate the structure. To this point, irrigating vegetation and removing dead plant material to reduce ignitability may be as or more important than fuel volume, which is a finding borne out by recent research [24]. While defensible space distances <30 m may be sufficient for increasing structure survival probability, another important reason for requiring 30 m (100 ft) is firefighter safety and providing a zone of protection [39]. Finally, while the inspectors recorded defensible space distances, part of the definition of defensible space in California revolves

around the horizontal and vertical spacing of fuels; thus, if these factors matter as much or more than distance, they could not be accounted for here.

The nature of building loss via ember flow factors such as exterior siding or roof material were much less important than exposed eaves, vents, or windows. This again is likely due to the extreme weather condition characteristics of destructive wildfires. That is, the fire-resistance of materials such as roofs or siding, i.e., preventing them from catching fire, was less important than building characteristics that provided gaps in the structure that could allow penetration of wind-borne burning debris. These results suggest that one of the potentially most effective methods of protecting homes from wildfire destruction would be to perform simple building retrofits, such as placing fine mesh screens over vents and coverings other openings in the structures, such as gaps in roofs, and enclosing structure eaves. Specific recommendations for these types of retrofits are easily found online, e.g., [40], and suggest that improving the fire safety of structures does not necessarily require expensive replacement of construction materials but rather careful attention to structure details.

The previous post-fire study of the role of construction materials in structure survival also found that windows, particularly framing material and panes, were more important than roof or siding material, although the methods and overall suite of variables differed in that study [23]. In the case of windows, they can, like other parts of the structure, provide an easy entry point for firebrands [26]. Additionally, however, they are also vulnerable to radiant heat, and multi-pane windows can withstand much higher levels of thermal exposure than single-pane windows [41]. Although not recorded here, the type of glass used in the window is also important for resistance to cracking [26].

Although individual structural characteristics were highly influential in this study, structure age did not explain a lot by itself, which may mean that, at a broad scale, it does not necessarily serve well as a proxy for the building characteristics most likely to protect homes. On the other hand, Syphard et al. [23] found that structure age did correlate with both building characteristics and structure survival, but that study was only conducted in San Diego County, where building codes had already been updated several times in response to wildfires in the regions. Although the state of California has also recently adopted strict building codes for wildfires [42], those codes only apply to new housing, so the effects may not have been seen yet. Further analysis might be warranted to compare structural characteristics and outcomes as a function of date of code enforcement.

Another consideration is that, despite the importance of structure age in the San Diego study, that study also determined that building location and arrangement were more important in predicting structure loss than structure age, building materials, or defensible space. The effect of structure age was primarily important in higher-density neighborhoods where structure loss was overall less likely. Thus, the role of housing arrangement and location, found to be the most important predictors of structure loss in several California studies [13–15] and nationwide [43] should ultimately be factored into discussions of reducing future fire risk; and this looks to be a challenge given trends of rapid ongoing development in the wildland–urban interface [44].

One of the reasons that housing arrangement and location are such strong predictors of structure loss may be structure accessibility by firefighters, who must divide manpower and resources to reach communities located in dispersed or remote locations [45,46]. The role of defensive actions in determining the extent and location of structure survival has been historically difficult to quantify, mostly because data are sparse, but also because defining suppression effectiveness is an inherently difficult task [47]. In the North-Interior region, defensive action explained more than any other factor in structure survival, although it was less important than building characteristics in Southern California. Even given the high importance of defensive action in the North-Interior, the total number of structures with unknown defensive action was substantial, and the proportion of unknown actions was even larger in Southern California. Thus, while these results suggest that defensive actions may be one of the most important and overlooked factors in structure survival, it remains difficult to make definitive conclusions. Given that building inspectors have just started collecting this information, it is important to recognize this is an on-going process of increasing our knowledge base as more data are collected.

5. Dataset and Limitations

Given the enormous number of structures lost in California in recent years, the dataset compiled for this study may represent the largest existing source of information on homeowner mitigation practices associated with structure loss. Other large databases and studies of house loss have been developed in other countries, however, where wildfires result in substantial losses in structures and human life; much of this work has been conducted in Australia, a country with a long history of destructive wildfires with substantial structure losses [48], and human fatalities [49]. This ongoing data collection process, especially if more exposed but unburned homes are included, will be important for continued understanding of structure loss and identifying the most effective strategies for prevention.

Despite the unprecedented opportunity the DINS data have provided for this broad-scale analysis of structure loss, there are nevertheless uncertainties and limitations within the data, and Cal Fire is working to improve the collection process on an ongoing basis [30].

The primary limitation is, as we discussed previously, that defensible space was presented uni-dimensionally as a function of distance categories and thus excluded other relevant factors such as vegetation spacing, height, type, age, moisture content, or composition. Nevertheless, given the broad scale of the data and similar conclusions for all study areas, these additional vegetation characteristics do not appear to be biased in one direction or the other; thus, our conclusions about distance classes are likely robust.

Another limitation of the dataset is the potential uncertainty inherent in recording building characteristics after a wildfire for homes that have been badly burned with materials largely consumed in the fire. This likely explains the missing data seen throughout the records. Cal Fire is aware of this and is beginning to combine their reports with pre-fire information from county assessors' offices [30]; however, the extent to which pre-fire data may have been incorporated in the reports used for this study is unclear.

Finally, as mentioned previously, this study only focused on the relative importance of the local-scale factors reported by the building inspectors, and full understanding of structure loss will need to include additional factors. Ongoing research will account for a fuller range of landscape-scale factors as well as information on fire behavior and spatial patterns.

6. Conclusions

We have explored the factors correlated with structure loss and survival during a recent five-year period in California. In most regions home structural characteristics are far more important in determining home survival than defensible space. Statewide, the most critical factor was eave construction. Windowpanes were also widely important in the state. Exterior siding was an important structural characteristic in the Bay Area, but vent screens were much more important in southern California. The likely explanation for why structure characteristics play a greater role than defensible space is that most homes burn by embers, which often come from long distances; and the impact of the ember cast is not likely affected by distance of defensible space. Whether or not the embers ignite is largely a function of structure.

Given that the primary role of building inspectors is to assess building damage, most structures in the data were destroyed. As such, one of the striking outcomes of this study is the finding that many of these destroyed structures could be characterized as "fire-safe," such as having >30 m defensible space or fire-resistant building materials. While the number of structures lost in these fire events was unprecedented in California history, structure loss during severe fire-weather and wind conditions similar to some of the fires represented here has occurred for decades in the state [2]. Therefore, it may be safe to assume that these data are broadly representative.

Supplementary Materials: The following are available online at http://www.mdpi.com/2571-6255/2/3/49/s1, Figure S1: Proportion of defensible space distance classes for survived and destroyed structures (a) and proportion of survived and destroyed structures within defensible space distance classes (b) for three California regions, Figure S2: Figure S2: Proportion of defensible action type for survived and destroyed structures (a) and proportion

of survived and destroyed structures within defensive action types (b) for two California regions, Figure S3: Proportion of deck material type for survived and destroyed structures (a) and proportion of survived and destroyed structures within deck material type classes (b) for three California regions, Figure S4: Proportion of roof material type for survived and destroyed structures (a) and proportion of survived and destroyed structures within roof material type classes (b) for two California regions, Figure S5: Proportion of eave type for survived and destroyed structures (a) and proportion of survived and destroyed structures within eave type classes (b) for three California regions, Figure S6: Proportion of Exterior siding classes for survived and destroyed structures (a) and proportion of survived and destroyed structures within exterior siding classes (b) for three California regions, Figure S7: Proportion of vent screen classes for survived and destroyed structures (a) and proportion of survived and destroyed structures within vent screen classes (b) for three California regions, Figure S8: Proportion of windowpane type for survived and destroyed structures (a) and proportion of survived and destroyed structures within windowpane type (b) for three California regions. Table S1: Number or average value of destroyed and survived structures within building inspection classes for three California regions.

Author Contributions: Conceptualization, A.D.S. and J.E.K.; methodology, A.D.S. and J.E.K.; formal analysis, A.D.S.; data curation, A.D.S.; writing—original draft preparation, A.D.S.; writing—review and editing, J.E.K.

Funding: This research received no external funding.

Acknowledgments: The US government does not endorse any product mentioned in this manuscript.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Sugihara, N.G.; Van Wagtendonk, J.W.; Fites-Kaufman, J.; Shaffer, K.E.; Thode, A.E. *Fire in California's Ecosystems*; University of California Press: Berkeley, CA, USA, 2006.
2. Keeley, J.E.; Syphard, A.D. Twenty-First Century California, USA, Wildfires: Fuel-Dominated vs. Wind Dominated Fires. *Fire Ecol.* **2019**, *15*, 24. [CrossRef]
3. Viegas, D.X. Wildfires in Portugal. *Eur. J. For. Res.* **2018**, *130*, 775–784. [CrossRef]
4. Leonard, J.; Blanchi, R.; Lipkin, F.; Newnham, G.; Siggins, A.; Opie, K.; Culvenor, D. *Building and Land-Use Planning Research after the 7th February Victorian Bushfires: Preliminary Findings*; Bushfire CRC: Melbourne, Australia, 2009.
5. Molina-Terrén, D.M.; Xanthopoulos, G.; Diakakis, M.; Ribeiro, L.; Caballero, D.; Delogu, G.M.; Viegas, D.X.; Silva, C.A.; Cardil, A. Analysis of Forest Fire Fatalities in Southern Europe: Spain, Portugal, Greece and Sardinia (Italy). *Int. J. Wildland Fire* **2019**, *28*, 85–98. [CrossRef]
6. Edwards, W.P. The New Normal: Living with Wildland Fire. *Nat. Resour. Environ.* **2019**, *33*, 30–33.
7. Radtke, K.W.H. Living More Safely in the Chaparral-Urban Interface. *USDA For. Serv. Pac. Southwest For. Range Exp. Stn.* **1983**, *67*, 51.
8. Moore, H.E. *Protecting Residences from Wildfires: A Guide for Homeowners, Lawmakers, and Planners*; DIANE Publishing: Collingdale, PA, USA, 1993.
9. Bradstock, R.A.; Gill, A.M.; Kenny, B.J.; Scott, J. Bushfire Risk at the Urban Interface Estimated from Historical Weather Records: Consequences for the Use of Prescribed Fire in the Sydney Region of South-Eastern Australia. *J. Environ. Manag.* **1998**, *52*, 259–271. [CrossRef]
10. Penman, T.D.; Collins, L.; Syphard, A.D.; Keeley, J.E.; Bradstock, R.A. Influence of Fuels, Weather and the Built Environment on the Exposure of Property to Wildfire. *PLoS ONE* **2014**, *9*, e111414. [CrossRef]
11. Mell, W.E.; Manzello, S.L.; Maranghides, A.; Butry, D.T.; Rehm, R.G. The Wildland-Urban Interface Fire Problem—Current Approaches and Research Needs. *Int. J. Wildland Fire* **2010**, *19*, 238–251. [CrossRef]
12. Conlisk, E.; Lawson, D.; Syphard, A.D.; Franklin, J.; Flint, L.; Flint, A.; Regan, H.M. The Roles of Dispersal, Fecundity, and Predation in the Population Persistence of an Oak (Quercus Engelmannii) under Global Change. *PLoS ONE* **2012**, *7*. [CrossRef]
13. Syphard, A.D.; Rustigian-Romsos, H.; Mann, M.; Conlisk, E.; Moritz, M.A.; Ackerly, D. The Relative Influence of Climate and Housing Development on Current and Projected Future Fire Patterns and Structure Loss across Three California Landscapes. *Glob. Environ. Chang.* **2019**, *56*, 41–55. [CrossRef]
14. Alexandre, P.M.; Stewart, S.I.; Mockrin, M.H.; Keuler, N.S.; Syphard, A.D.; Bar-Massada, A.; Clayton, M.K.; Radeloff, V.C. The Relative Impacts of Vegetation, Topography and Spatial Arrangement on Building Loss to Wildfires in Case Studies of California and Colorado. *Landsc. Ecol.* **2015**, *31*, 415–430. [CrossRef]
15. Syphard, A.D.; Keeley, J.E.; Massada, A.B.; Brennan, T.J.; Radeloff, V.C. Housing Arrangement and Location Determine the Likelihood of Housing Loss Due to Wildfire. *PLoS ONE* **2012**, *7*, e33954. [CrossRef] [PubMed]

16. Los Angeles County Board of Supervisors. A Guide to Defensible Space Ornamental Vegetation Maintenance. Available online: https://www.fire.lacounty.gov/wp-content/uploads/2019/06/A-Guide-to-Defensible-Space-Ornamental-Vegetation-Maintenance.pdf (accessed on 20 August 2019).
17. Cohen, J.D. Home Ignitability in the Wildland-Urban Interface. *J. For.* **2000**, *98*, 15–21.
18. Cohen, J. Relating Flame Radiation to Home Ignition Using Modeling and Experimental Crown Fires. *Can. J. For. Res.* **2004**, *34*, 1616–1626. [CrossRef]
19. Syphard, A.D.; Brennan, T.J.; Keeley, J.E. The Role of Defensible Space for Residential Structure Protection during Wildfires. *Int. J. Wildland Fire* **2014**, *23*, 1165–1175. [CrossRef]
20. Penman, S.H.; Price, O.F.; Penman, T.D.; Bradstock, R.A. The Role of Defensible Space on the Likelihood of House Impact from Wildfires in Forested Landscapes of South Eastern Australia. *Int. J. Wildland Fire* **2019**, *28*, 4–14. [CrossRef]
21. Miner, A. *Defensible Space Optimization for Preventing Wildfire Structue Loss in the Santa Monica Mountains*; Johns Hopkins University: Baltimore, MD, USA, 2014.
22. Rahman, S.; Rahman, S. Defensible Spaces and Home Ignition Zones of Wildland-Urban Interfaces in the Fire-Prone Areas of the World. *Preprints* **2019**. [CrossRef]
23. Syphard, A.D.; Brennan, T.J.; Keeley, J.E. The Importance of Building Construction Materials Relative to Other Factors Affecting Structure Survival during Wildfire. *Int. J. Disaster Risk Reduct.* **2017**, *21*, 140–147. [CrossRef]
24. Gibbons, P.; Gill, A.M.; Shore, N.; Moritz, M.A.; Dovers, S.; Cary, G.J. Options for Reducing House-Losses during Wildfires without Clearing Trees and Shrubs. *Landsc. Urban Plan.* **2018**, *174*, 10–17. [CrossRef]
25. Quarles, S.L.; Valachovic, Y.; Nakamura, G.; Nader, G.; De, L.M. *Home Survival in Wildfire-Prone Areas: Building Materials and Design Considerations*; UC Agriculture and Natural Resources: Richmond, CA, USA, 2010.
26. Bowditch, P.; Sargeant, A.; Leonard, J.; Macindoe, L. *Window and Glazing Exposure to Laboratory-Simulated Bushfires*; Bushfire CRC: East Melbourne, Australia, 2006.
27. Manzello, S.L.; Suzuki, S.; Hayashi, Y. Exposing Siding Treatments, Walls Fitted with Eaves, and Glazing Assemblies to Firebrand Showers. *Fire Saf. J.* **2012**, *50*, 25–34. [CrossRef]
28. Gibbons, P.; van Bommel, L.; Gill, A.; Cary, G.J.; Driscoll, D.A.; Bradstock, R.A.; Knight, E.; Moritz, M.A.; Stephens, S.L.; Lindenmayer, D.B. Land Management Practices Associated with House Loss in Wildfires. *PLoS ONE* **2012**, *7*, e29212. [CrossRef] [PubMed]
29. Maranghides, A.; Mell, W. *A Case Study of a Community Affected by the Witch and Guejito Fires*; National Institute of Standards and Technology. Building and Fire Research Laboratory: Gaithersburg, MD, USA, 2009.
30. Henning, A.; Cox, J.; Shew, D. CAL FIRE's Damage Inspection Program—Its Evolution and Implementation. Available online: http://www.fltwood.com/perm/nfpa-2016/scripts/sessions/M26.html (accessed on 20 August 2019).
31. Venables, W.M.; Ripley, B.D. *Modern Applied Statistics with S-Plus*; Springer: New York, NY, USA, 1994.
32. Sheskin, D.J. *Handbook of Parametric and Nonparametric Statistical Procedures*; CRC Press: Boca Raton, FL, USA, 2003.
33. Elia, M.; Lovreglio, R.; Ranieri, N.; Sanesi, G.; Lafortezza, R. Cost-Effectiveness of Fuel Removals in Mediterranean Wildland-Urban Interfaces Threatened by Wildfires. *Forests* **2016**, *7*, 149. [CrossRef]
34. Cohen, J.D. Wildland–Urban Fire—A Different Approach. In *Proceedings of the Firefighter Safety Summit*; International Association of Wildland Fire: Missoula, MT, USA, 2001; pp. 6–8.
35. Platt, R.V. Wildfire Hazard in the Home Ignition Zone: An Object-Oriented Analysis Integrating LiDAR and VHR Satellite Imagery. *Appl. Geogr.* **2014**, *51*, 108–117. [CrossRef]
36. Keeley, J.E.; Syphard, A.D.; Fotheringham, C.J. *The 2003 and 2007 Wildfires in Southern California*; Cambridge University Press: Oxford, UK, 2008. [CrossRef]
37. DistasterSafety.Org. Maintain Defensible Space. Available online: https://disastersafety.org/wildfire/defensible-space/ (accessed on 20 August 2019).
38. Cohen, J.; Stratton, R. *Home Destruction Examination: Grass Valley Fire, Lake Arrowhead, California*; Tech. Paper R5-TP-026b; USDA: Vallejo, CA, USA, 2008.
39. Cheney, P.; Gould, J.; McCaw, L. The Dead-Man Zone—A Neglected Area of Firefighter Safety. *Aust. For.* **2001**, *64*, 45–50. [CrossRef]
40. Extension, U. of C.C. Wildfire Preparation & Recovery. Available online: https://ucanr.edu/sites/fire/Wildfire_Preparation_-_Recovery/ (accessed on 20 August 2019).

41. Cuzzillo, B.; Pagni, P. Thermal Breakage of Double-Pane Glazing by Fire. *J. Fire Prot. Eng.* **1998**, *9*, 1–11. [CrossRef]
42. Commission, C. B. S. 2016 California Building Code Title 24, Part 2, Volume 1 of 2. Available online: https://codes.iccsafe.org/content/document/653 (accessed on 20 August 2019).
43. Alexandre, P.M.; Stewart, S.I.; Keuler, N.S.; Clayton, M.K.; Mockrin, M.H.; Bar-Massada, A.; Syphard, A.D.; Radeloff, V.C. Factors Related to Building Loss Due to Wildfires in the Conterminous United States. *Ecol. Appl.* **2016**, *26*, 2323–2338. [CrossRef] [PubMed]
44. Radeloff, V.C.; Helmers, D.P.; Anu Kramer, H.; Mockrin, M.H.; Alexandre, P.M.; Bar-Massada, A.; Butsic, V.; Hawbaker, T.J.; Martinuzzi, S.; Syphard, A.D.; et al. Rapid Growth of the US Wildland-Urban Interface Raises Wildfire Risk. *Proc. Natl. Acad. Sci. USA* **2018**, *115*, 3314–3319. [CrossRef] [PubMed]
45. Gude, P.H.; Rasker, R.; van den Noort, J. Potential for Future Development on Fire-Prone Lands. *J. For.* **2008**, *106*, 198–205.
46. Gorte, R. *The Rising Cost of Wildfire Protection*; Headwaters Economics: Bozeman, MT, USA, 2013.
47. Plucinski, M.P. Fighting Flames and Forging Firelines: Wildfire Suppression Effectiveness at the Fire Edge. *Curr. For. Rep.* **2019**, *5*, 1–19. [CrossRef]
48. Leonard, J. Report to the 2009 Victorian Bushfires Royal Commission. Building Performance in Bushfires. In *Highett, Victoria: Australia Sustainable Ecosystems*; CSIRO: Canberra, Australia, 2009.
49. Blanchi, R.; Leonard, J.; Haynes, K.; Opie, K.; James, M.; Kilinc, M.; De Oliveira, F.D.; Van den Honert, R. *Life and House Loss Database Description and Analysis*; CSIRO: Canberra, Australia, 2012.



© 2019 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).

OPEN ACCESS Freely available online

PLOS ONE

Land Use Planning and Wildfire: Development Policies Influence Future Probability of Housing Loss

Alexandra D. Syphard[1]*, Avi Bar Massada[2], Van Butsic[3], Jon E. Keeley[4,5]

1 Conservation Biology Institute, La Mesa, California, United States of America, **2** Department of Biology and Environment, University of Haifa at Oranim, Kiryat Tivon, Israel, **3** Humboldt University-Berlin, Berlin, Germany, **4** U.S. Geological Survey, Western Ecological Research Center, Sequoia – Kings Canyon Field Station, Three Rivers, California, United States of America, **5** University of California, Los Angeles, California, United States of America

Abstract

Increasing numbers of homes are being destroyed by wildfire in the wildland-urban interface. With projections of climate change and housing growth potentially exacerbating the threat of wildfire to homes and property, effective fire-risk reduction alternatives are needed as part of a comprehensive fire management plan. Land use planning represents a shift in traditional thinking from trying to eliminate wildfires, or even increasing resilience to them, toward avoiding exposure to them through the informed placement of new residential structures. For land use planning to be effective, it needs to be based on solid understanding of where and how to locate and arrange new homes. We simulated three scenarios of future residential development and projected landscape-level wildfire risk to residential structures in a rapidly urbanizing, fire-prone region in southern California. We based all future development on an econometric subdivision model, but we varied the emphasis of subdivision decision-making based on three broad and common growth types: infill, expansion, and leapfrog. Simulation results showed that decision-making based on these growth types, when applied locally for subdivision of individual parcels, produced substantial landscape-level differences in pattern, location, and extent of development. These differences in development, in turn, affected the area and proportion of structures at risk from burning in wildfires. Scenarios with lower housing density and larger numbers of small, isolated clusters of development, i.e., resulting from leapfrog development, were generally predicted to have the highest predicted fire risk to the largest proportion of structures in the study area, and infill development was predicted to have the lowest risk. These results suggest that land use planning should be considered an important component to fire risk management and that consistently applied policies based on residential pattern may provide substantial benefits for future risk reduction.

Citation: Syphard AD, Bar Massada A, Butsic V, Keeley JE (2013) Land Use Planning and Wildfire: Development Policies Influence Future Probability of Housing Loss. PLoS ONE 8(8): e71708. doi:10.1371/journal.pone.0071708

Editor: Ben Bond-Lamberty, DOE Pacific Northwest National Laboratory, United States of America

Received February 28, 2013; **Accepted** July 2, 2013; **Published** August 14, 2013

This is an open-access article, free of all copyright, and may be freely reproduced, distributed, transmitted, modified, built upon, or otherwise used by anyone for any lawful purpose. The work is made available under the Creative Commons CC0 public domain dedication.

Funding: Funding was provided by the US Geological Survey. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Competing Interests: The authors have declared that no competing interests exist.

* E-mail: asyphard@consbio.org

Introduction

The recognition that homes are vulnerable to wildfire in the wildland-urban interface (WUI) has been established for decades [e.g., 1,2]; but with a recent surge in structures burning, this issue is now receiving widespread attention in policy, the media, and the scientific literature. Single fire events, like those in Greece, Australia, southern California, and Colorado have resulted in scores of lost lives, thousands of structures burned, and billions of dollars in expenditures [3–6]. With the potential for increasingly severe fire conditions under climate change [7] and projections of continued housing development [8], it is becoming clear that more effective fire-risk reduction solutions are needed. "Fire risk" here refers to the probability of a structure burning in a wildfire within a given time period.

Traditional fire-risk reduction focuses heavily on fire suppression and manipulation of wildland vegetation to reduce hazardous fuels [9]. Enormous resources are invested in vegetation management [10], but as increasing numbers of homes burn down despite this massive investment, the "business-as-usual" approach to fire management is undergoing reevaluation. One issue is that fuel treatments may not be located in the most strategic positions, i.e., in the wildland-urban interface [11]. Yet, even if treatments surrounded all communities, scattered development patterns are difficult for firefighters to reach [12–14], and fuel treatments do little to protect homes without firefighter access [15–16]. Fuel treatments may also be ineffective against embers or flaming materials that blow ahead of the fire front [17].

One alternative to traditional fire management that is receiving widespread attention is to prepare communities through the use of fire-safe building materials or creating defensible space around structures [17–18]. These actions represent an important shift in emphasis from trying to prevent wildfires in fire-prone areas to better anticipating fires that are ultimately inevitable. Nevertheless, the cost of building and retrofitting homes to be fire-safe can be prohibitive, and these actions do not guarantee immunity from fire [19].

Land use planning is an alternative that represents a further shift in thinking, beyond the preparation of communities to withstand an inevitable fire, to preventing new residential structures from being exposed to fire in the first place. The reason homes are vulnerable to fires at the wildland-urban interface is a function of its very definition: "where homes meet or intermingle with wildland vegetation" [20]. In other words, the location and

pattern of homes influence their fire risk, and past land-use decision-making has allowed homes to be constructed in highly flammable areas [21]. Land use planning for fire safety is beginning to receive some attention in the literature [22–23], and there is growing recognition of the potential benefits of directing development outside of the most hazardous locations [8,19,24].

Despite recent attention in the literature, land use planning for wildfire has yet to gain traction in practice, particularly in the United States. However, fire history has been used to help define land zoning for fire planning in Italy [22], and bushfire hazard maps are integrated into planning policy in Victoria, Australia [25]. Although some inertia inevitably arises from complications with existing policy and plans, a primary impediment to the design and implementation of fire-smart land use planning is lack of guidance about specific locations, patterns of development, or appropriate methodology to direct the placement of new development. Without a solid knowledge base to draw from, planners will be misinformed about which planning decisions may result in the greatest overall reduction of residential landscape risk. Even worse, poor science could result in placement of homes in areas that actually have high fire hazard.

Research on how planning decisions contributed to structures burning in the past provides some guidance about what actions may work in the future. Analysis of hundreds of homes that burned in southern California the last decade showed that housing arrangement and location strongly influence fire risk, particularly through housing density and spacing, location along the perimeter of development, slope, and fire history [26]. Although high-density structure-to-structure loss can occur [27–28], structures in areas with low- to intermediate- housing density were most likely to burn, potentially due to intermingling with wildland vegetation or difficulty of firefighter access. Fire frequency also tends to be highest at low to intermediate housing density, at least in regions where humans are the primary cause of ignitions [29–30].

These results suggest, for example, that placing new residential development within the boundaries of existing high-density developments or in areas of low relief may reduce fire risk. However, it is difficult to know whether broad-scale planning policies would actually result in the intended housing arrangement and pattern at the landscape scale, and whether those patterns would result in lower fire risk. Our objective here was to simulate three scenarios of future residential development, and to project wildfire risk, in a rapidly urbanizing and fire-prone region where we have studied past structure loss [25]. We based all future development on an econometric subdivision model, but we varied the emphasis of subdivision decision-making based on three broad and common growth types.

Although cities vary in extent, fragmentation, and residential density [31–32], urban form typically adheres to a set of common patterns [33–34], and we based our development scenarios on the three primary means by which residential development typically occurs: infill, expansion, or leapfrog [34]. Infill is characterized by development of vacant land surrounded by existing development, typically in built-up areas where public facilities already exist. [35–36], and should result in higher structure density rather than increased urban extent. Expansion growth occurs along the edge of existing development, extends the size of the urban patch to which it is adjacent, and may have variable influence on structure density. Leapfrog growth occurs when development occurs beyond existing urban areas such that the new structure is surrounded by undeveloped land. This type of growth would expand the urban extent and initially result in lower structure density; but these areas may eventually become centers of growth from which infill or expansion can occur. We asked:

1) Do residential development policies reflecting broad growth types affect the resulting pattern and footprint of development across the landscape?
2) Do differences in extent, location, and pattern of residential development translate into differences in wildfire risk, based on the current configuration of structures?
3) Which development process, infill, expansion, or leapfrog, results in the lowest projected fire risk across the landscape?

Methods

Study Area

The study area included all land within the South Coast Ecoregion of San Diego County, California, US, encompassing an area of 8312 km^2. The region is topographically diverse with high levels of biodiversity, and urban development has been the primary cause of natural habitat loss and species extinction [37]. Owing to the Mediterranean climate, with mild, wet winters and long summer droughts, the native shrublands dominating the landscape are extremely fire-prone. San Diego County was the site of major wildfire losses in 2003 and 2007 [38], although large wildfire events have occurred in the county since record-keeping began, and are expected to continue, as fire frequency has steadily increased in recent decades [29,39]. The county is home to more than three million residents, and approximately one million more people are expected by 2030 [40]. Although most residential development has been concentrated along the coast, expansion of housing is expected in the eastern, unincorporated part of the county.

Econometric Subdivision Model

A host of alternative modeling approaches exist to simulate future land use scenarios [41], including a cellular automaton model that we previously applied to the study area [42]. We chose to use an econometric modelling approach for this study because we wanted to capture fine-scale, structure-level patterns and processes that are correlated with housing loss to wildfire [26]; and econometric models may perform better at the scale of individual parcels [43].

Although we based the three development scenarios on generalized planning policies, we also wanted to ensure that the residential projections were realistic and adhered to current planning regulations. The objective of the econometric modeling was to estimate the likelihood that residential parcels will subdivide in the future. Therefore, we used a probit model to estimate the transition probability of each parcel based on a range of potential explanatory variables typically associated with parcel subdivision and housing development [44–45].

To develop the model of subdivision probability, we acquired GIS data of the county's parcel boundaries in years 2005 and 2009 from the San Diego Association of Governments (SANDAG). The dependent variable was equal to 1 if a parcel subdivided between 2005 and 2009, and zero otherwise. Using these data layers we first determined which parcels were legally able to subdivide given current land use regulations. Minimum lot size restrictions are typically considered the most import restriction for determining future land use. We deemed a parcel eligible for subdivision if the current lot size was greater than twice the minimum legal size given the land class. To determine which parcels subdivided between 2005 and 2009, we queried parcel IDs where the total

area was reduced by at least the minimum lot size between the two time periods. Finally, we were able to generate a suite of variables that determine the likelihood of a parcel developing in the future (Table S1).

We overlaid the parcel boundaries over a range of GIS layers representing our explanatory variables. These data are available to download at (http://www.sandag.org/index.asp?subclassid = 100&fuseaction = home.subclasshome). Our explanatory variables included: parcel size, parcel size squared, six dummy variables which capture non-linear effects of parcel size, distance to the coast, distance to the coast squared; distance to city center and its square, current zoning, slope, land use, roads, if the parcel is in a protected area, if the parcel is in a development area, if the parcel is in the redevelopment area (Table 1).

Spatial Model of Future Development under Planning Alternatives

The outcome of the land use change econometric model is the subdivision probability for each parcel for a five-year time step. Based on these probabilities, we developed a GIS spatial simulation model of future land use under three distinct planning scenarios: infill (development in open or low density parcels within already developed areas), expansion (development on the fringe of developed areas), and leapfrog (development in open areas). The model runs in four 5-year time steps from 2010 to 2030, and generates the spatial locations of new housing units in the county.

Although development decisions could feasibly depend on fire risk, we did not model that here. There is no evidence that fire has influenced past regional planning decisions, so it was not used as an explanatory variable in the econometric model. Although we could have evaluated the potential for future development decisions to be based in part on fire risk, this would have required simulation of feedbacks between fires and probability of development. Because our objective in this study was to isolate the effects of the three distinct growth types, we modeled fire risk only as a function of development pattern and not vice versa.

We constructed a complete spatial database of existing residential structures in the study area [26]. These structures and their corresponding parcel boundaries served as the initial conditions for all three scenarios of the spatial simulation model. The current and projected future GIS layers of structures were also subsequently used in the fire risk model (see below). The

Table 1. Variables and results from the probit regression model of parcel subdivision in San Diego County.

Subdivided (1 = yes,0 = no)	Coefficient	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Acres of lot	0.0026342	0.00075	3.51	0	0.001164	0.004105
Acres of lot ^{2}	−3.02E-06	1.29E-06	−2.34	0.019	−5.55E-06	−4.93E-07
Distance to ocean	−7.42E-06	1.33E-06	−5.59	0	−0.00001	−4.82E-06
Distance to ocean ^{2}	2.33E-11	8.28E-12	2.82	0.005	7.11E-12	3.96E-11
Distance to major road	2.17E-07	2.74E-06	0.08	0.937	−5.16E-06	5.59E-06
Distance to major road ^{2}	−1.94E-11	1.70E-11	−1.14	0.252	−5.27E-11	1.38E-11
Distance to nearest city center	−0.0000115	1.70E-06	−6.76	0	−1.5E-05	−8.16E-06
Distance to nearest city center ^{2}	2.89E-11	9.70E-12	2.98	0.003	9.91E-12	4.79E-11
Slope between 0–5%	0.6211289	0.211761	2.93	0.003	0.206085	1.036173
Slope between 5–10%	0.3911427	0.210684	1.86	0.063	−0.02179	0.804076
Slope between 10–25%	0.0716669	0.212725	0.34	0.736	−0.34527	0.4886
Rural Residential	−0.3563149	0.071512	−4.98	0	−0.49648	−0.21615
Single Family	0.1361149	0.068678	1.98	0.047	0.001509	0.270721
Multi-Family	−0.2505093	0.151486	−1.65	0.098	−0.54742	0.046397
Road	0.015329	0.086094	0.18	0.859	−0.15341	0.184069
Open Space	−0.7440933	0.099145	−7.51	0	−0.93841	−0.54977
Orchard/Vineyard	−0.5813305	0.097867	−5.94	0	−0.77315	−0.38951
Agriculture	−0.9785208	0.132734	−7.37	0	−1.23867	−0.71837
Vacant Land	−0.5222501	0.074586	−7	0	−0.66844	−0.37606
Zoned protected	0.253769	0.076881	3.3	0.001	0.103086	0.404452
Area marked for redevelopment	−0.2680261	0.14069	−1.91	0.057	−0.54377	0.007722
Area marked for development	0.5780101	0.064103	9.02	0	0.452371	0.703649
Parcel between 10–20 acres	−0.3379532	0.065899	−5.13	0	−0.46711	−0.20879
Parcel between 5–10 acres	−0.6119036	0.067012	−9.13	0	−0.74325	−0.48056
Parcel between 2–5 acres	−1.16297	0.07062	−16.47	0	−1.30138	−1.02456
Parcel between 1–2 acres	−1.563956	0.090286	−17.32	0	−1.74091	−1.387
Parcel between.5–1 acres	−1.999939	0.099893	−20.02	0	−2.19573	−1.80415
Parcel between.25–.5 acres	−2.178273	0.117101	−18.6	0	−2.40779	−1.94876
Constant	−1.397931	0.227467	−6.15	0	−1.84376	−0.9521

Sample size 113 001, LR Chi^2 1535.23, pro>chi 0, pseudo R^2 0.22. Further description of the variables is provided in Table S1.
doi:10.1371/journal.pone.0071708.t001

dataset of existing housing includes locations of 687,869 structures, of which 4% were located within the perimeter of one of 40 fires that burned since 2001. During these fires, 4315 structures were completely destroyed, and another 935 were damaged.

For future development scenarios, we wanted to allocate an equal number of new structures to the landscape. This was to ensure that any predicted difference in fire risk was a function of the arrangement and location of structures, not the total number of structures. Nevertheless, differences in the total number of structures were simulated with each of the 5-year time steps. We determined the number of housing units to add during the simulations based on projections made by San Diego County [46]. Using factors such as development proposals, general plan densities, and information from jurisdictions, the county estimated that between 331,378 units and 486,336 units could be supported within the developable residential land by 2030. Because the eastern, desert portion of the county was not included in our study area, we used a conservative approach and simulated the addition of 331,378 new dwelling units. We divided this number by four to define the number of new dwelling units to add at each time step, assuming a linear growth rate.

One output of the econometric model was the prediction of the maximum number of new dwelling units that could be added to each parcel. However, dwelling units may consist of apartments as well as single family homes. The mix of single and multifamily units in the region has remained relatively constant over time, and the overall trend has been a mix of roughly 1/3 multifamily and 2/3 single family units. Because the fire risk model is based on points representing structure locations across the landscape, regardless of the number of dwelling units per structure, we needed to generate a conversion factor from dwelling units to structures. We therefore defined a minimum lot size of 0.25 acre on which no more than a single structure could be built, regardless of the number of dwelling units in it (i.e., a single family home or apartment complex). Then, once a parcel was selected for development by the model (see details below), we divided its total area by the maximum number of dwelling units to be added, according to the econometric model. If the result was larger than 0.25, we subdivided parcels according to the result. If not, we quantified how many 0.25 acre parcels fit into the original parcel, and generated the new parcel boundaries accordingly.

Using the initial map of parcels (year 2010), we classified each parcel that was defined as eligible for development (in the previous stage) as suitable for one of the three planning scenarios described above, according to the number of developed parcels in its immediate neighborhood (i.e., those parcels that share a boundary with the focal parcel). We defined 'developed parcels' as ones that had more than one house per 20 acres (8.09 ha). Therefore, according to these density thresholds, we allowed some parcels with nonzero housing density to be considered as 'undeveloped' because these large, rural parcels might contain a single or a handful of houses but they exist within a large open area. In other words, the overall land cover of these parcels was effectively undeveloped, and we therefore assumed that development in adjacent parcels would be akin to development in open areas.

We defined infill parcels as those that were completely surrounded by developed parcels. Expansion parcels had at least one neighboring parcel that was undeveloped; and leapfrog parcels were those with no developed parcels in their immediate surroundings. We reclassified the type of each available parcel in the same manner after each time step, to account for changing dynamics in the development map of the county.

We conducted three simulations, one for each development scenario (infill, expansion, and leapfrog). In each simulation, all parcels were eligible to subdivide, regardless of their class. Therefore, to build a simulation for a specific scenario, we increased the development probability of parcels of the selected scenario by 20%, to favor their development compared to the other types of parcels, without prohibiting development in the other parcel types. This approach was necessary because the projected number of dwelling units was much larger than it would be possible to fit in infill and leapfrog class parcels solely. For example, as the spatial coverage of developed parcel expands, there is less contiguous area that is undevelopable and suitable for leapfrog development. Therefore, the scenarios are not exclusive, but rather a mixture of the three development types. Yet, in each scenario, there is one main type of development, and smaller amounts of development events of the other two types.

Due to the immense computational demand of the simulations, we adopted a deterministic, rather than a stochastic approach to decide on which parcels were subdivided. After enhancing the transition probability according to the corresponding scenario, we ranked and then sorted all parcels according to their probability of subdivision. We then sequentially selected parcels, while simultaneously tallying the number of dwelling units in them, until the development target in that time step (one fourth of the total number of dwelling units to be added: 82,795) was reached. Once the development target was reached, we moved to the next time step. After each time step, the remaining parcels that were still eligible for development were re-classified to development types according to the new spatial configuration of the landscape.

Once a parcel was selected for subdivision, and the number of new parcels to develop in it was calculated (as detailed above), an equal-area spatial splitting model was employed to split the parent parcel to the predefined number of equal-area child parcels. We developed a simple splitting model which is based on iterative splitting of larger parcels into two smaller parcels using a straight line splitting boundary. Once the parcel was fully split into the needed number of sub-parcels, we allocated a new structure inside each new parcel by generating a point at its centroid (center of gravity). The point datasets of all structure locations per time step per scenario were passed over to the fire risk model, which is described below.

Fire Risk Modeling and Analysis

To project the distribution of fire risk under alternative scenarios, we used MaxEnt [47–48], a map-based modeling software used primarily for species distribution modeling [48], but we have used it successfully for ignition modeling [50] and for projecting current fire risk in the study area [26]. For this study, we slightly modified the model from Syphard et al. [26]. The dependent variable was the location of structures destroyed by fire between 2001 and 2010. Although inclusion of damaged structures in the data set does not significantly affect results [26], we only included completely destroyed structures to avoid the introduction of any uncertainty.

The MaxEnt software uses a machine-learning algorithm that iteratively evaluates contrasts among values of predictor values at locations where structures burned versus values distributed across the entire study area. The model assumes that the best approximation of an unknown distribution (i.e., structure destruction) is the one with maximum entropy. The output is an exponential function that assigns a probability to every cell of a map. Thus, the resulting continuous maps of fire risk represented the probability of a structure being destroyed by fire. In these output maps, areas of predicted high fire risk that did not have structures on them represented environmental conditions similar to those in which structures have actually burned.

We based the explanatory variables on those that were significantly related to burned structures in Syphard et al. [26], including maps depicting housing arrangement and pattern, housing location, and biophysical factors. Housing pattern variables reflected individual structure locations as well as the arrangement of structures within housing clusters. We calculated housing clusters, defined as groups of structures located within a maximum of 100 m from each other, by creating 100 m buffers around all structures and dissolving the overlapping boundaries [51].

Because burned structures were significantly related to small housing clusters [26], we calculated the area of every cluster as an attribute, and then created raster grids based on that attribute. Low-to intermediate housing density and distance to the edge of the cluster were also significant explanatory variables relative to housing pattern and location [26], so we also created raster grids for those. GIS buffer measures at 1-km have been found to explain approximately 90% of the variation in rural residential density [52], so we developed density grids using simple density interpolation based on a 1-km search radius, with area determined through square map units. To create grids representing distance to the edge of clusters, we first collapsed the cluster polygons into vector polyline files, and then created grids of interpolated Euclidean Distance to the edge within each cluster.

Because the MaxEnt model randomly selects background samples in the map to compare with locations of destroyed structures, we used a mask to restrict sampling to the developed environment within cluster boundaries; the distance to the edge of the cluster would represent a different relationship inside a cluster boundary versus outside in the wildland. We also modified the grids to ensure that any random sample located within the 100m buffer zone would receive a value of 100m; thus, all points within the buffer were considered ''the edge of the development''.

After creating the grids representing housing pattern and arrangement of the current configuration of structures, we applied the same algorithms to the maps of simulated future structure locations. We thus generated grids representing future housing pattern and arrangement under alternative development scenarios. The other explanatory variables, including fire history, slope, fuel type, southwest aspect, and distance to coast [26] remained constant through time for current and future scenarios. Although historic fire frequency and fuel type typically change through time, we did not simulate their dynamics here because we wanted to isolate the effect of planning decisions on housing pattern and arrangement while holding everything else constant.

We conditioned the MaxEnt model on present distributions of housing using ten thousand random background points and destroyed structures located no closer than 500-m to minimize any effect of spatial autocorrelation. We used 80% (260 records) of these data for model training, and 20% [66 records) for testing. We repeated the process using cross-validation with five replicates and used the average of these five models for analyses. For smoother functions of the explanatory variables, we used hinge features, linear, and quadratic with an increase in regularization of beta set at 2.5, based on Elith et al. [48]. The smoother response curves minimize over fitting of the model. We conducted jackknife tests of explanatory variable importance.

We first developed the model using mapped explanatory variables derived from the current configuration of structures. To project fire risk under the different time steps of the alternative development scenarios, projected the model conditioned upon current conditions onto maps representing future conditions by substituting the grids representing future housing pattern and arrangement. This is similar to how potential future distributions of species are projected under climate change scenarios [49].

To quantify differences among current and future alternative scenarios, we calculated metrics representing housing density, pattern, and footprint to determine the extent to which the planning policies produced differences in housing pattern and location. We compared the modeled structure fire risk of the scenarios by overlaying all maps of structure locations with their respective mapped output grids from the MaxEnt models and calculating probability of burning for every structure point. We also calculated total area of risk by selecting three threshold criteria [53]. These criteria, at 0.05, 0.25, and 0.5 represented three different degrees of risk, and we calculated the proportion of structures that were located in risk areas for every time step in all scenarios.

Results

The probit econometric model, run on 113 001 observations, showed that larger parcels were most likely to subdivide, although the relationship between parcel size and subdivision probability was non-linear (Table 1). Parcels closer to existing roads, the ocean, those with lower slopes, and those designated as fit for development were all most likely to develop. Parcels designated in redevelopment areas were less likely to develop. Overall, the model had a pseudo r –squared of 0.22.

The land use simulation model, based on a combination of the econometric subdivision model and three different growth policies, resulted in substantial differences in the extent and pattern of housing of the three scenarios. The total area of housing development, or the housing footprint, was largest for simulations where leapfrog growth dominated, followed by expansion-type development, and then infill (Figure 1a). The differences in the housing footprint became larger among the scenarios over time, but the largest difference was between infill and the other two development types. As the housing footprint expanded in the three scenarios, the corresponding housing density declined, so that leapfrog growth resulted in the lowest housing density per 1-km, followed by expansion and then infill (Figure 2b). Despite the near inverse of this relationship, there was generally a larger separation among scenarios with regard to housing density. With larger housing footprints and lower housing density, the number of separate housing clusters increased while their size decreased (Figure 2c).

In the first two time steps of the model (2015 and 2020), the simulated development pattern closely followed the desired pattern in the scenario, although some of the growth in the infill scenario ended up becoming expansion or leapfrog (Table 2). In the last two time steps (2025 and 2030), there were not enough infill parcels left, and thus, the majority of growth in these simulations became expansion, followed by infill, and then leapfrog. In the last time step, there were not enough isolated parcels in the leapfrog scenario and thus, the majority of development became expansion. Thus in general, as more development occurred in the simulations by the year 2030, the majority took the form of expansion.

The area under the curve (AUC) of receiver operating characteristic (ROC) plots, indicating the ability of the MaxEnt model to discriminate between burned and unburned structures, averaged across five cross-validated replicate runs was 0.91. The AUC represents the probability that, for a randomly selected set of observations, the model prediction was higher for a burned structure than for an unburned structure [49].The two most important variables in the model according to the internal jackknife tests in MaxEnt [47] were related to housing pattern:

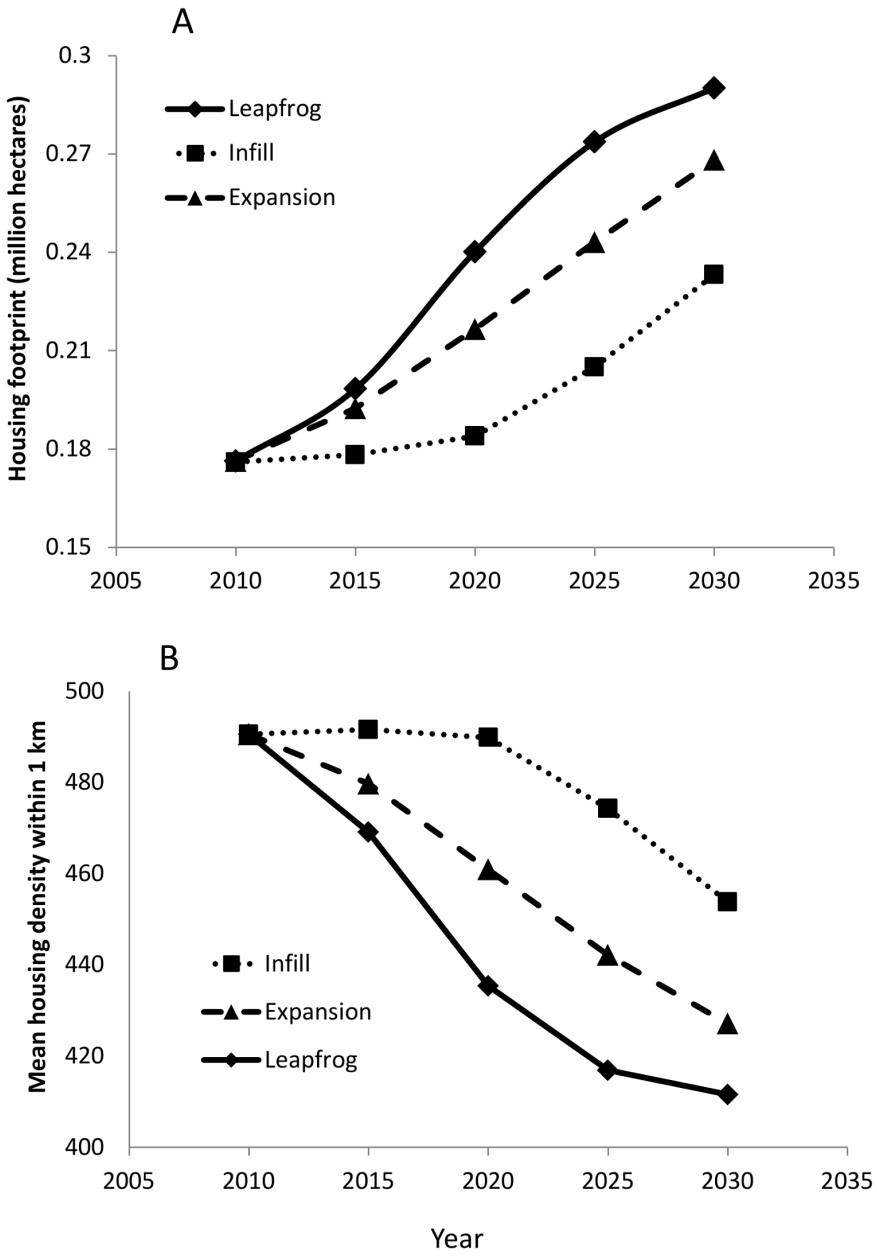


Figure 1. Trends of development extent and pattern for three planning policy simulations from 2010–2030, including A) total housing footprint representing the area of land within all housing clusters, and B) mean housing density averaged across all housing clusters.
doi:10.1371/journal.pone.0071708.g001

low to intermediate housing density and small cluster size and housing density (Figure 3). The distance to the edge of housing cluster was a less important contribution.

Maps showing the probability of a structure being destroyed in a wildfire, displayed as a gradient from low to high risk, show broad agreement relative to the general areas of the landscape that are riskiest, with correlation coefficients ranging from 0.85–0.91 (Figure 4). Nevertheless, subtle differences are apparent in the three development-scenario maps by year 2030, with the highest-risk areas in the expansion scenario located farther east than infill, and the highest-risk areas in leapfrog occupying a wider extent than either of the other two scenarios.

Differences among current housing and the three development scenarios are clearly illustrated through the mean landscape risk, or total probability of all structures burning (Figure 5). All three development scenarios were predicted to experience an increase in mean landscape risk over the duration of the simulations, except for infill at year 2015. The highest landscape risk to structures was predicted for the leapfrog scenario, followed by expansion, and then infill. The increase in risk over time is more gradual for the infill scenario than the other two scenarios.

The ranking of scenarios varied according to the proportion of structures located within different levels of risk defined through binary thresholding (Figure 6). When the continuous risk maps were thresholded at the lowest number of 0.05, a large proportion

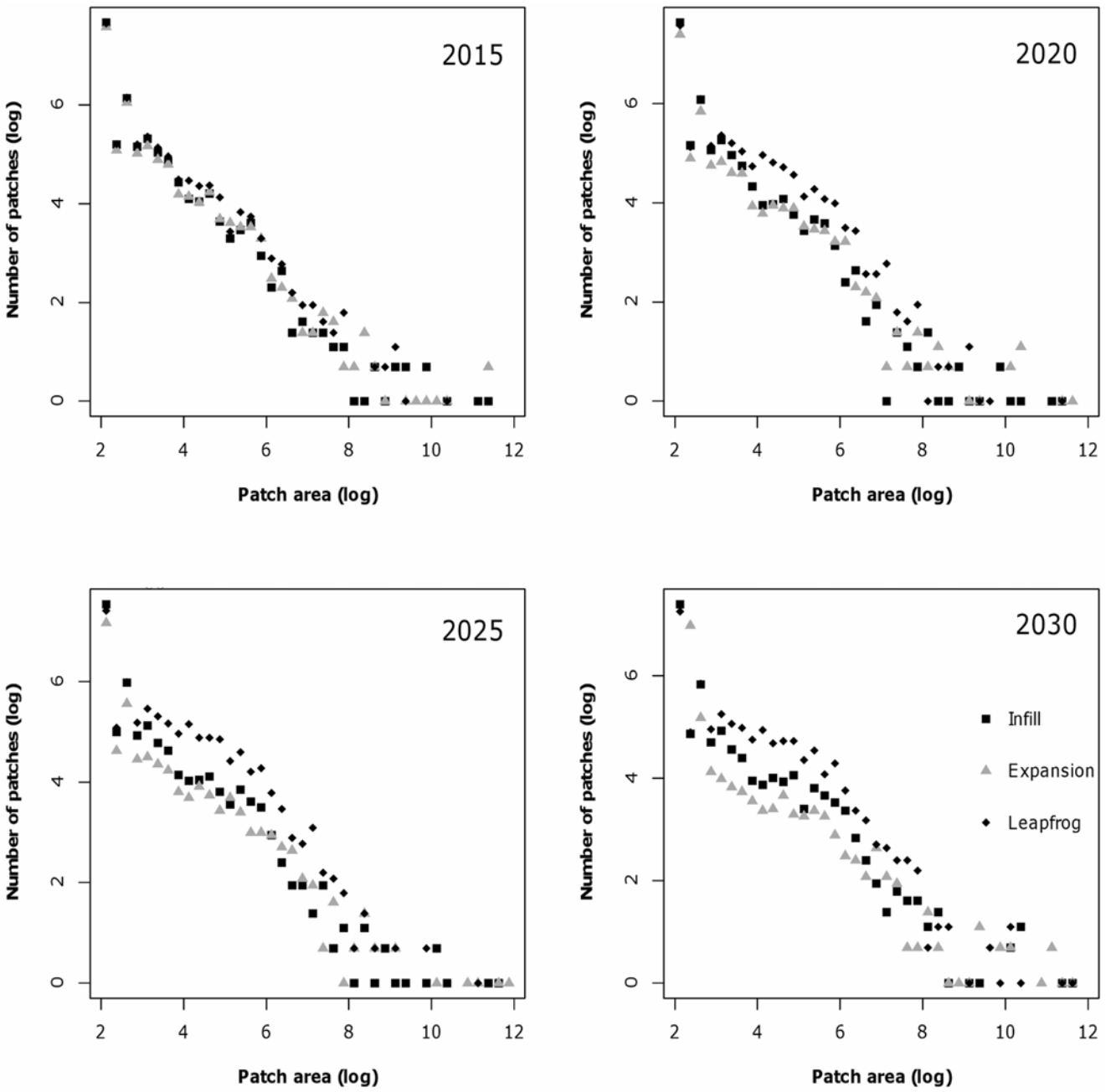


Figure 2. Trends in number of patches and patch area for three planning policy simulations from 2010–2030. Numbers were log-transformed for better visual representation of the scenarios.
doi:10.1371/journal.pone.0071708.g002

of structures in all scenarios fell within areas defined as risky according to this criterion. At this threshold, the proportion of structures in high-risk areas increased linearly for the expansion and leapfrog development scenarios while the proportion of infill homes increased more gradually. When risk was defined more conservatively at 0.25, temporal trends for the leapfrog and infill scenarios were similar to the 0.05 threshold. However, the proportion of structures at risk in the expansion scenario initially increased to 2020, but this proportion leveled off and declined by 2030. When the threshold was highest at 0.50, a very low proportion of structures in any scenario were located in areas at risk. But in these high-risk areas, the expansion scenario switched places with infill to have the lowest proportion of structures at risk in all time steps. Leapfrog had the largest proportion of homes at risk. This proportion of homes located in areas at risk with a threshold at 0.5 declined over time for all three scenarios.

Discussion

Our simulations of residential development showed that planning policies based on different growth types, applied locally for subdivision of individual parcels, will likely produce substantial and cumulative landscape-level differences in pattern, location, and extent of development. These differences in development pattern, in turn, will likely affect the area and proportion of

Table 2. Pattern of simulated development under infill, expansion, and leapfrog growth policies.

		Actual development		
Development scenario	**year**	*Infill*	*Expansion*	*Leapfrog*
Infill	2015	9450	18	6
	2020	11787	153	29
	2025	236	624	144
	2030	325	890	179
Expansion	2015	0	772	0
	2020	0	1243	2
	2025	0	1871	1
	2030	0	2662	0
Leapfrog	2015	0	10	408
	2020	0	5	1132
	2025	1	83	3563
	2030	34	917	0

The numbers in the table denote the numbers of patches of a given development type.
doi:10.1371/journal.pone.0071708.t002

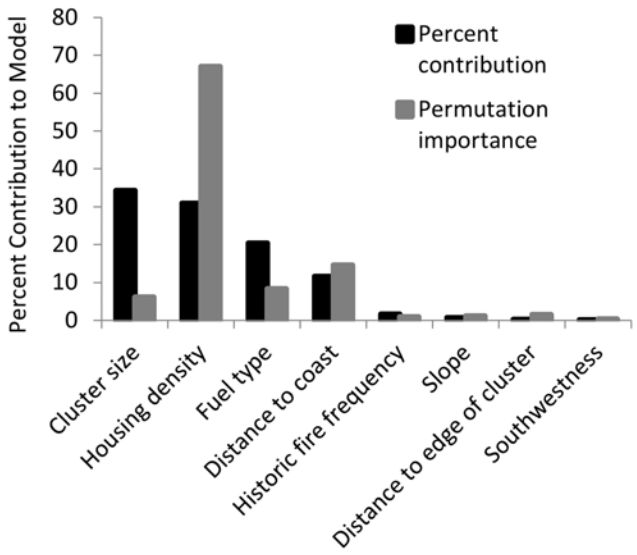


Figure 3. The importance of explanatory variables averaged across five cross-validated replications in the MaxEnt fire risk model. Percent contribution is determined as a function of the information gain from each environmental variable throughout the MaxEnt model iterations. Permutation importance reflects the drop in model accuracy that results from random permutations of each environmental variable, normalized to percentages.
doi:10.1371/journal.pone.0071708.g003

structures at risk from burning in wildfires. In particular, the scenarios with lower housing density and larger numbers of small, isolated clusters of development, i.e., leapfrog followed by expansion and infill, were generally predicted to have the highest predicted fire risk to the largest proportion of structures in the study area. Nevertheless, rankings of scenarios were affected by the definition of risk.

Theoretically, it makes sense that leapfrog development produced fragmented development with larger numbers of small patches, lower housing density, and a larger housing footprint; and that infill resulted in the opposite, with expansion in the middle. By definition, leapfrog development requires open space around all sides of the newly developed parcel, whereas infill requires development on all sides, and expansion requires development on one side and open space on another. Implementing these planning policies on real landscapes, however, can be complex if there are more houses to build than there are parcels that meet the definitions of the three planning rules, and thus not all development conforms strictly to the policy [54]. In our simulations, parcels meeting the definition of each growth type had a higher probability of subdividing; yet, as we were simulating a real landscape, many newly developed parcels did not meet the scenario criteria. That the three scenarios nevertheless produced substantial differences in landscape-level development patterns shows that decision-making at the individual level can lead to meaningful broad-scale effects.

The objective of the econometric model was to provide a baseline probability to predict which parcels were most likely to subdivide; thus, the econometric model itself provides no explanation of how a given policy affects likelihood of subdivision, although it does indicate the correlation between the policy and the outcome. In our setting, which areas are protected, marked for redevelopment, or marked for development may be endogenous to the land owner decision to subdivide. In the case of these variables especially, our results should not be interpreted as causal predictors. Likewise, we use data only from 2005–2009 to predict changes to 2030. If major changes in the land market take place over this time horizon our model will not be able to take this into account.

Although some differences in predicted fire risk among the three scenarios likely stemmed from location of new structures relative to variables such as distance to coast, fuel type, or slope, the most important variables in the fire risk model were housing density and cluster size, with most structure loss historically occurring in areas with low housing density and in small, isolated housing clusters. Thus, leapfrog development was generally the riskiest scenario and infill the least risky. The most surprising result was the variation in predicted risk for the expansion scenario over time and at different thresholds. While leapfrog and infill showed similar trajectories across thresholds, expansion went from being the highest-risk scenario at the low threshold to being the lowest-risk scenario at the highest threshold. Because the threshold is merely a way to group structures into a binary classification, this means that, while the average risk calculated across all homes shows expansion to rank in the middle of infill and leapfrog throughout the simulation (Figure 5), the other two scenarios have a relatively larger proportion of homes that are modeled to be at a very high risk (i.e., 0.25 or 0.5), particularly by the end of the simulations. Because the total number of structures with a risk greater than 0.25 or 0.5 is relatively low in all scenarios, this difference in distribution of homes at the highest risk is not reflected in the mean. Another reason for the shift in rank of expansion over time is that, as more development occupied the landscape, there were fewer parcels remaining to accomplish infill or leapfrog type growth in the other scenarios. Thus, by the end of the simulations in year 2030, the majority of growth in all scenarios was expansion, and there was some convergence between scenarios. Finally, the change in risk of expansion growth over time may reflect that, despite the relatively low importance of distance to edge of cluster as an explanatory variable, expansion growth is characterized as having an initially fragmented landscape pattern that eventually merges into large patches with low edge.

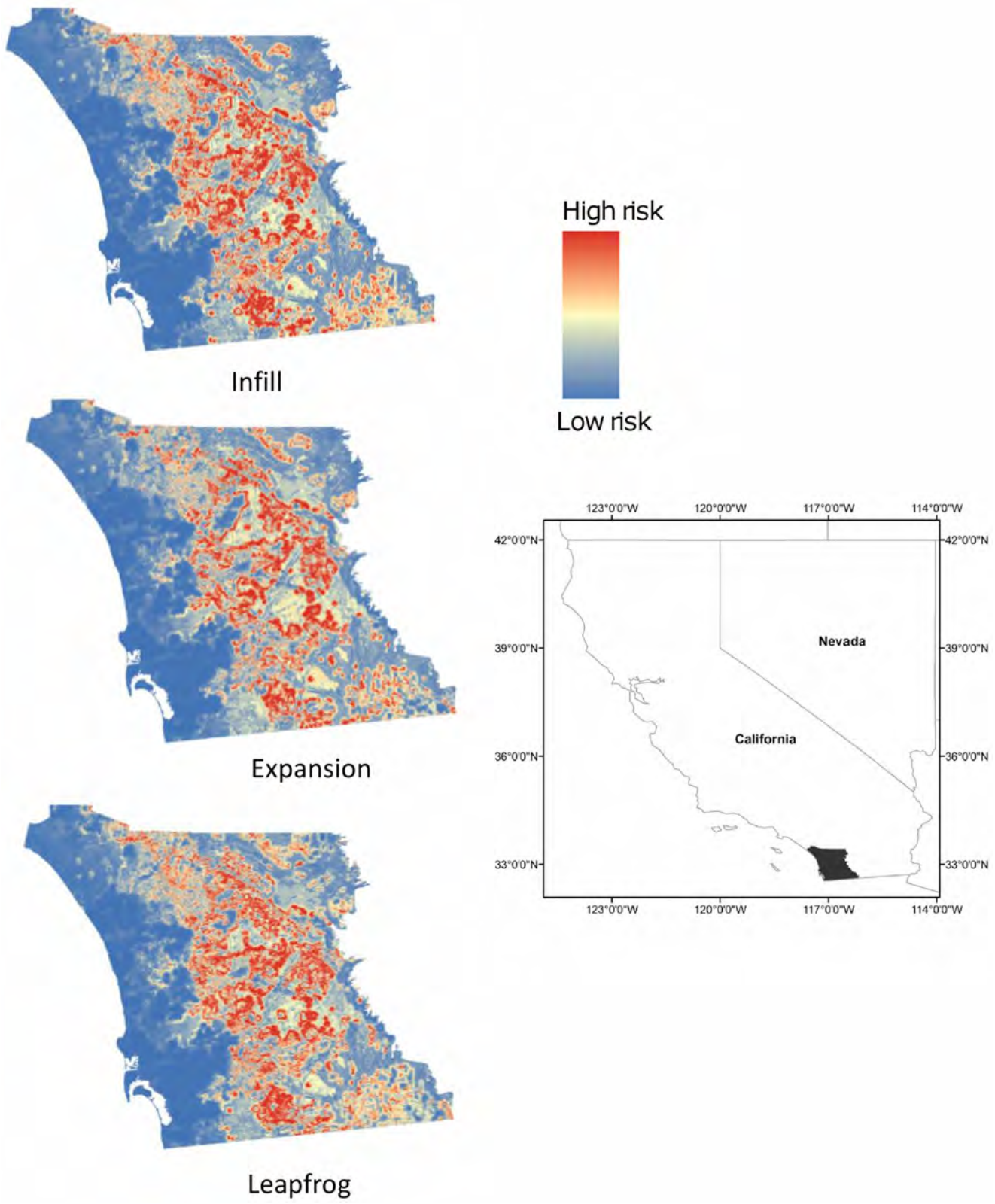


Figure 4. Maps of the study area showing projected wildfire risk at year 2030 for simulations of residential development under policies emphasizing infill, expansion, or leapfrog growth.
doi:10.1371/journal.pone.0071708.g004

Although leapfrog development clearly ranked highest in terms of fire risk, the interpretation of which planning policy is best may depend on fire management objectives and resources, as well as other considerations such as biodiversity or ecological impacts.

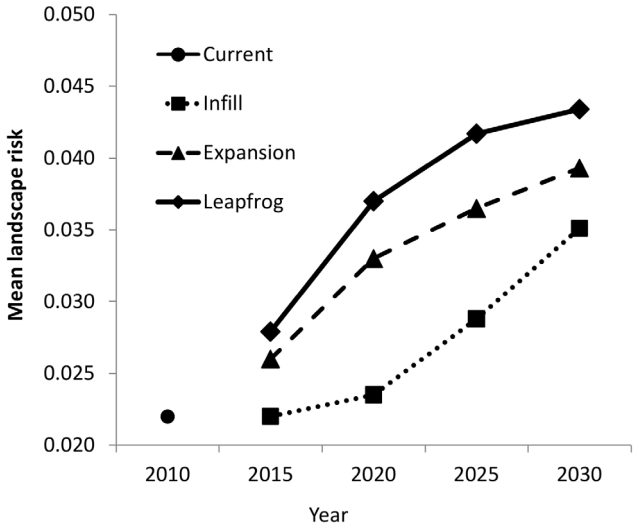


Figure 5. Projected landscape fire risk, reflecting the probability of burning in a wildfire averaged across all residential structures on the current landscape and in three development scenarios of infill, expansion, and leapfrog for year 2030.
doi:10.1371/journal.pone.0071708.g005

The spatial pattern of development affects multiple ecological functions and services [55], with potentially varying conservation implications; both leapfrog and expansion development consumed more land than infill, which would likely lead to more ecological degradation [56]; nevertheless, higher-density clustered development may be dominated by more invasive species [57]. Trade-offs between fire protection and conservation are common, but techniques are available for identifying mutually beneficial solutions [58].

Different perceptions of the fire risk results could also potentially translate into different planning priorities for management. For example, if the priority is to plan for the lowest overall risk to structures, then the mean landscape risk clearly delineates the rankings of options, with infill being the winner. However, if the objective is to reduce the number of structures at the highest risk threshold, i.e., $>=0.5$, then expansion is the best option, at least by 2030. An important consideration for fire management is the total area that needs to be protected, as well as the length of wildland-urban interface [8,13]. Therefore, despite the lower number of structures at the highest risk thresholds, expansion creates more edge than infill and may translate into greater challenges for firefighter protection.

Although we did not create separate scenarios for high or low growth, the results at different time steps can be substituted to envision the potential outcome of developing more or fewer houses. In the short term, the total fire risk is projected to increase proportionately as more land is developed. However, given the inverse relationship between housing density and fire risk, it is possible that this trend could reverse if housing growth eventually resulted in expansive high-density development.

Land use planning is one of a range of options available for reducing fire risk, and the best outcome will likely be achieved through a combination of strategies that include homeowner actions, improvements in fire-safe building codes, and advanced fire suppression tactics. Although we isolated the effect of land use planning policy in the three development scenarios, the fire risk model nevertheless showed that the pattern and location of structures in this study area were the most important out of a suite of factors influencing structure loss. We used a correlative approach that did not incorporate mechanisms or feedbacks, but our models clearly illustrated differences in the cumulative effects of individual planning decisions. The relationship between spatial pattern of development and fire risk is likely related to the intermixing of development and wildland vegetation [29,59]; thus, these results likely apply to a wide range of fire-prone ecosystems with large proportions of human-caused ignitions. Nevertheless, because fire risk is highly variable over space and time, and due to a range of human and biophysical variables [60], we recommend planners develop their own models for the best understanding of where the most fire-prone areas are in their region [19].

With projections of substantial global change in climate and human development, we recommend that land use planning should be considered as an important component to fire risk management, potentially to become as successful as the prevention of building on flood plains [61]. History has shown us that preventing fires is impossible in areas where large wildfires are a natural ecological process [4,9]. As Roger Kennedy put it, "the

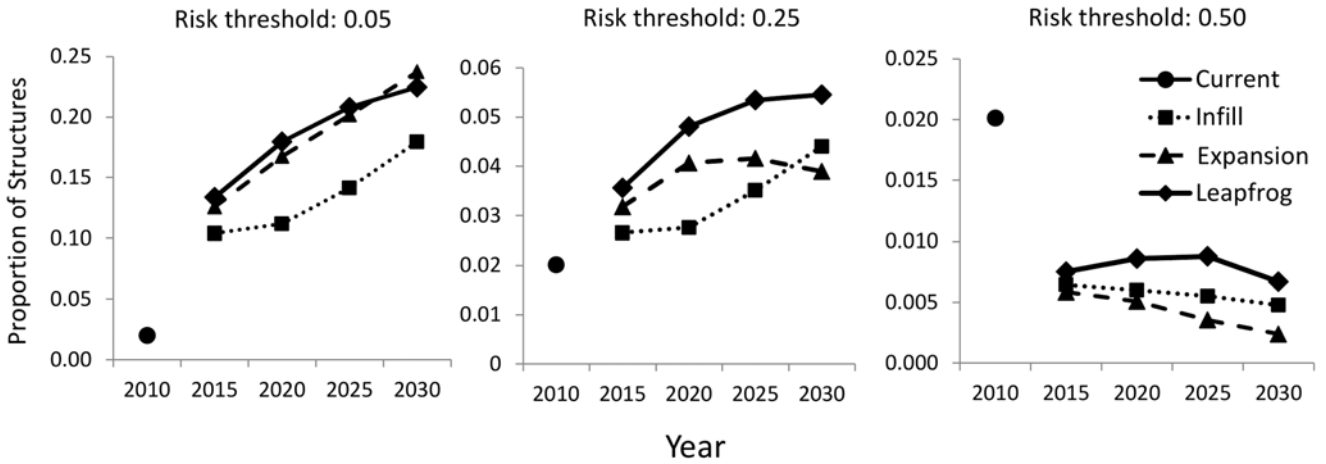


Figure 6. Proportion of residential structures that are located in areas of high fire risk defined using thresholds from the fire risk model of 0.05, 0.25, and 0.5 for current structures and for structures simulated under infill, expansion, and leapfrog growth policies.
doi:10.1371/journal.pone.0071708.g006

problem isn't fires; the problem is people in the wrong places [62]."

Supporting Information

Table S1 Definitions and summary statistics for variables used in the probit model.
(DOCX)

Acknowledgments

We thank V.C. Radeloff for insightful discussions, and we are grateful for the helpful suggestions from Susan Jones, Rob Klinger, Ben Bond-Lamberty, and the anonymous reviewers. Any use of trade names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Author Contributions

Conceived and designed the experiments: ADS JEK ABM VB. Performed the experiments: ADS ABM VB. Analyzed the data: ADS ABM VB. Wrote the paper: ADS JEK ABM VB.

References

1. Keeley JE (1993). Interface between ecology and land development in California. Los Angeles, California: Southern California Academy of Sciences.
2. Rundel PW, King JA (2001) Ecosystem processes and dynamics in the urban/wildland interface of Southern California. Journal of Mediterranean Ecology 2: 209–219.
3. Boschetti RD, Barbosa P, Justice CL (2008) A MODIS assessment of the summer 2007 extent burned in Greece. Int J Remote Sens 29: 2433–2436.
4. Keeley JE, Safford HD, Fotheringham CJ, Franklin J, Moritz MA (2009) The 2007 southern California wildfires: Lessons in complexity. J Forest 107: 287–296.
5. Blanchi R, Lucas C., Leonard J., Finkele K (2010) Meteorological conditions and wildfire-related house loss in Australia. Int J Wildland Fire 19: 914–926.
6. Hubbard J (2012) Statement of Testimony: United States Senate Committee on Energy and Natural Resources.
7. Hessl AE (2011) Pathways for climate change effects on fire: Models, data, and uncertainties. Prog Phys Geog 35 : 393–407.
8. Gude PH, Rasker R, van den Noort J (2008) Potential for Future Development on Fire-Prone Lands. J Forest 106: 198–205.
9. Keeley JE, Aplet GH, Christensen NL, Conard SG, Johnson EA, et al. (2009) Ecological foundations for fire management in North American forest and shrubland ecosystems: General Technical Report, USDA Forest Service, Pacific Northwest Research Station.
10. Mell WE, Manzello SL, Maranghides A, Butry DT, Rehm RG (2010) The wildland-urban interface fire problem – current approaches and research needs. IntJ Wildland Fire 19: 238–251.
11. Schoennagel T, Nelson CR, Theobald DM, Carnwath GC, Chapman TB (2009) Implementation of National Fire Plan treatments near the wildland–urban interface in the western United States.Proc Natl Acad Sci 106: 10706–10711.
12. Bar Massada A, Radeloff VC, Stewart SI (2011) Allocating fuel breaks to optimally protect structures in the wildland – urban interface. IntJ Wildland Fire: 59–68.
13. Gude PH, Jones K, Rasker R, Greenwood MC (In Press) Evidence for the effect of homes on wildfire suppression costs. IntJ Wildland Fire. http://dx.doi.org/10.1071/WF11095.
14. Lampin-Maillet C, Long-Fournel M, Ganteaume a., Jappiot M, Ferrier JP (2011) Land cover analysis in wildland–urban interfaces according to wildfire risk: A case study in the South of France. For Ecol Manage 261: 2200–2213.
15. Syphard AD, Keeley JE, Brennan TJ (2011) Comparing the role of fuel breaks across southern California national forests. For Ecol Manage 261: 2038–2048.
16. Syphard AD, Keeley JE, Brennan TJ (2011) Factors affecting fuel break effectiveness in the control of large fires on the Los Padres National Forest, California. IntJ Wildland Fire 20: 764.
17. Cohen JD (2000) Home ignitability in the wildland-urban interface,J Forest 98: 15–21.
18. Winter McCaffrey, S Vogt, C.A G (2009) The role of community policies in defensible space compliance. For Pol Econ 11: 570–578.
19. Schwab J, Meck S (2005) Planning for wildfires. Chicago: American Planning Association.
20. USDA USDI (2001) Urban wildand interface communities within vicinity of Federal lands that are at high risk from wildfire. Federal Register 66: 751–777.
21. Pincetl S, Rundel PW, DeBlasio JC, Silver D, Scott T, et al. (2008) It's the land use, not the fuels: fires and land development in southern California. Real Estate Rev 37: 25–43.
22. Bovio G, Camia A (1997) Land zoning based on fire history. IntJ Wildland Fire 7: 249–258.
23. Buxton M, Haynes R, Mercer D, Butt A (2011) Vulnerability to Bushfire Risk at Melbourne's Urban Fringe: The Failure of Regulatory Land Use Planning. Geogr Res 49: 1–12.
24. Bhandary U, Muller B (2009) Land use planning and wildfire risk mitigation: an analysis of wildfire-burned subdivisions using high-resolution remote sensing imagery and GIS data. J Environ Plan Manage 52: 939–955.
25. Groenhart L, March, A Holland, M (2012) Shifting Victoria's Emphasis in Land Use Planning for Bushfire: Towards a Place-Based Approach. Australian J Emergency Manage 27: 33–37.
26. Syphard AD, Keeley JE, Massada AB, Brennan TJ, Radeloff VC (2012) Housing arrangement and location determine the likelihood of housing loss due to wildfire. PLoS One 7: e33954.
27. Murphy K, Rich T, Sexton T. (2007) An assessment of fuel treatment effects on fire behavior, suppression effectiveness, and structure ignition on the Agora Fire. Vallejo, CA: USDA Pacific Southwest Region. Gen. Tech. Rep. R5-TP-025.
28. Spyratos V, Bourgeron PS, Ghil M (2007) Development at the wildland-urban interface and the mitigation of forest-fire risk. Proc Natl Acad Sci104: 14272–14276.
29. Syphard AD, Radeloff VC, Keeley JE, Hawbaker TJ, Clayton MK, et al. (2007) Human influence on California fire regimes. Ecol Applic 17: 1388–1402.
30. Syphard AD, Radeloff VC, Hawbaker TJ, Stewart SI (2009) Conservation Threats Due to Human-Caused Increases in Fire Frequency in Mediterranean-Climate Ecosystems. Conserv Biol 23: 758–769.
31. Silva EA (2004) The DNA of our regions: artificial intelligence in regional planning. Futures 36: 1077–1094.
32. Schneider A, Woodcock C (2008) Compact, dispersed, fragmented, extensive? A comparison of urban expansion in twenty-five global cities using remotely sensed, data pattern metrics and census information. Urban Stud 45: 659–92.
33. Herold M, Goldstein NC, Clarke KC (2003) The spatiotemporal form of urban growth: measurement, analysis and modeling. Remote Sensing of Environment 86: 286–302.
34. Wilson JS, Clay M, Martin E, Stuckey D, Vedder-Risch K (2003) Evaluating environmental influences of zoning in urban ecosystems with remote sensing. Remote Sens Environ 86: 303–321.
35. Ellman T (1997) Infill: the cure for sprawl? Arizona Issue Analysis 146: 7–9.
36. Forman RTT (1995) Land Mosaics: The Ecology of Landscapes and Regions. Cambridge, UK: Cambridge University Press.
37. Regan HM, Hierl LA, Franklin J, Deutschman DH, Schmalbach HL, et al. (2008) Species prioritisation for monitoring and management in regional multiple species conservation plans. Divers Distrib 14: 462–471.
38. Keeley JE, Safford HD, Fotheringham CJ, Franklin J, Moritz MA (2009) The 2007 southern California wildfires: Lessons in complexity. J Forest 107: 287–296.
39. Keeley JE, Fotheringham CJ, Morais M (1999) Reexamining fire suppression impacts on brushland fire regimes. Science 284: 1829–1832.
40. San Diego Association of Governments (SANDAG) (2008) Regional Growth Forecast Update. San Diego, CA.
41. Irwin EG (2010) New directions for urban economic models of land use change: Incorporating spatial dynamics and heterogeneity. Journal of Regional Science 50: 65–91.
42. Syphard AD, Clarke KC, Franklin J, Regan HM, McGinnis M (2011) Forecasts of habitat loss and fragmentation due to urban growth are sensitive to source of input data. J Environ Manage 92: 1882–1893.
43. Suarez-Rubio M, Lookingbill T, Wainger L (2012) Modeling exurban development near Washington, DC, USA: comparison of a pattern-based model and a spatially-explicit econometric model. Landsc Ecol 27: 1045–1061.
44. Carrion-Flores C, Irwin E (2004). Determinants of residential land-use conversion and sprawl at the rural-urban fringe. Am J Agric Econ 86: 889–904.
45. Butsic V, Lewis DJ, Ludwig L (2011). An Econometric Analysis of Land Development with Endogenous Zoning. Land Econ 87: 412–432.
46. San Diego Association of Governments (SANDAG) (2009) 2009 Employment and Residential Land Inventory & Market Analysis. San Diego, CA.
47. Phillips SJ, Anderson RP, Schapire RE (2006) Maximum entropy modeling of species geographic distributions. Ecol Modell 190: 231–259.
48. Elith J, Phillips SJ, Hastie T, Dudík M, Chee YE, et al. (2011) A statistical explanation of MaxEnt for ecologists. Divers Distrib 17: 43–57.
49. Franklin J (2010) Mapping species distributions: spatial inference and prediction. New York: Cambridge University Press.
50. Bar Massada A, Syphard AD, Stewart SI, Radeloff VC (in press) Wildfire ignition modeling: a comparative study in the Huron-Manistee National Forest, Michigan, USA. Int J Wildland Fire 22: 174–183.
51. Lampin-Maillet C, Jappiot M, Long M, Bouillon C, Morge D, et al. (2010) Mapping wildland-urban interfaces at large scales integrating housing density

and vegetation aggregation for fire prevention in the South of France. J Environ Manage 91: 732–741.
52. Owens P, Titus-Ernstoff L, Gibson L, Beach M, Beauregard S, et al. (2010) Smart density: a more accurate method of measuring rural residential density for health-related research. Int J Health Geogr 9: 8.
53. Freeman EA, Moisen GG (2008) A comparison of the performance of threshold criteria for binary classification in terms of predicted prevalence. Ecol Modell 217: 48–58.
54. Danielsen KA, Lang RE, Fulton W (1999) Retracting suburbia: Smart growth and the future of housing. Housing Policy Debate 10: 513–540.
55. Solecki WD, Oliveri C (2004) Downscaling Climate Change Scenarios in an Urban Land Use Change Model. J Environ Manage 72: 105–115.
56. Xie Y, Mei Y, Guangjin T, Xuerong X (2005) Socio-economic driving forces of arable land conversion: A case study of Wuxian City, China. Global Environ. Chang. A. 15: 238–252.
57. Lenth BA, Knight RL, Gilbert WC (2006) Conservation value of clustered housing developments. Conserv Biol 20: 1445–1456.
58. Driscoll DA, Lindenmayer DB, Bennett AF, Bode M, Bradstock RA, et al. (2010) Resolving conflicts in fire management using decision theory: asset-protection versus biodiversity conservation. Conserv Letters 3: 215–223.
59. Radeloff VC, Hammer RB, Stewart SI, Fried JS, Holcomb SS, et al. (2005) The wildland-urban interface in the United States. Ecoll Appl 15: 799–805.
60. Syphard AD, Radeloff VC, Keuler NS, Taylor RS, Hawbaker TJ, et al. (2008) Predicting spatial patterns of fire on a southern California landscape. Int J Wildland Fire 17: 602–613.
61. Abt SR, Witter RJ, Taylor A, Love DJ (1989) Human stability in a high flood hazard zone. J Am Wat Resour As 25: 881–890.
62. Kennedy RG (2006) Wildfire and Americans: How to save lives, property, and your tax dollars. New York: Hill & Wang Pub.

CSIRO PUBLISHING

International Journal of Wildland Fire **2008**, *17*, 602–613 www.publish.csiro.au/journals/ijwf

Predicting spatial patterns of fire on a southern California landscape

Alexandra D. Syphard[A,E], *Volker C. Radeloff*[A], *Nicholas S. Keuler*[B], *Robert S. Taylor*[C], *Todd J. Hawbaker*[A], *Susan I. Stewart*[D] *and Murray K. Clayton*[B]

[A]Department of Forest and Wildlife Ecology, University of Wisconsin, Madison, WI 53706, USA.
[B]Department of Statistics, University of Wisconsin, Madison, WI 53706, USA.
[C]National Park Service, Santa Monica Mountains National Recreation Area, Thousand Oaks, CA 91360, USA.
[D]USDA Forest Service, Northern Research Station, Evanston, IL 60201, USA.
[E]Corresponding author. Email: asyphard@yahoo.com

Abstract. Humans influence the frequency and spatial pattern of fire and contribute to altered fire regimes, but fuel loading is often the only factor considered when planning management activities to reduce fire hazard. Understanding both the human and biophysical landscape characteristics that explain how fire patterns vary should help to identify where fire is most likely to threaten values at risk. We used human and biophysical explanatory variables to model and map the spatial patterns of both fire ignitions and fire frequency in the Santa Monica Mountains, a human-dominated southern California landscape. Most fires in the study area are caused by humans, and our results showed that fire ignition patterns were strongly influenced by human variables. In particular, ignitions were most likely to occur close to roads, trails, and housing development but were also related to vegetation type. In contrast, biophysical variables related to climate and terrain (January temperature, transformed aspect, elevation, and slope) explained most of the variation in fire frequency. Although most ignitions occur close to human infrastructure, fires were more likely to spread when located farther from urban development. How far fires spread was ultimately related to biophysical variables, and the largest fires in southern California occurred as a function of wind speed, topography, and vegetation type. Overlaying predictive maps of fire ignitions and fire frequency may be useful for identifying high-risk areas that can be targeted for fire management actions.

Additional keywords: fire frequency, fire ignitions, generalised linear model, predictive mapping, wildland–urban interface.

Introduction

Altered fire regimes threaten ecosystem structure and function, create hazards for people, and increase fire suppression costs (Calkin *et al*. 2005; Stephens 2005; Steele *et al*. 2006). In the United States, fire regimes have been altered both through fuel accumulation due to fire suppression and from the dramatic increase in the number of human-caused ignitions in fire-prone areas, particularly the wildland–urban interface (WUI) (Keeley and Fotheringham 2003), which is the contact zone where human development abuts and intermingles with undeveloped vegetation (Radeloff *et al*. 2005). The convergence of these trends has resulted in substantial federal funding, and social and political pressure, to decrease fire hazard by reducing fuel loads (USDA and USDI 2001; NPS 2005).

Although fuel buildup creates conditions favourable for intense, large-scale fires (Pyne *et al*. 1996; Allen *et al*. 2002), human population growth contributes to increased ignitions and fire frequency (Keeley *et al*. 1999; Rundel and King 2001; Radeloff *et al*. 2005; Syphard *et al*. 2007*a*). Information on fuel loading is often the only factor considered when planning management activities to reduce fire hazard (Dickson *et al*. 2006). In some forests, widespread fuel reduction methods, such as landscape-scale prescribed fire, can be beneficial for restoring natural disturbance regimes (Miller and Urban 2000; Scheller *et al*. 2005). However, in regions where human ignitions have increased fire frequency beyond its natural range of variability, widespread prescribed fire can be ecologically damaging to native plant communities (Keeley and Fotheringham 2003).

Also, management strategies based solely on fuel as a risk factor can become needlessly expensive if fuel treatments are placed in locations where fire hazard to humans is of little concern (G. Aplet and B. Wilmer, http://www.tws.org/OurIssues/Wildfire/CFPZ/index.cfm, accessed 11 August 2008). Considering that fire regimes vary among vegetation types and that humans impact fire regimes in different ways, there is growing awareness that fire management should be adapted to both the human and ecological landscape characteristics that vary from region to region (Odion *et al*. 2004; Halsey 2005; Badia-Perpinya and Pallares-Barbera 2006). With better understanding of regional context, fuels treatments can be prioritised and strategically placed in areas where fire is most likely to threaten values

© IAWF 2008 10.1071/WF07087 1049-8001/08/050602

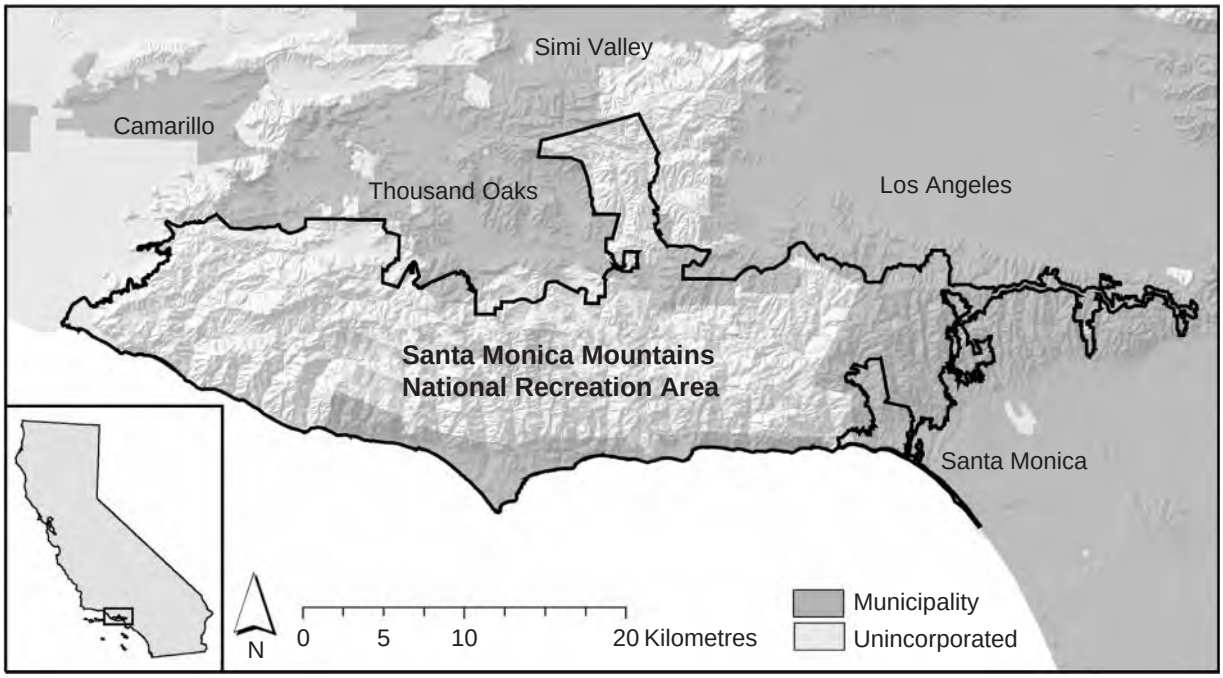


Fig. 1. The Santa Monica Mountains National Recreation Area, California, USA.

at risk or where placement will minimise ecological impacts (Halsey 2005; Dickson *et al*. 2006).

To identify the best locations for strategically placed fuels treatments, it is first necessary to understand how and why fire patterns vary across landscapes (DellaSala *et al*. 2004). Fire behaviour is largely a physical phenomenon, as illustrated by the fire environment triangle that places fire as a function of weather, fuels, and topography (Countryman 1972). Therefore, many fire risk and probability assessments have focussed on biophysical and climate variables (e.g. Bradstock *et al*. 1998; Fried *et al*. 1999; Diaz-Avalos *et al*. 2001; Rollins *et al*. 2002; Preisler *et al*. 2004), and several models and methods have been used to predict fire behaviour within different fuels types and from weather condition inputs (Burgan and Rothermel 1984; Forestry Canada Fire Danger Group 1992). Models that predict the probability of lightning ignitions have also been useful for identifying places where fires are likely to occur (Larjavaara *et al*. 2005; Wotton and Martell 2005). Although these biophysical approaches are critical for understanding fire patterns and behaviour, it is also important to understand the human influence on the frequency and spatial pattern of fire to help identify where fire risk is highest on a landscape, especially in places where fire regimes have been altered (Pyne 2001; DellaSala *et al*. 2004; Haight *et al*. 2004).

Human effects on the spatial distribution of fire have been accounted for in recent efforts to map or model fire risk. Most of these studies focussed on fire ignition points (i.e. the spatial location of fire's origin) (e.g. Pew and Larsen 2001; Badia-Perpinya and Pallares-Barbera 2006; Dickson *et al*. 2006; Yang *et al*. 2007), but fire risk probability has also been mapped using fire occurrence data (i.e. any location that burned regardless of point of origin) (e.g. Chou 1992; Chou *et al*. 1993). One problem is that fire patterns depend on both ignition locations and fire spread, but these are not necessarily determined by the same factors (Dickson *et al*. 2006; Syphard *et al*. 2007*a*, 2007*b*). For example, ignitions may or may not occur in fuel types that are highly flammable.

Our objective for the present research was to use a combination of biophysical and human explanatory variables to produce spatially explicit statistical models and maps predicting patterns of fire ignitions and fire frequency in a human-dominated southern California landscape. Most fires in the region result from human ignition sources (Keeley 1982; NPS 2005), so we expected proximity to human infrastructure to most strongly influence fire ignition patterns because the human activities that are likely to lead to ignitions are concentrated in or near these locations. The rate of spread for the largest fires in southern California is largely determined by wind speed, topography, and vegetation type (Keeley 2000). Therefore, we also expected the distribution of biophysical variables to be important predictors of fire frequency.

Methods

Study area

The Santa Monica Mountains National Recreation Area (hereafter referred to as the Santa Monica Mountains) encompasses ~60 000 ha of Mediterranean-type habitat, characterised by steep, coastal mountains that form the southernmost range in the Transverse Ranges of southern California (Fig. 1). Slightly more than half of the land in the mountains is in public ownership (including the National Park Service), and much of the privately owned land remains undeveloped. However, the Santa Monica Mountains include a substantial amount of WUI and have been experiencing increased development pressure due to their proximity to the Los Angeles metropolitan region, which is

Table 1. Variables analysed in the regression models explaining fire ignitions and fire frequency in the Santa Monica Mountains, CA
WUI, wildland–urban interface

Variable	Resolution	Source	Description or range
Dependent variables			
Ignition points	Point	National Park Service	$n = 126$, V = 67, from 1981 to 2003
Fire frequency	10 m	National Park Service fire perimeters	0 to 9, from 1925 to 2003
Explanatory variables			
Human			
Distance to development	10 m	Syphard *et al*. 2005	Mean Euclidean distance
Level of development	500-m buffer	Syphard *et al*. 2005	None (0); low (0.01–0.33); intermediate (0.34–0.66); high (0.67–1.0)
Distance to WUI	10 m	Radeloff *et al*. 2005	Mean Euclidean distance
Level of WUI	500-m buffer	Radeloff *et al*. 2005	None (0); low (0.01–0.33); intermediate (0.34–0.66); high (0.67–1.0)
Distance to roads	10 m	US Census Bureau TIGER/Line files	Mean Euclidean distance
Distance to trails	10 m	National Park Service	Mean Euclidean distance
Biophysical			
January temperature	1 km	J. Michaelson (Franklin 1998)	Interpolated by kriging
Elevation	30 m	USGS Digital Elevation Model (DEM)	
Slope gradient	30 m	Derived from DEM	
South-westness	30 m	Derived from DEM	SW = (con(aspect(<dem>) == −12, 201,(cos(((aspect(<dem>) − 255) div deg) + 1) * 100)))
Vegetation type	30 m	J. Franklin, J. J. Swenson and D. Shaari, pers. comm., 1997	Coastal sage scrub; northern mixed chaparral; chamise chaparral; non-native grass; oak woodland; riparian; other (less flammable vegetation such as salt marshes, agriculture, or urban)

home to more than 17 million people (Rundel and King 2001). The region that includes the study area is biologically rich, with ~1000 plant species, 50 mammal species, 400 bird species, and 35 species of reptiles and amphibians (NPS 2005). The region is also home to more than 20 federal or state-listed threatened or endangered animals and plants and another 46 animal and 11 plant species listed as species of concern (NPS 2002). The primary vegetation types are chaparral (e.g. *Ceanothus* spp. or *Adenostoma fasciculatum*, ~60%); coastal sage scrub vegetation (e.g. *Salvia* spp. or *Artemisia californica*, ~25%); exotic grass (~5%); oak woodland (~5%); and riparian vegetation (~5%).

Fire is a natural process in southern California Mediterranean-type ecosystems, and many of the region's native species are resilient to a range of fire frequencies (Zedler 1995). However, explosive population growth in the region has increased ignitions to the point that fire frequency exceeds its natural range of variability in many areas (Keeley *et al*. 1999). Repeated fires in short succession can also exceed the resilience of native species, and some shrublands have type-converted to exotic annual grasses under high fire frequencies (Zedler *et al*. 1983; Haidinger and Keeley 1993; Jacobsen *et al*. 2007). In the last 75 years, humans have been responsible for 98% of the fires in the Santa Monica Mountains, and some areas have burned up to 10 times (NPS 2005). Chaparral-dominated shrublands are typified by high-intensity, stand-replacing fires that are difficult or impossible to suppress under severe, high-wind weather conditions (Keeley 2000). Therefore, considering that fire frequency has increased despite aggressive fire suppression efforts, the most recent fire management plan in the Santa Monica Mountains recommends against using prescribed fire to reduce fuel across the entire landscape (NPS 2005). Instead, the National Park Service (NPS) recommends strategically positioned fuels treatment in areas with high fire hazard near the WUI.

Data description

Dependent variables – fire ignitions and frequency

The ignition data included 126 coordinate points acquired from the NPS fire records from 1981 to 2003 (Table 1, Fig. 2). Ignition locations were entered into the Shared Applications Computer System (SACS) at the National Interagency Fire Center (NIFC) in Boise, ID, and then converted into a Geographic Information System (GIS) database. The median accuracy of the ignition locations was 100 m.

Fire perimeter polygons originally reported by NPS and County Fire Departments were compiled by the California Department of Forestry–Fire and Resource Assessment Program (CDF-FRAP) into a GIS database (http://frap.cdf.ca.gov/data/frapgisdata/select.asp, accessed 8 August 2008). Although this database generally provides the most complete digital record of fire perimeters in California, the fire record was incomplete, with a minimum mapping unit of 4.04 ha (10 acres). Therefore, the NPS staff at the Santa Monica Mountains updated this database to include additional smaller fires (less than 1 ha), which resulted in a fire frequency map that delineated overlapping fire perimeter boundaries from 1925 to 2003. Within this database, more than 75% of the fires occurred within the last 20 years. Although the average area burned also increased over time, the fire size distribution has remained generally stable, with a slight decline (Table 1, Fig. 2).

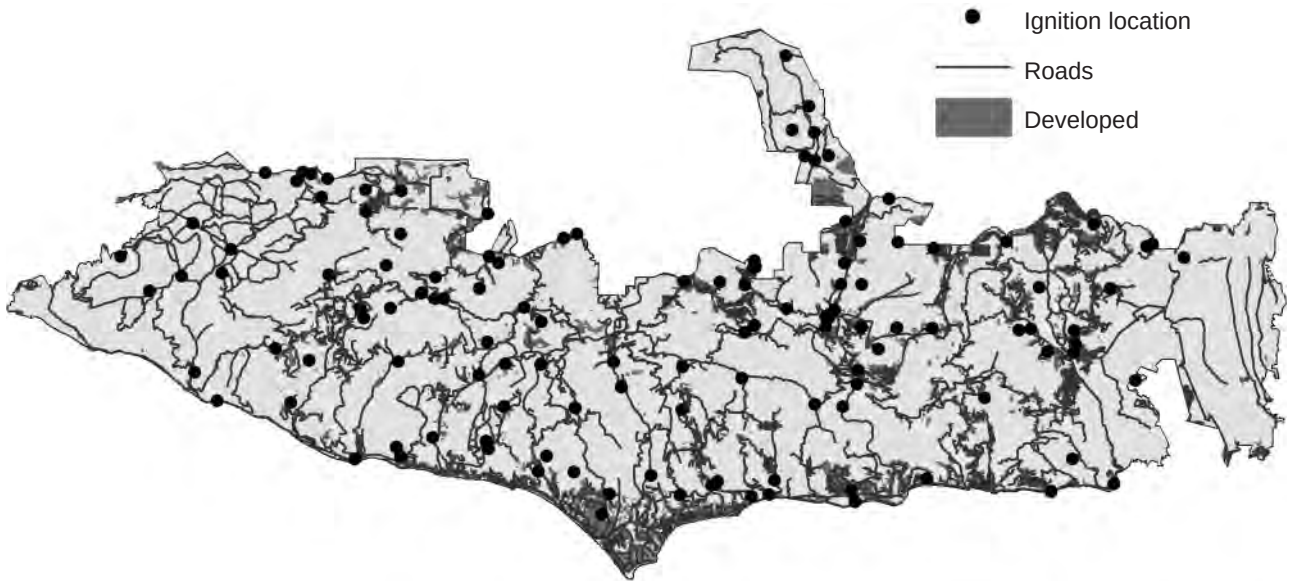


Fig. 2. Map showing proximity of ignition points (1981–2003) to roads and development in the Santa Monica Mountains, CA.

Using these boundaries, we created a continuous grid surface reflecting the number of fires that occurred during those 78 years for each cell. From this fire frequency grid, we randomly selected 1000 points to relate number of fires to the explanatory variables. We selected 1000 data points as our sample size because we wanted to use as many points as possible given the practical limitations of our statistical models. To ensure that the sample size was large enough to adequately represent the study area, we performed χ^2 goodness of fit tests to compare the true distribution of fire frequency (14 million points) with the distribution of fire frequency in our sample size of 1000, and we found no significant difference between them.

Explanatory variables – human

Human-caused ignitions frequently occur along transportation corridors and other areas where human activity is concentrated (Keeley and Fotheringham 2003; Stephens 2005). The ignition data points from the Santa Monica Mountains also appeared to be close to roads and development on a map (Fig. 2). Therefore, our explanatory human variables included distance to development, roads, trails, and WUI (Table 1, Fig. 2). We included trails because they provide a means of human access to otherwise undeveloped areas in the parks and protected areas. We created the map of development through airphoto interpretation and onscreen digitising of development evident on 1 : 12 000 at 1-m resolution digital orthorectified quarter quadrangles (DOQQs) from the US Geological Survey (USGS) for 2000. 'Development' included any part of the landscape with houses or other buildings, in addition to golf courses. We used 2000 US Topologically Integrated Geographic Encoding and Referencing system TIGER/Line files (US Census 2000) for our road data, and the NPS provided the GIS map of trails.

The interactions between human activities and natural dynamics tend to be spatially concentrated at the WUI, which has received national attention because housing developments and human lives are vulnerable to fire in these locations and because human ignitions are believed to be most common there (Rundel and King 2001; USDA and USDI 2001). Our WUI map was created as part of a nationwide mapping project that produced fine-scale maps of the conterminous United States (Radeloff *et al*. 2005; http://www.silvis.forest.wisc.edu/silvis.asp, accessed 8 August 2008). These data were created based on the definition of WUI published in the Federal Register (USDA and USDI 2001) using housing density data obtained from the US Census and land cover data obtained from the USGS National Land Cover Dataset (at 30-m resolution).

Explanatory variables – biophysical

From a biophysical perspective, the expression of fire on a landscape is a function of its fire environment, including the climate, terrain, and fuels in a region (Pyne *et al.* 1996). Therefore, spatially explicit models that simulate fire behaviour use input measurements of elevation, slope, aspect, weather, and vegetation (Anderson 1982; Andrews *et al*. 2005). Likewise, we selected climate and terrain-derived variables, as well as vegetation type, as potential biophysical explanatory variables (Table 1, Fig. 2). The biophysical factors that influence fire ignitions and fire spread may produce multiple direct and indirect effects on the fire regime (Whelan 1995). For example, slope angle affects soil moisture and development, which in turn affects vegetation distribution and composition, and thus fuel characteristics and flammability (Franklin 1995). At the same time, slope produces a direct physical effect on active fire fronts because the flames are closer to the ground, and fires typically burn faster in an upslope direction (Whelan 1995). We expected that the spatial variability and distribution of these influential biophysical variables across the landscape would provide substantial explanatory power to

predict and map where fire ignitions and fire frequency were likely to occur.

Our terrain variables included elevation, percentage slope, and transformed slope aspect ('south-westness'). These topographic factors explain variation in local climate, provide natural firebreaks, and indirectly influence factors such as fuel moisture, vegetation distribution, and relative humidity (Whelan 1995). We scaled aspect to an index of 'south-westness' using a cosine transformation because the index better distinguished xeric exposures (high index values) from mesic exposures (low index values) (Franklin *et al*. 2000).

Because we were not simulating annual fire behaviour or weather, we used spatially interpolated climate variables (mean annual precipitation, average January minimum temperature and average July maximum temperature), which were more appropriate for the broad spatial and temporal scale of our study. Moisture and temperature affect vegetation productivity and rate of fuel accumulation as well as soil moisture, rate of combustion, and rate of spread (Whelan 1995). We evaluated both January minimum and July maximum temperatures because these represented upper and lower limits, both of which would therefore maximise the distribution of variability in temperature gradients and plant species distributions across the landscape (Franklin 1998). Annual precipitation had high correlation with other variables and was removed from the analysis. The temperature data layers were developed as a 1-km^2 gridded surface that was interpolated from climate station data, elevation, and a digital elevation model. The surfaces were interpolated using universal and ordinary kriging (Franklin 1998).

Several sophisticated systems have been developed to create fuels models to use in fire behaviour prediction (e.g. Forestry Canada Fire Danger Group 1992). However, only three of the thirteen standard fuel models used in the United States (by the National Forest Fire Laboratory) are considered applicable to chaparral shrublands (Anderson 1982). In southern California shrublands, the fire regime is strongly differentiated according to broadly defined, structurally similar vegetation types, and fire tends to behave uniformly within those types (Wells *et al*. 2004). Therefore, instead of using fuel types as predictor variables, we used a generalised map of vegetation types, created through a classification of 30-m Landsat Thematic Mapper (TM) data (J. Franklin *et al*., pers. comm., 1997).

The fact that post-fire age (and thus fuel buildup) is a less critical factor in California chaparral than in some other vegetation types is an important additional consideration. Fire spread in North American coniferous forest areas is strongly affected by post-fire age, with younger stands having lower fuel loads and lower rates of fire spread. In contrast, post-fire age has relatively little effect on the spread of fires in California chaparral, particularly during high wind conditions (Moritz 2003). Owing to rapid post-fire fuel accumulation, chaparral and coastal sage shrublands can burn at high intensities at young ages (Radtke *et al*. 1982). Therefore, we assumed that post-fire age would not strongly influence temporal patterns of fire frequency in the Santa Monica Mountains as strongly as it would in other regions, and therefore we did not include it as a variable in our analysis. Some studies in forested regions have considered post-fire age and temporal autocorrelation when explaining fire frequency (e.g. Reed *et al*. 1998; Preisler *et al*. 2004).

Data manipulation

Because we expected fire to occur close to human infrastructure, we created continuous surfaces reflecting mean Euclidean distances to all of the human explanatory variables, and we used these distances in our models. To obtain better precision in our Euclidean distance calculations, we resampled all of our grids to a 10-m resolution and used those for overlay and extraction of data to relate the explanatory variables to fire ignitions and frequency. Because fire frequency and area burned also tend to be highest at intermediate levels of human activity and are a function of the spatial pattern of development and fuels (Keeley 2005; Syphard *et al*. 2007*a*), we created 500-m buffers around all point locations and calculated the proportion of development and WUI within those areas (total extent = 78 ha). We chose this buffer size because the dense nature of chaparral makes it difficult for humans to traverse far into the vegetation (Halsey 2005); therefore, we assumed that human influence would not exceed 500 m. The proportions were then classified into four arbitrary categories: none (0), low (0.01–0.33), intermediate (0.34–0.66), and high (0.67–1.0) (Table 1). We used the Spatial Analyst Extension of *ArcGIS*, in addition to *ArcInfo Workstation*, for our GIS analysis and data processing.

Modelling approaches

Fire ignitions

To predict the estimated probability, *P*, of a cell, i, in the study area experiencing an ignition, we developed a multiple logistic regression model. For logistic regression, if we let P_i be the probability of an ignition in cell i, and x_{ji} be the value of the jth covariate in cell i, the logistic regression model is:

$$P_i = \exp(\beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \ldots + \beta_n x_{ni}) / (1 + \exp(\beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \ldots + \beta_n x_{ni}))$$

where β_0 is a constant and β_n are regression coefficients for the human and biophysical explanatory variables, x_{ni}. To determine whether the explanatory variables affected the ignition locations differently than what would be expected by chance, we also generated a random sample of 700 control points in the study area. Therefore, our model predicted the probability that ignitions would occur disproportionately as a function of multiple landscape characteristics compared with 700 randomly selected available locations within the study area. We chose 700 control points because we wanted to sample enough points to adequately capture the variability in the predictors across the entire landscape without substantially decreasing the ratio of ones to zeros. Our ratio (1 : 5.5) was similar to that of Brillinger *et al*. (2003) (1 : 4).

We first developed univariate logistic regression models for all of the explanatory variables because we wanted to evaluate their independent influence on the response variables and to determine the values and direction (i.e. positive or negative) of the coefficients independently of their interactions with other variables. The *P* values for these models were Bonferroni-corrected to account for the large number of tests performed. Next, we developed a multiple logistic regression model using the R statistical package (R Development Core Team 2005). We selected the final model through a backwards elimination process using the Akaike Information Criterion (AIC)

(Venables and Ripley 1999). Significance of effects was determined using the likelihood ratio test.

To ensure that there were no collinearity problems, we implemented a collinearity diagnostic procedure, the variance inflation factor (VIF), to ensure low correlation (VIF lower than 10) between the variables in the multiple regression model (Belsey *et al*. 1980). Because July maximum temperature was correlated with other variables, we removed this variable and refitted the multiple regression models. We also plotted semivariograms of the models' deviance residuals to ensure there was no evidence of spatial autocorrelation. For all of our models, we evaluated the variables for non-linear relationships with the response through graphical checks and by fitting the models with quadratic terms included and determining whether those terms were significant.

To evaluate the performance of the multiple logistic regression model, we used a leave-one-out cross-validation approach (Lachenbruch 1967; Bautista *et al*. 1999). The procedure was to drop a single data point (i.e. an ignition), fit the model without it, and then calculate the predicted probability of an ignition at that point. This was repeated for every point. We then performed a receiver operating characteristic (ROC) analysis to determine the optimal probability cutoff for predicting that an ignition would occur. Based on this prediction rule, we were able to compare the yes–no ignition prediction with whether an ignition actually occurred, and estimate the sensitivity (fraction of true positive), specificity (fraction of false positive), and overall predictive ability of the fitted model (Fielding and Bell 1997).

The overall area under the curve (AUC) reflected the overall probability that, when we drew one ignition and one non-ignition point at random, our prediction rule correctly identified them. AUC values vary from 0.5 (no apparent accuracy) to 1.0 (perfect accuracy), but the interpretation of what is considered high or low predictive ability is subjective and can vary according to sample size, with lower sample sizes resulting in lower evaluations of model accuracy (Hernandez *et al*. 2006).

Fire frequency

Instead of using logistic regression, we used Poisson univariate and multiple regressions to develop the fire frequency models because they were appropriate for count data (Agresti 1996). For Poisson regression, if N_i is the number of fires observed in cell i, and x_{ji}, β_0 and β_n are as above, the model is:

$$N_i = \exp(\beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \ldots + \beta_n x_{ni})$$

As with the ignition multiple regression models, we developed univariate regression models for all of the explanatory variables because we wanted to evaluate their independent influence on the response variable, and adjusted the *P* values using the Bonferroni correction. For our multiple Poisson regression analysis, we again used a backwards stepwise elimination procedure based on the AIC to select the final model.

Although no spatial autocorrelation was present in the ignition data, we refitted the Poisson multiple regression model with allowance for a spatial exponential correlation between the deviance residuals owing to significant spatial autocorrelation in the fire frequency data (Littell *et al*. 1996). We fitted this model using the *GLIMMIX* macro of *SAS* Software (PROC GLIMMIX 2005).

To evaluate the performance of our multiple Poisson regression model, we randomly selected 300 independent observations in the study area. To determine how closely the observed and predicted values agreed in relative terms, we calculated Pearson's correlation coefficient. We also calculated the root mean square error (RMSE) and average error, which illustrate the discrepancy between the observed and predicted values (Potts and Elith 2006).

Predictive mapping

To convert our models into predictive map surfaces, we applied the formulae from the multiple Poisson and multiple logistic regression models to the entire study area using the predicted coefficients and the GIS map layers of the significant explanatory variables. Because logistic regression uses a prespecified number of control points, the intercept for the logistic regression is meaningless. However, we were able to adjust the intercept, and thereby map meaningful predicted probabilities, by using the ratio of control to experimental points (Preisler *et al*. 2004). We used the formulae from the Poisson model to predict and map fire frequency.

Owing to the difference in scales of fire ignition and fire frequency maps (probability of ignition *v.* predicted number of fires), we reclassified both maps into five equal-interval categories using the GIS and then summed these derived maps to generate a new map. This combined map was beneficial for identifying areas where ignitions and fire frequency were either both high or both low; however, intermediate values on the combined map did not differentiate between areas of high ignitions and low fire frequency and areas of high fire frequency and low ignitions. Therefore, we created a second map that reflected the differences in the predicted map surfaces.

Results

Fire ignitions

All of the human variables were significant ($P \leq 0.05$) in explaining fire ignitions in the univariate models except for distance to WUI after the Bonferroni adjustment (Table 2, Fig. 3). Ignitions were negatively related to all the distance variables and occurred closer to human infrastructure than the randomly selected points (Table 2). Although logistic regression coefficients can only be interpreted with respect to the intercept for categorical variables, the univariate models did indicate that fewer ignitions occurred when there was no development within a surrounding 500-m buffer, and more ignitions occurred with low or high proportions of nearby development. Similarly, fewer ignitions occurred when there was no WUI in the buffer, and more occurred with higher proportions of WUI. In addition to the human variables, the pattern of ignitions was also significantly related to slope and vegetation type, with ignitions being negatively related to slope.

When all of the variables were evaluated in the multiple logistic regression analysis, the final model for fire ignitions retained most of the human variables (distance to development, distance to roads, distance to trails, and level of WUI) as well as January minimum temperature and vegetation type (Table 3). The final model was highly significant at $P < 0.0001$.

Table 2. Univariate regression results for all variables explaining fire ignitions and fire frequency in the Santa Monica Mountains, CA
WUI, wildland–urban interface

Explanatory variable	Fire ignitions			Fire frequency		
	Coefficient	s.e.	*P* value	Coefficient	s.e.	*P* value
Distance development	−0.001201	0.000258	<0.0001	0.000131	0.000043	0.0026
Distance WUI	−0.000298	0.000137	0.0183	0.000065	0.000045	0.1513
Distance roads	−0.002635	0.000637	<0.0001	0.000097	0.000059	0.1028
Distance trail	−0.001785	0.0007	0.0045	−0.00002	0.000073	0.7837
January	−0.00012	0.000115	0.2964	0.000194	0.000057	0.0007
South-westness	0.002373	0.001392	0.0869	0.000334	0.00012	0.0055
Slope	−0.039957	0.009359	<0.0001	0.001927	0.00092	0.0364
Elevation	−0.000414	0.000169	0.0132	0.000079	0.000044	0.0726
Level of development						
None (0)	−2.3706[A]	0.2012	0.0002	1.2394	0.3444	<0.0001
Low (0–0.33)	0.9784	0.2349		1.1649	0.3426	
Intermediate (0.34–0.66)	0.6127	0.3972		0.9595	0.3338	
High (0.67–0.1)	0.9843	0.8158		−0.2587[A]	0.3604	
Level of WUI						
None (0)	−2.3302[A]	0.2095	<0.0001	0.07604	0.05809	0.5728
Low (0–0.33)	1.174	0.2704		0.03285	0.04838	
Intermediate (0.34–0.66)	0.8506	0.3119		0.01377	0.04237	
High (0.67–0.1)	0.4861	0.285		0.8651[A]	0.08816	
Vegetation type						
Coastal sage scrub	−1.39872[A]	0.17656	<0.0001	−0.02177	0.6849	0.3812
Northern mixed chaparral	−0.99918	0.24968		−0.00314	0.06824	
Chamise chaparral	0.01242	0.58624		−0.09035	0.1025	
Non-native grass	0.3001	0.3657		−0.05593	0.0823	
Other	0.19474	0.30509		−0.099	0.08529	
Oak woodland	0.64495	0.46368		−0.1134	0.09551	
Riparian	0.41789	0.69965		0.9235[A]	0.1039	

[A]Intercept of the model; the coefficients of the categorical variables (level of development and WUI, and vegetation type) are relative to the value of the intercept.

The map surface generated by applying the formula and coefficients of the final model to the original GIS maps showed the distribution of predicted ignition probabilities across the study area (Fig. 4). The spatial pattern of those areas predicted as having the highest likelihood of ignition reflected the influence of development, WUI, and roads, as seen through their similar distributions (Fig. 2).

The leave-one-out cross-validation of the final multiple logistic model resulted in an AUC of 0.71. An AUC of 0.71 indicates that, although our ability to predict is not perfect, our model performs considerably better than chance, and thus provides useful and novel information about the properties of the locations where ignitions are likely to occur. Our maximum sensitivity (true positive fraction) and specificity (false positive) occurred at a cutoff of 0.16, which yielded sensitivity = 0.685, and specificity = 0.667 (Fig. 4). In other words, if the model predicts a probability of ignition of 0.16 or more, we predict an ignition, otherwise we predict no ignition.

Fire frequency

Unlike the univariate models for fire ignitions, there were more biophysical variables than human variables that were significant ($P \leq 0.05$) in explaining fire frequency (Table 2, Fig. 3). Specifically, January minimum temperature, south-westness, slope, and elevation all had a positive influence on fire frequency. However, elevation, slope, and south-westness were not considered significant with the Bonferroni adjustment. Whereas distance to development negatively influenced the likelihood of ignition, it had a significant positive influence on fire frequency, so that fires were more likely to burn farther away from development. Fire frequency was also significantly related to level of development, but the influence was opposite that for fire ignitions in that fires were more likely to occur in none, low, and intermediate levels than in high levels of development.

Except for distance to development, all of the variables that were significant in the non-adjusted univariate models were also retained in the final model for fire frequency (Table 3). This model was also highly significant at $P < 0.0001$. The spatial pattern of predicted fire frequency on the map generated from the final regression model showed a strong influence of level of development and reflected the influence of the 500-m buffers (Fig. 4). The influence of January temperature was also visually apparent in the predictions, with more fires occurring along the coast where the temperature is generally warmer. The areas predicted to experience the most fires roughly corresponded to the fire history map (Fig. 2).

The evaluation of our multiple Poisson regression fire frequency model with the independent dataset showed that we predicted the number of fires correctly 40% of the time,

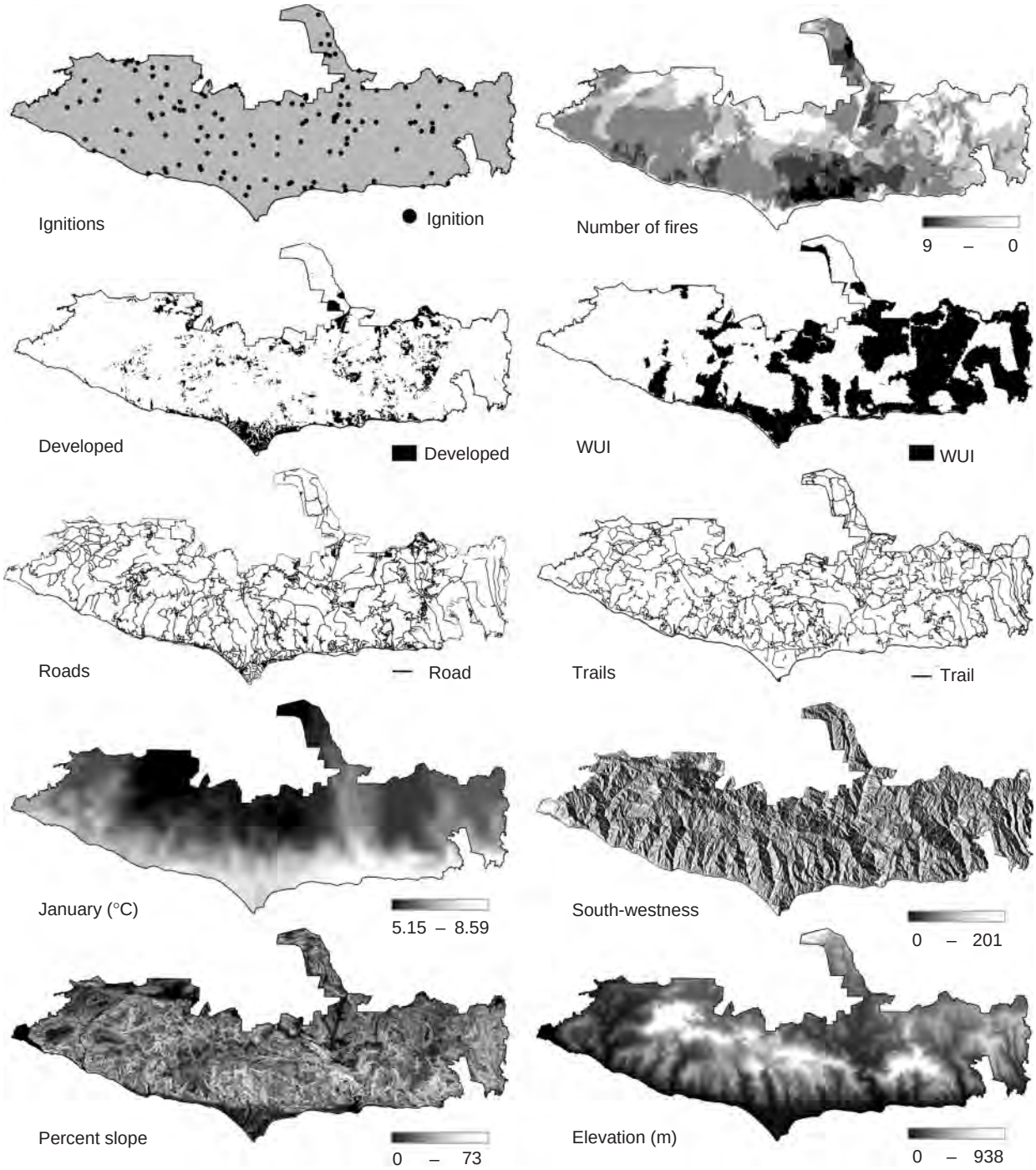


Fig. 3. Maps of variables used for regression models and predictive mapping of the Santa Monica Mountains, CA. Dependent variables included ignitions and number of fires; independent variables included developed, wildland–urban interface (WUI), roads, trails, mean January minimum temperature, south-westness, percentage slope, and elevation. Vegetation map not shown. The WUI is the area where houses meet or intermingle with undeveloped wildland vegetation, based on the definition in the Federal Register.

80% were within one fire of being correct, and 95% were within two. The Pearson's correlation coefficient was 0.490, the RMSE was 1.219. These statistics indicate that the model's performance was fair, but the positive error shows that we tended to underestimate fire frequency.

The combined map showed that, although some areas had a high potential for both fire ignition and frequency, not all areas with high potential for ignition were likely to experience many fires. In some of the most remote portions in the interior of the landscape, both fire ignition probability and fire frequency were

predicted to be low. Along the coast and through some of the more developed canyons in the interior, however, both ignitions and frequency were predicted to be higher (Fig. 4).

Discussion

As we expected, humans significantly influenced the spatial pattern of ignitions, which were located in close proximity to all measures of human infrastructure included in our univariate models and were most strongly related to distance to development and roads in the multivariate models. Previous research showed that fire frequency and area burned were highest at intermediate levels of human activity; however, at lower and higher levels of human activity, fire activity was lower (Keeley 2005; Syphard *et al*. 2007*a*, 2007*b*). In the present study, ignitions were more likely to occur with consistently larger proportions of both development and WUI within 500-m buffers. However, the spatial extent of these buffers may not have captured the intermediate effects that were apparent through the landscape and county scales used in the other studies. Slope, vegetation type, and January temperature were also significantly related to ignitions, which may in part reflect the fact that fire ignition success is conditional on factors such as fuel moisture content and stand structure (Tanskanen *et al*. 2005).

Considering that humans start most fires in the Santa Monica Mountains and that human activities are concentrated around roads and developed areas, these results are not surprising. Yet, statistically modelling these human relationships and their interactions with biophysical variables is necessary for more precisely explaining and mapping the parts of the landscape that are most likely to ignite. Although other regions may not experience the same proportion of human ignitions as southern California, human-caused ignitions along transportation corridors have been documented broadly (Stephens 2005), and the significance of our results underscores the importance of considering more than just fuel loads in fire risk assessments. The WUI is not just the area with the highest concentration of human

Table 3. Variables retained in the multiple regression models explaining fire ignitions and fire frequency in the Santa Monica Mountains, CA
WUI, wildland–urban interface

Model	Explanatory variable	*P* value
Ignitions	Distance development	<0.0001
	Distance roads	0.002
	Vegetation type	0.002
	Level of WUI	0.011
	January	0.016
	Distance trails	0.08
	Full model	<0.0001
Fire frequency	Level of development	<0.0001
	January	<0.0001
	South-westness	0.005
	Elevation	0.036
	Slope	0.045
	Full model	<0.0001

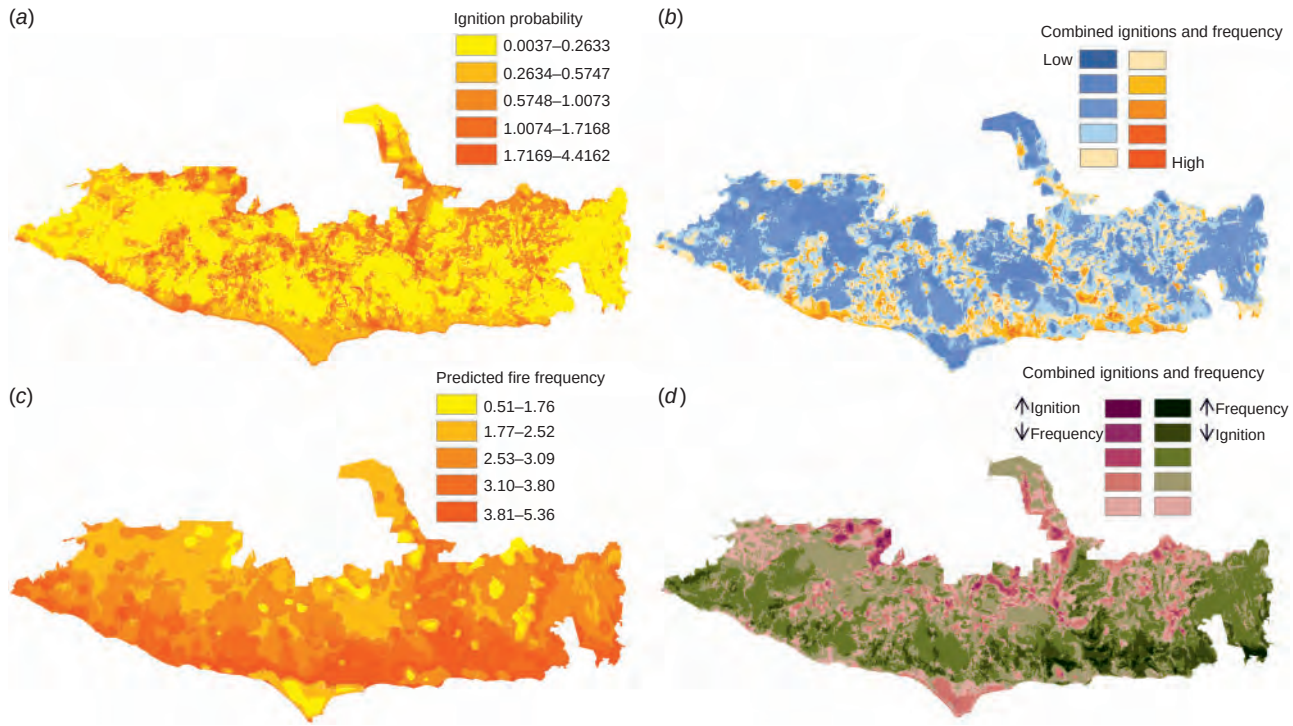


Fig. 4. Maps showing predicted probability of ignition (*a*), predicted fire frequency (*b*), overlay and sum of the classified ignition and fire frequency maps (*c*), and the distribution of differences between predicted ignition probabilities and predicted fire frequency (*d*) developed from multiple regression models in the Santa Monica Mountains, CA.

values at risk; it is also the area where humans are most likely to put these valuable assets at risk by starting fires, intentionally or not.

Although ignition locations were primarily related to the distribution of human activities, fire frequency was mainly determined by biophysical variables, which was expected because fire spread is ultimately a function of vegetation characteristics, climate, and terrain (Pyne *et al*. 1996). Fire frequency was significantly related to two human variables, but more fires occurred with longer distances to development and with lower proportions of development within buffers. Although this result seems surprising given the location of ignitions, one likely reason that fires burned more frequently when they were farther from human infrastructure is that there is typically more continuous vegetation in remote areas. Therefore, fires would not be interrupted by fragmented fuels that characterise urban areas. Also, there are lower concentrations of fire suppression resources outside urban areas (Calkin *et al*. 2005), so fires will be able to consistently burn longer and grow larger when they spread beyond their ignition source into more remote regions. This means that, although fires start closer to roads or development, the areas that actually burn most frequently are the non-urban regions where fire spreads after ignition.

A possible shortcoming in our fire frequency models was that the human explanatory variables only represented the contemporary time period, but the fire frequency data spanned a period of 78 years (although more than 75% of the fires in the record occurred within the last 20 years). Despite this temporal mismatch, our results were consistent with previous research in California that showed that, whereas human variables are the best predictors for the number of fires that start, biophysical variables are better at explaining the variation in area burned (Syphard *et al*. 2007*a*). Therefore, the most important predictors for the fire frequency models were the biophysical variables that remained constant over the temporal extent of the fire frequency data.

Although it would have been ideal to incorporate temporally extensive human variables in our multiple regression analysis, adding these data would have likely only improved the fit of our models, particularly because human development patterns have high spatial autocorrelation, particularly in the Santa Monica Mountains (Syphard *et al*. 2007*b*). Historic housing data were most likely distributed in the exact same locations as the contemporary housing data that we used in our analysis because houses persist over time. Nevertheless, the fair performance of our fire frequency models may have been improved if we had had access to temporally extensive data for the human variables.

The fact that the variables that best predicted fire ignitions differed from those that best predicted fire frequency explains why the spatial patterns in the predictive maps of ignitions and frequency were somewhat different from one another. Nevertheless, there were regions in the interior of the landscape where fire ignitions and fire frequency were predicted to be very low. Therefore, although fires spread away from ignition sources and burn more frequently outside urban areas, there are also even more remote areas that burn with much less frequency. However, some of the coastal areas and interior canyons are more likely to experience greater numbers of ignitions and more frequent fire. The coastal areas tend to be warmer and dryer than the more remote interior regions of the landscape, which makes them more conducive to fire. These regions also have gentler slopes and are more favourable for housing development and human activity.

From a management perspective, overlaying the two predictive maps is useful because the resulting combined map can identify areas that are not only at a high risk for experiencing an ignition, but also where those ignitions are likely to initiate into a full, spreading fire. Areas where high predicted ignition probability coincides with high predicted fire frequency can then be targeted for fire management actions, such as fuel reduction. The Santa Monica Mountains fire management plan has outlined additional criteria, including socioeconomic variables and other resources at risk, to further the decision-making process for identifying potential strategic fuel modification locations (NPS 2005). These additional criteria are important for ensuring that treatments are not placed in low-hazard areas where protection is not needed.

The present and other studies have determined that fire ignition locations, as well as areas where frequent fires occur, can be statistically modelled using readily measurable sets of social, biological, and physical features (e.g. Keeley *et al*. 1999; Cardille *et al*. 2001; Pew and Larsen 2001; Prestemon *et al*. 2002; Mercer and Prestemon 2005). Therefore, the approach used here can be used in other landscapes to refine the strategic placement of fuels treatments and to better anticipate where fires are most likely to occur. To adapt these methods to other regions, scientists and managers should be aware that the relative influence of human or biophysical variables is likely to vary according to region, temporal or spatial scale of analysis, and type of human activity. Therefore, the choice of predictor variables should be relevant to the primary characteristics driving each region's fire regime.

Acknowledgements

We are grateful to the USDA Forest Service Northern Research Station and the Pacific Northwest Research Station for their support. We also thank the editor, the associate editor, and our anonymous reviewers for their insightful comments and recommendations that greatly improved the manuscript. Thanks also to Janet Franklin for her statistical advice.

References

Agresti A (1996) 'An Introduction to Categorical Data Analysis.' 1st edn. (Wiley: New York)

Allen CD, Savage M, Falk DA, Suckling KF, Swetnam TW, Schulke T, Stacey PB, Morgan P, Hoffman M, Klingel JT (2002) Ecological restoration of south-western ponderosa pine ecosystems: a broad perspective. *Ecological Applications* **12**, 1418–1433. doi:10.1890/1051-0761(2002)012[1418:EROSPP]2.0.CO;2

Anderson HE (1982) Aids to determining fuel models for estimating fire behavior. USDA Forest Service, Intermountain Research Station, General Technical Report INT-167. (Ogden, UT)

Andrews PL, Bevins CD, Seli RC (2005) BehavePlus Fire Modeling System, version 3.0: user's guide. USDA Forest Service, Rocky Mountain Research Station, General Technical Report RMRS-GTR-106WWW Revised. (Ogden, UT)

Badia-Perpinya A, Pallares-Barbera M (2006) Spatial distribution of ignitions in Mediterranean periurban and rural areas: the case of Catalonia. *International Journal of Wildland Fire* **15**, 187–196. doi:10.1071/WF04008

Bautista D, Arana E, Marti-Bonmati L, Paredes R (1999) Validation of logistic regression models in small samples. *Journal of Clinical Epidemiology* **52**, 237–241. doi:10.1016/S0895-4356(98)00165-6

Belsey D, Kuh E, Welsch RE (Eds) (1980) 'Regression Diagnostics: Identifying Influential Observations and Sources of Collinearity.' (Wiley Sons: New York)

Bradstock RA, Gill AM, Kenny BJ, Scott J (1998) Bushfire risk at the urban interface estimated from historical weather records: consequences for the use of prescribed fire in the Sydney region of south-eastern Australia. *Journal of Environmental Management* **52**, 259–271. doi:10.1006/JEMA.1997.0177

Brillinger DR, Preisler HK, Benoit JW (2003) Risk assessment: a forest fire example. In 'Science and Statistics: a Festschrift for Terry Speed'. (Ed. DR Goldstein) pp. 177–196. (Institute of Mathematical Statistics: Beachwood, OH)

Burgan RE, Rothermel RC (1984) BEHAVE: fire prediction and fuel modelling system – FUEL subsystem. USDA Forest Service, Intermountain Research Station, General Technical Report INT-167. (Ogden, UT)

Calkin DE, Gebert KM, Jones JG, Neilson RP (2005) Forest Service large fire area burned and suppression expenditure trends, 1970–2002. *Journal of Forestry* **103**, 179–183.

Cardille JA, Ventura SJ, Turner MG (2001) Environmental and social factors influencing wildfires in the Upper Midwest, Unites States. *Ecological Applications* **11**, 111–127. doi:10.1890/1051-0761(2001)011[0111:EASFIW]2.0.CO;2

Chou YH (1992) Spatial autocorrelation and weighting functions in the distribution of wildland fires. *International Journal of Wildland Fire* **2**, 169–176. doi:10.1071/WF9920169

Chou YH, Minnich RA, Chase RA (1993) Mapping probability of fire occurrence in San Jacinto Mountains, California, USA. *Environmental Management* **17**, 129–140. doi:10.1007/BF02393801

Countryman CM (1972) The fire environment concept. USDA Forest Service, Pacific Southwest Forest and Range Experiment Station, General Technical Report PSW-7. (Berkeley, CA)

DellaSala DA, Williams JE, Williams CD, Franklin JF (2004) Beyond smoke and mirrors: a synthesis of fire policy and science. *Conservation Biology* **18**, 976–986. doi:10.1111/J.1523-1739.2004.00529.X

Diaz-Avalos C, Peterson DL, Alvarado E, Ferguson SA, Besag JE (2001) Space–time modelling of lightning-caused ignitions in the Blue Mountains, Oregon. *Canadian Journal of Forest Research* **31**, 1579–1593. doi:10.1139/CJFR-31-9-1579

Dickson BG, Prather JW, Xu Y, Hampton HM, Aumack EN, Sisk TD (2006) Mapping the probability of large fire occurrence in northern Arizona, USA. *Landscape Ecology* **21**, 747–761. doi:10.1007/S10980-005-5475-X

Fielding AH, Bell JF (1997) A review of methods for the assessment of prediction errors in conservation presence/absence models. *Environmental Conservation* **24**, 38–49. doi:10.1017/S0376892997000088

Forestry Canada Fire Danger Group (1992) Development and structure of the Canadian Forest Fire Behaviour Prediction System. Forestry Canada, Science and Sustainable Development Directorate, Report ST-X-3. (Ottawa, ON)

Franklin J (1998) Predicting the distribution of shrub species in Southern California from climate and terrain-derived variables. *Journal of Vegetation Science* **9**, 733–748. doi:10.2307/3237291

Franklin J, McCullough P, Gray C (2000) Terrain variables used for predictive mapping of vegetation communities in Southern California. In 'Terrain Analysis: Principles and Applications'. (Eds J Wilson, J Gallant) pp. 331–353. (Wiley: New York)

Fried JS, Winter G, Gilless JK (1999) Assessing the benefits of reducing fire risk in the wildland–urban interface: a contingent valuation approach. *International Journal of Wildland Fire* **9**, 9–20. doi:10.1071/WF99002

Haidinger TL, Keeley JE (1993) Role of high fire frequency in destruction of mixed chaparral. *Madrono* **40**, 141–147.

Haight RG, Cleland DT, Hammer RB, Radeloff VC, Rupp TS (2004) Assessing fire risk in the wildland–urban interface. *Journal of Forestry* **104**, 41–48.

Halsey RW (2005) 'Fire, Chaparral, and Survival in Southern California.' (Sunbelt Publications: San Diego, CA)

Hernandez PA, Graham CH, Master LL, Albert DL (2006) The effect of sample size and species characteristics on performance of different species distribution models. *Ecography* **29**, 773–785. doi:10.1111/J.0906-7590.2006.04700.X

Jacobsen AL, Pratt RB, Ewers FW, Davis SD (2007) Cavitation resistance among twenty-six chaparral species of southern California. *Ecological Monographs* **77**, 99–115. doi:10.1890/05-1879

Keeley JE (1982) Distribution of lightning and man-caused wildfires in California. In 'Proceedings of the International Symposium on the Dynamics and Management of Mediterranean-type Ecosystems', 22–26 June 1981, San Diego, CA. (Eds CE Conrad, WC Oechel) USDA Forest Service, Pacific Southwest Forest and Range Experiment Station, General Technical Report PSW 58, pp. 431–437. (Berkeley, CA).

Keeley JE (2000) Chaparral. In 'North American Terrestrial Vegetation'. (Eds MG Barbour, WD Billings) pp. 202–253. (Cambridge University Press: Cambridge, MA)

Keeley JE (2005) Fire history of the San Francisco East Bay region and implications for landscape patterns. *International Journal of Wildland Fire* **14**, 285–296. doi:10.1071/WF05003

Keeley JE, Fotheringham CJ (2003) Impact of past, present, and future fire regimes on North American Mediterranean shrublands. In 'Fire and Climatic Change in Temperate Ecosystems of the Western Americas'. (Eds TT Veblen, WL Baker, G Montenegro, TW Swetnam) pp. 218–262. (Springer-Verlag: New York)

Keeley JE, Fotheringham CJ, Morais M (1999) Reexamining fire suppression impacts on brushland fire regimes. *Science* **284**, 1829–1832. doi:10.1126/SCIENCE.284.5421.1829

Lachenbruch PA (1967) An almost unbiased method for the probability of misclassification in discriminant analysis. *Biometrics* **23**, 639–645. doi:10.2307/2528418

Larjavaara M, Pennanen J, Tuomi TJ (2005) Lightning that ignites forest fires in Finland. *Agricultural and Forest Meteorology* **132**, 171–180. doi:10.1016/J.AGRFORMET.2005.07.005

Littell RC, Milliken GA, Stroup WW, Wolfinger RD (1996) 'SAS System for Mixed Models.' (SAS Institute Inc.: Cary, NC)

Mercer DE, Prestemon JP (2005) Comparing production function models for wildfire risk analysis in the wildland–urban interface. *Forest Policy and Economics* **7**, 782–795. doi:10.1016/J.FORPOL.2005.03.003

Miller C, Urban DL (2000) Modeling the effects of fire management alternatives on mixed-conifer forests in the Sierra Nevada. *Ecological Applications* **10**, 85–94.

Moritz MA (2003) Spatiotemporal analysis of controls on shrubland fire regimes: age dependency and fire hazard. *Ecology* **84**, 351–361. doi:10.1890/0012-9658(2003)084[0351:SAOCOS]2.0.CO;2

National Park Service (2002) Final general management plan and environmental impact statement, Vol. 1 of 2. USDI, National Park Service. (Thousand Oaks, CA)

National Park Service (2005) Final environmental impact statement for a fire management plan, Santa Monica Mountains National Recreation Area. USDI, National Park Service. (Thousand Oaks, CA)

Odion DC, Frost EJ, Strittholt JR, Jiang H, DellaSalla DA, Moritz MA (2004) Patterns of fire severity and forest conditions in the western Klamath Mountains, north-western California. *Conservation Biology* **18**, 927–936. doi:10.1111/J.1523-1739.2004.00493.X

Pew KL, Larsen CPS (2001) GIS analysis of spatial and temporal patterns of human-caused wildfires in the temperate rainforest of Vancouver Island, Canada. *Forest Ecology and Management* **140**, 1–18. doi:10.1016/S0378-1127(00)00271-1

Potts JP, Elith J (2006) Comparing species abundance models. *Ecological Modelling* **199**, 153–163. doi:10.1016/J.ECOLMODEL.2006.05.025

Preisler HK, Brillinger DR, Burgan RE, Benoit JW (2004) Probability-based models for estimation of wildfire risk. *International Journal of Wildland Fire* **13**, 133–142. doi:10.1071/WF02061

Prestemon JP, Pye JM, Butry DT, Holmes TP, Mercer DE (2002) Understanding broadscale wildfire risks in a human-dominated landscape. *Forest Science* **48**, 685–693.

PROC GLIMMIX (2005) '*SAS/STAT* Software, version 9.1.3 of the SAS System for Unix.' (SAS Institute Inc.: Cary, NC)

Pyne SJ (2001) 'Fire in America.' (Princeton University Press: Princeton, NJ)

Pyne SJ, Andrews PL, Laven RD (1996) 'Introduction to Wildland Fire.' (Wiley: New York)

R Development Core Team (2005) R: a language and environment for statistical computing. (R Foundation for Statistical Computing: Vienna, Austria) Available at http://www.R-project.org [Verified 11 August 2008]

Radeloff VC, Hammer RB, Stewart SI, Fried JS, Holcomb SS, McKeefry JF (2005) The wildland–urban interface in the United States. *Ecological Applications* **15**, 799–805. doi:10.1890/04-1413

Radtke KWH, Arndt AM, Wakimoto RH (1982). Fire history of the Santa Monica Mountains. (Eds CE Conrad, WC Oechel) USDA Forest Service, Pacific Southwest Forest and Range Experiment Station, General Technical Report PSW-58, pp. 438–443. (Berkeley, CA)

Reed WJ, Larsen CPS, Johnson EA, MacDonald GM (1998) Estimation of temporal variations in historical fire frequency from time-since-fire map data. *Forest Science* **44**, 465–475.

Rollins MG, Morgan P, Swetnam T (2002) Landscape-scale controls over 20th century fire occurrence in two large Rocky Mountain (USA) wilderness areas. *Landscape Ecology* **17**, 539–557. doi:10.1023/A:1021584519109

Rundel PW, King JA (2001) Ecosystem processes and dynamics in the urban/wildland interface of Southern California. *Journal of Mediterranean Ecology* **2**, 209–219.

Scheller RM, Mladenoff DM, Crow TR, Sickley TA (2005) Simulating the effects of fire reintroduction versus continued fire absence on forest composition and landscape structure in the Boundary Waters Canoe Area, northern Minnesota, USA. *Ecosystems* **8**, 396–411. doi:10.1007/S10021-003-0087-2

Steele BM, Reddy SK, Keane RE (2006) A methodology for assessing the departure of current plant communities from historical conditions over large landscapes. *Ecological Modelling* **199**, 53–63. doi:10.1016/J.ECOLMODEL.2006.06.016

Stephens SL (2005) Forest fire causes and extent on United States Forest Service lands. *International Journal of Wildland Fire* **14**, 213–222. doi:10.1071/WF04006

Syphard AD, Radeloff VC, Keeley JE, Hawbaker TJ, Clayton MK, Stewart SI, Hammer RB (2007*a*) Human influence on California fire regimes. *Ecological Applications* **17**, 1388–1402. doi:10.1890/06-1128.1

Syphard AD, Clarke KC, Franklin J (2007*b*) Simulating fire frequency and urban growth in southern California coastal shrublands. *Landscape Ecology* **22**, 431–445. doi:10.1007/S10980-006-9025-Y

Tanskanen H, Venäläinen A, Puttonen P, Granström A (2005) Impact of stand structure on surface fire ignition potential in *Picea abies* and *Pinus sylvestris* forests in southern Finland. *Canadian Journal of Forest Research* **35**, 410–420. doi:10.1139/X04-188

US Census (2000) 'Census 2000 TIGER/Line Files [machine-readable data files].' (US Census Bureau: Washington, DC)

USDA, USDI (2001) Urban–wildand interface communities within vicinity of Federal lands that are at high risk from wildfire. *Federal Register* **66**, 751–777.

Venables WN, Ripley BD (1999) 'Modern Applied Statistics with S-Plus.' 3rd edn. (Springer: New York)

Wells ML, O'Leary JF, Franklin J, Michaelson J, McKinsey DE (2004) Variations in a regional fire regime related to vegetation type in San Diego County, California (USA). *Landscape Ecology* **19**, 139–152. doi:10.1023/B:LAND.0000021713.81489.A7

Whelan RJ (1995) 'The Ecology of Fire.' (Cambridge University Press: Cambridge, UK)

Wotton BM, Martell DL (2005) A lightning fire occurrence model for Ontario. *Canadian Journal of Forest Research* **35**, 1389–1401. doi:10.1139/X05-071

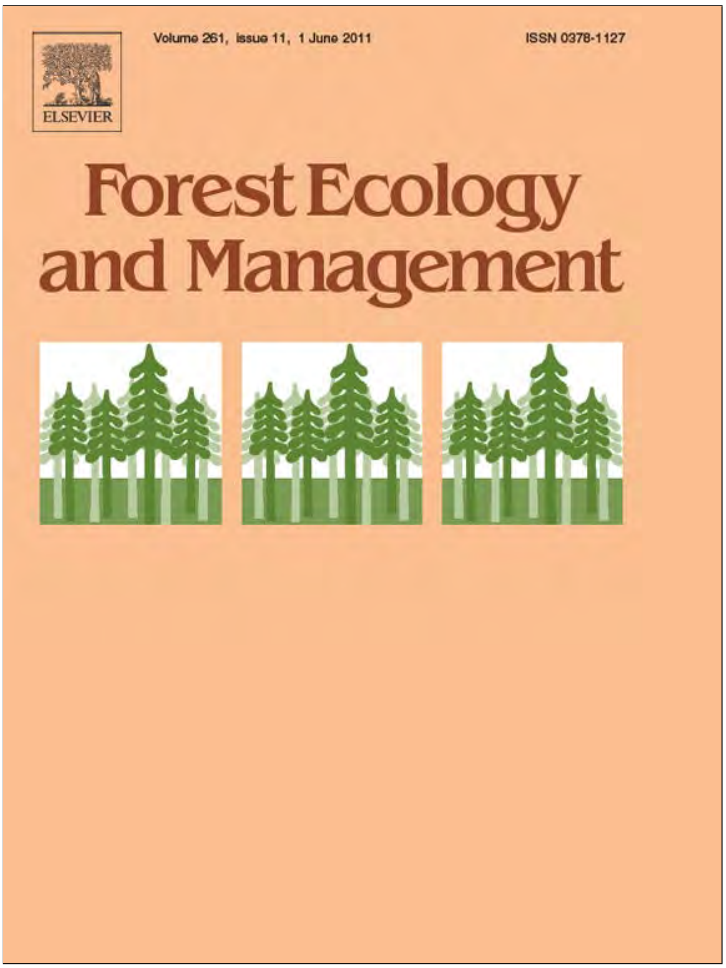
Yang J, He HS, Shifley SR, Gustafson EJ (2007) Spatial patterns of modern period human-caused fire occurrence in the Missouri Ozark Highlands. *Forest Science* **53**, 1–15.

Zedler PH (1995) Plant life history and dynamic specialization in the chaparral/coastal sage scrub flora in southern California. In 'Ecology and Biogeography of Mediterranean Ecosystems in Chile, California, and Australia'. (Eds MTK Arroyo, PA Zedler, MD Fox) pp. 89–115. (Springer-Verlag: New York)

Zedler PH, Clayton RG, McMaster GS (1983) Vegetation change in response to extreme events: the effect of a short interval between fires in California chaparral and coastal scrub. *Ecology* **64**, 809–818. doi:10.2307/1937204

Manuscript received 29 July 2007, accepted 19 November 2007

Provided for non-commercial research and education use.
Not for reproduction, distribution or commercial use.



This article appeared in a journal published by Elsevier. The attached copy is furnished to the author for internal non-commercial research and education use, including for instruction at the authors institution and sharing with colleagues.

Other uses, including reproduction and distribution, or selling or licensing copies, or posting to personal, institutional or third party websites are prohibited.

In most cases authors are permitted to post their version of the article (e.g. in Word or Tex form) to their personal website or institutional repository. Authors requiring further information regarding Elsevier's archiving and manuscript policies are encouraged to visit:

http://www.elsevier.com/copyright

Author's personal copy

Forest Ecology and Management 261 (2011) 2038–2048

Contents lists available at ScienceDirect

Forest Ecology and Management

journal homepage: www.elsevier.com/locate/foreco

Comparing the role of fuel breaks across southern California national forests

Alexandra D. Syphard [a,*], Jon E. Keeley [b,c], Teresa J. Brennan [b]

[a] Conservation Biology Institute, 10423 Sierra Vista Avenue, La Mesa, CA 91941, USA
[b] U.S. Geological Survey, Western Ecological Research Center, Three Rivers, CA, USA
[c] Department of Ecology & Evolutionary Biology, University of California, Los Angeles, USA

ARTICLE INFO

Article history:
Received 3 January 2011
Received in revised form 23 February 2011
Accepted 24 February 2011

Keywords:
Structural equation model
Fuel treatment
National forest
Wildland–urban interface
Firefighting
Fire management

ABSTRACT

Fuel treatment of wildland vegetation is the primary approach advocated for mitigating fire risk at the wildland–urban interface (WUI), but little systematic research has been conducted to understand what role fuel treatments play in controlling large fires, which factors influence this role, or how the role of fuel treatments may vary over space and time. We assembled a spatial database of fuel breaks and fires from the last 30 years in four southern California national forests to better understand which factors are consistently important for fuel breaks in the control of large fires. We also explored which landscape features influence where fires and fuel breaks are most likely to intersect. The relative importance of significant factors explaining fuel break outcome and number of fire and fuel break intersections varied among the forests, which reflects high levels of regional landscape diversity. Nevertheless, several factors were consistently important across all the forests. In general, fuel breaks played an important role in controlling large fires only when they facilitated fire management, primarily by providing access for firefighting activities. Fire weather and fuel break maintenance were also consistently important. Models and maps predicting where fuel breaks and fires are most likely to intersect performed well in the regions where the models were developed, but these models did not extend well to other regions, reflecting how the environmental controls of fire regimes vary even within a single ecoregion. Nevertheless, similar mapping methods could be adopted in different landscapes to help with strategic location of fuel breaks. Strategic location of fuel breaks should also account for access points near communities, where fire protection is most important.

© 2011 Elsevier B.V. All rights reserved.

1. Introduction

Wildfire is a key natural process in many ecosystems, but fire frequency, extent, and/or severity have surged across the globe in recent decades (Bowman et al., 2009; Flannigan et al., 2009; Westerling et al., 2006). The social and economic consequences of these fires are immense, with dramatic increases in property destruction and firefighting expenditures (Butry et al., 2001; NIFC, 2009). Altered fire regimes also threaten ecosystem integrity and biodiversity (Pausas and Keeley, 2009; Pyne, 2004). In many parts of the world the fire problem has been exacerbated by the continued expansion of the wildland–urban interface, where homes and lives are most vulnerable to wildfires, and where human ignitions increase the likelihood of fire occurring (Radeloff et al., 2005; Syphard et al., 2007). Mitigating the risk of wildfire at the wildland–urban interface, therefore, is now described as a major objective in the National Fire Plan (2001), the Healthy Forests Restoration Act (2003), and other federal fire management documents. The primary approach advocated for mitigating fire risk is to reduce hazardous fuel loads through fuel treatments of vegetation in wildland areas. In the last decade, expenditures on fuel treatments and area treated has increased markedly (Mell et al., 2010), with U.S. federal land management agencies receiving billions of dollars and treating millions of hectares of land (Schoennagel et al., 2009).

Despite this recent surge in treatment area and expenditure, fuel treatments have been a cornerstone of fire management in the U.S.A. for the better part of the 20th century. Yet, little systematic research has been conducted to understand what role fuel treatments have played in controlling fire, which factors influence this role, or how the role of fuel treatments may vary over space and time. A number of simulation studies have improved our understanding of potential fuel treatment effectiveness in modifying forest fire behavior (e.g., Finney et al., 2007; Miller and Urban, 2000; Schmidt et al., 2008). However, most empirical studies have focused on relatively localized effects when fires have intersected fuel treatments on forests (e.g., Finney et al., 2005; Martinson and Omi, 2003; Raymond and Peterson, 2005; Schoennagel et al., 2004). Due to this relatively small temporal and spatial scale (but see

* Corresponding author.
E-mail addresses: asyphard@consbio.org (A.D. Syphard), jon_keeley@usgs.gov (J.E. Keeley), tjbrennan@usgs.gov (T.J. Brennan).

0378-1127/$ – see front matter © 2011 Elsevier B.V. All rights reserved.
doi:10.1016/j.foreco.2011.02.030

Author's personal copy

Syphard et al., in press-b), these studies have not contributed to an understanding of factors that influence sustainable fuel treatment performance over broad landscapes. This is important because many parts of the western U.S. that intersect with urban environments comprise heterogeneous landscapes that include forest and non-forested ecosystems and because strategic planning requires an understanding of how repeated fire events over time are affected by fuel treatments.

Due in part to the paucity of appropriate research, there is no comprehensive fire policy in the United States that provides forest mangers with science-based guidance on where, how, and when fuel treatments should be conducted (Agee et al., 2000; Franklin and Agee, 2003). Instead, within-agency policies are established and implemented according to the agencies' missions and objectives, and many policies are not publicly reviewed or debated (Franklin and Agee, 2003). Developing scientifically based general principles and guidelines for using fuel treatments to control fires could benefit managers if these guidelines were to facilitate decision-making with regards to strategic placement and tactical response. Given limits in time and money, managers need to prioritize where to place new fuel treatments and to determine the level of maintenance needed for current fuel treatments (Dellasala et al., 2004). Thus, a scientifically based methodology and set of principles could make the decision-making process not only easier but more defensible as well. Furthermore, a better understanding of the factors that influence the role of fuel treatments could lead to the identification of additional management considerations and the development of improved management practices.

The primary problem with development of general guidelines for fuel treatments is that fire-prone regions are highly variable with regards to their natural fire regimes and the factors that control them. Fire regimes vary as a function of forest type, fuels, terrain, climate, and ignition sources (Pyne et al., 1996; Keeley et al., 2009), and fuel treatment effectiveness may also vary according to these factors (Schoennagel et al., 2004). In addition, human development and other infrastructure strongly influence fire regimes and vulnerability to fire. Humans start and stop fires both directly (e.g., via suppression or accidental ignitions) and indirectly (e.g., via land use planning, land cover change, exotic species introduction, climate change), and their influence varies by scale and by locale (Cardille et al., 2001; Prestemon et al., 2002; Syphard et al., 2009). These variations in fire regime and human influence complicate the notion of general principles because management programs need to account for these differences (Noss et al., 2006).

Another reason that a "one size fits all" approach to fire management is problematic is that fuel treatment objectives are likely to vary from region to region, particularly for wildland areas versus the wildland–urban interface (Keeley et al., 2009). In wildland areas, particularly in western U.S. forests, fuel treatments are intended to change fire behavior and to reduce the severity of fire effects, whereas fuel treatments in the wildland–urban interface are intended to prevent fire from spreading into communities (Radeloff et al., 2005; Reinhardt et al., 2008). Therefore, the effectiveness of fuel treatments, and the factors that contribute to their effectiveness, may change as a function of fuel treatment objectives.

One way to determine how well certain guidelines may transfer from region to region is to identify which factors affecting fuel treatment outcome are most likely to vary. Identifying these could help to determine what aspects of plans need to be developed separately for each management area. Common decision-making tools could be developed that account for regional differences in those variables. If there are factors that are universally influential across different regions or landscapes, these could help in the development of general management considerations.

In California, where a substantial portion of the landscape comprises non-forested ecosystems such as chaparral and sage scrub, fuel breaks have been a major part of fire management activities since the 1930s (Davis, 1965). Unlike forests where mechanical fuel treatments remove only surface fuels (preserving larger, older trees), fuel break construction in chaparral typically involves complete removal of vegetation, chemical herbicides, and permanent conversion of native shrublands to weedy herbaceous associations (Wakimoto, 1977).

In southern California, differences in natural fire regimes and the way fire regimes have been altered by past land use complicate fire management in the region. In the shrubland-dominated foothills and coastal valleys, fire frequency has substantially increased along with population growth and urban expansion (Keeley et al., 1999; Syphard et al., 2007). This increased fire frequency not only threatens homes and lives, but many shrublands cannot tolerate repeated fires and under such conditions are often replaced with non-native grasslands (Keeley and Fotheringham, 2003; Syphard et al., 2006). In shrubland-dominated regions, fuel manipulation projects involve a trade-off. On one hand, fuel breaks are needed to protect homes and lives, which are at an elevated risk in these crown fire shrublands; on the other hand, construction of fuel breaks typically involves complete removal of vegetation and may result in a range of ecological impacts. Thus, fire management in the region is greatly complicated by the need to balance both fire and resource management.

In the less extensive montane coniferous forests in the region, fire frequency has been unnaturally low during the last century, and fire hazard has consequently increased due to accumulated fuels associated with fire suppression and logging (Keeley, 2006), problems similar to other forests in the western U.S. (Miller et al., 2009). Because thinning and fuel manipulation is intended to improve forest vigor and reduce risk of catastrophic loss to wildfire (often by restoring forests to more historic conditions), fuel treatments and resource benefits are likely to be compatible in these forested regions (Schwilk et al., 2009). However, this model of fuel accumulation and ecological compatibility with fuel treatments has often been inappropriately applied to chaparral (Keeley and Fotheringham, 2004, 2006).

To better understand the factors that influence the role of fuel treatments in controlling large fires in southern California, and how the role of fuel treatments varies across different landscapes, we assembled a spatial database of fuel breaks and fires from the last 30 years in four national forests. For this analysis, we only considered fuel manipulation projects that were clearly intended to serve as fuel breaks, which are defined as wide blocks, or strips, on which vegetation was manipulated to create lower fuel volume and reduced flammability (Green, 1977). Thus, prescribed fires and burn piles were excluded, as were any dozer lines created to aid suppression activities during the time that a fire was burning. We analyzed relationships among fires and fuel breaks to answer:

(1) What are the most important environmental and management variables affecting the role of fuel breaks in controlling large fires, and do these factors vary among national forests?
(2) What are the primary factors affecting the spatial pattern of fires and fuel break intersections, and do they vary among national forests?

Because we restricted our analysis to U.S. Forest Service national forests, we assumed these landscapes would be broadly similar in the tactical approaches used in the construction and maintenance of fuel breaks. Thus, this study could help determine how well management approaches for one national forest may transfer to other national forests. Also, on these largely non-forested landscapes we assumed that the primary management objective for fuel breaks in the region is to control the spread of fire and protect communities.

Author's personal copy

Table 1
Characteristics of fires and fuel breaks in the four southern California national forests. Fire rotation was calculated from 1980 to 2007.

	Angeles	Cleveland	Los Padres	San Bernardino
Area (ha)	26,375	21,117	61,464	30,408
Number of fires since 1980	175	118	96	253
Fire rotation period (years)	32	14	35	30
Fuel break length (km)	1834	482	550	1199

2. Methods

2.1. The national forests of southern California

The area of study included the Los Padres, Angeles, San Bernardino, and Cleveland National Forests (Table 1), an area spanning the extent of the state's South Coast Ecoregion (Keeley, 2006), which encompasses approximately 3.4 million ha (8% of the state) and is home to more than 19 million people (US Census 2000) (Fig. 1). Although the region is the most threatened hotspot of biodiversity in the continental US (Hunter, 1999), the national forest lands together occupy more than 1.5 million ha and offer some measure of protection for the region's biodiversity.

The South Coast Ecoregion is characterized by a Mediterranean-type climate, with cool, wet winters and warm, dry summers. Chaparral shrublands are the most extensive vegetation type, but there is extraordinary ecosystem diversity in the region, owing largely to a relatively sharp elevational gradient from sea level to more than 3500 m. Therefore, chaparral forms a mosaic with other vegetation types, including coastal sage scrub shrublands, grasslands, oak woodlands, and montane coniferous forests, and natural fire regimes are correspondingly variable (Keeley, 2006; Wells et al., 2004).

Fire management on the national forests is the responsibility of the U.S. Forest Service. The two primary strategies for management are to (1) suppress all actively burning fires, and (2) reduce the extent of future fires through mechanical construction of fuel breaks and limited use of prescription burning. We focus exclusively on fuel breaks in this study.

2.2. Data for dependent variables: fuel break outcome and fire/fuel break intersections

We acquired information on historic fuel breaks and their location from U.S. forest service staff on each of the four forests. We developed a digital spatial database of fuel breaks for the four forests by combining existing GIS layers with files that we created ourselves by digitizing fuel breaks that had been drawn on paper maps. Due to the substantial number of fuel breaks that were hand drawn, we conducted follow-up interviews to validate the newly digitized data.

On all the forests, we overlaid the fuel break GIS layer with fire perimeter polygons compiled by the California Department of Forestry-Fire and Resource Assessment Program (CALFIRE). The fire perimeter data represent the largest fires, with a minimum mapping unit of 4.04 ha (10 acres).

To evaluate factors affecting fuel break outcome, we first used a GIS overlay to identify all events in which a fire intersected a fuel break (within a 100 m buffer distance to account for potential data uncertainty). These events were considered potential case studies to retain for subsequent analysis. To be included for consideration, the date of the fire had to be later than the date of fuel break construction. For the case studies, we conducted a preliminary assessment as to whether fires stopped or crossed over fuel breaks, and then confirmed the outcome during personal interviews with firefighters who had first-hand knowledge of the event.

Table 2
Variables considered and retained in the multiple regression models explaining number of fire and fuel break intersections in three national forests. All variables retained in the models are designated through a significance symbol.

	Angeles	Los Padres	San Bernardino
Elevation	*		*
Slope			
Solar radiation		*	
USFS fuel model	*		*
Distance road		**	
Distance development			
Distance trails		**	
Historic fire frequency	***	**	***
Ignition density	*	*	
Deviance explained	37.27	27.55	54.7

* $p = 0.05$.
** $p = 0.01$.
*** $p = 0.001$.

Although data for some of the explanatory variables were acquired during personal interviews, we also used a GIS to extract information for other explanatory variables to relate to the fuel break outcome. See below for description of explanatory variables. For this analysis, we extracted data only from the portion of the fuel break that intersected the fire and averaged values across that area. In some cases, fires stopped at a portion of the fuel break, but ultimately crossed over the fuel break. For those cases, we classified the fuel break as not having stopped fire (for statistical analysis purposes only), and we only extracted explanatory variables for the section of the fuel break where the fire crossed over.

To analyze factors influencing the number of times fires intersected fuel breaks, we spatially stratified and classified all fuel breaks according to the number times they intersected fires during the study period. We only considered fires that had occurred since 1980, and to ensure that all fuel breaks had an equal chance of experiencing a fire, we only looked at fuel breaks that had been constructed before 1980. From this spatially stratified layer, we randomly selected point samples (greater than 1 km apart, to avoid spatial autocorrelation) to extract environmental data used as explanatory variables. The dependent variable was number of intersections at each sample location.

2.3. Explanatory variables for role of fuel breaks

The factors we considered as potentially influencing the role of fuel breaks on the forests included human and biophysical variables that have previously explained landscape-scale fire patterns in the region (Syphard et al., 2008), and that we used in a previous study of fuel breaks on a single national forest (Table 2, Syphard et al., in press-a). In addition to static landscape features, we also considered variables related to the actual event when a fire intersected a fuel break, including characteristics of fires, fuel breaks, vegetation age, and firefighting activities.

For the human variables, we considered distance to roads, trails, and development (Table 2) because fire ignitions in the region tend to occur near human activities (Syphard et al., 2008). We also hypothesized that these human variables may influence firefighting access and resources. For these three variables, we developed continuous grid surfaces reflecting the Euclidean distance to the nearest feature (road, trail, or development) and extrapolated values from those grids for the areas where fuel breaks intersected fires.

Biophysical variables (including climate, terrain, and fuels) influence fire spread rate, fuel moisture, flammability, and fire intensity (Pyne et al., 1996; Whelan, 1995). Therefore, we evaluated the potential influence of elevation, slope, solar radiation, vegetation age, and fuel model on fuel break outcome (Table 2). After

Author's personal copy

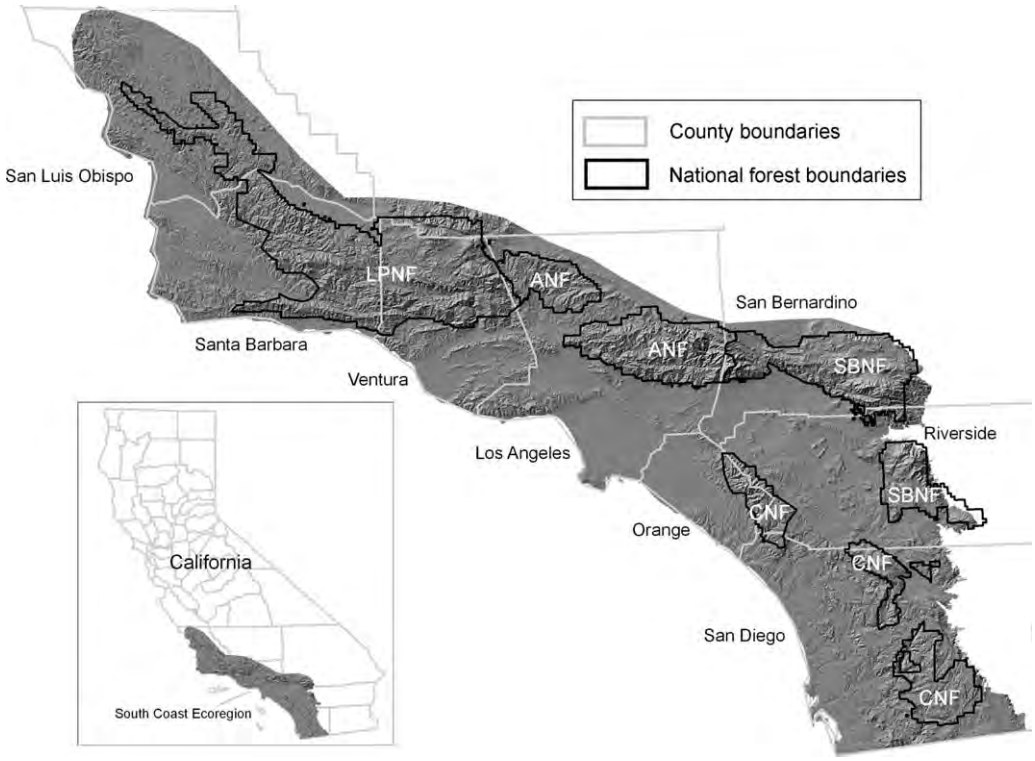


Fig. 1. Study area showing the four national forests of southern California. ANF is Angeles National Forest, CNF is Cleveland National Forest, LPNF is Los Padres National Forest, and SBNF is San Bernardino National Forest.

preliminary regression analysis, we found that climate variables were significantly correlated with terrain variables, so we did not include them. Because most fires are stand-replacing in southern California shrublands, we determined vegetation age by calculating the time since last fire in the area immediately adjacent to the fuel break before the fire intersected it.

Severe weather conditions are likely to strongly influence fire spread rates and intensity (Moritz et al., 2004; Keeley and Zedler, 2009), and lead to conditions that are dangerous for firefighters (Halsey, 2005). However, previous analysis indicated that, because weather is highly variable over space and time, it is difficult to attribute exact weather conditions to the moment of intersection (Syphard et al., in press-a). Instead, we considered fire size and season as potential explanatory variables because they indirectly reflect the severity of weather conditions (Finney, 2003; Westerling et al., 2004), particularly because of the importance of autumn Santa Ana winds in this region (Moritz et al., 2010). We calculated fire size from the fire perimeter data through GIS calculations, and we derived fire season from the attributes of the fire perimeter data. We reclassified the months of the fires into winter and spring (January through May), summer (June through August), and autumn (September through November) to reduce the degrees of freedom in the data.

We obtained information on fuel break condition and firefighting activities through personal interviews with firefighters and managers who were most familiar with the fire events. Fuel break length was calculated from the GIS files, but data on fuel break width were largely unavailable for all four forests. Because written fuel break maintenance records were often unavailable, we determined how well the fuel break had been maintained by asking fire personnel to indicate the condition of the fuel break at the time the fire intersected it on a scale from one to three. The ranking reflected poor to excellent conditions, with poor reflecting fuel breaks where the vegetation had almost entirely regrown, and excellent reflecting fuel breaks that were either entirely grass, or no vegetation had regrown. To evaluate the importance of management activities, we also asked personnel to indicate whether they were able to gain access to the fuel break for firefighting (yes or no) and whether they had sufficient resources available (including manpower and equipment) to fight the fire, again on a scale of one to three, from poor (no resources) to excellent (full resources).

2.4. Explanatory variables for mapping number of intersections

To explain and map areas where fires and fuel breaks are most likely to intersect, we evaluated the same human and biophysical variables as for the fuel break outcome (Table 2). However, we did not consider fire and management variables related to single events because we were interested in trends across the entire study period (1980–2007). In addition, we hypothesized that significantly more fire and fuel break intersections would occur in areas that were historically fire-prone. Therefore, we additionally explored historic fire frequency (derived through overlay of fire perimeters from 1878 to 2007) as well as spatially interpolated ignition density as explanatory variables.

2.5. Fuel treatment outcome: structural equation modeling

Structural equation modeling provides advantages over traditional multiple regression analysis because it uses existing information to examine potential causal pathways among intercorrelated variables and identify indirect relationships (Bollen, 1989; Grace and Pugesek, 1998). The model is statistically evaluated to determine the degree of consistency with empirical data and compare the outcomes of alternative models. Although structural equation modeling is a confirmatory approach that tests a priori hypotheses of about interrelationships among variables, it is often essential to use exploratory regression and correlation analysis to suggest which pathways to explore (Grace, 2006).

Author's personal copy

For the different national forests, we initially conducted correlation analyses and built simple and multiple logistic regression models to explore the relationships among the explanatory variables and fuel break outcome. We used logistic regression because the response variable for fuel treatment outcome was binary, indicating whether the fuel treatment stopped the fire or not. Based on the hypothesized interrelationships developed through correlation and regression analysis, we developed and tested structural equation models using Mplus version 5.1 software. Because we modeled categorical outcomes, we used the weighted least-squares with mean and variance adjustment (WLSMV) estimator. To ensure that we retained only the important pathways in the final models, we sequentially removed one path at a time to ensure that, if a path were removed, the chi-square did not increase more than 3.84 points (the single degree-of-freedom test) (James B. Grace, personal communication). We also examined the fit of alternative models through *p*-values, root mean square error of approximation, and weighted root mean square residual (Hooper et al., 2008).

2.6. Number of intersections: multiple regression and predictive mapping

To evaluate the relative influence of the explanatory variables on the number of times fires intersected fuel breaks on the forests, we developed simple and multiple Poisson regression models that were appropriate for count response variables (Agresti, 1996). Because the objective of this part of our study was to create predictive maps (rather than explore causal pathways), we only used multiple regression analysis, as opposed to structural equation modeling. We first conducted simple regression models with each variable (and quadratic terms for continuous variables) to establish rankings for entering the variables into a multiple regression.

For the multiple regression models, we entered variables according to the amount of deviance they explained [D^2, equivalent to the R^2 in ordinary least square models (Guisan and Zimmermann, 2000)] and only considered those variables that were significant at $p \leq 0.15$. We evaluated correlation coefficients in the models for all of the forests and avoided including two variables with a bivariate correlation ≥ 0.3. For each forest, we evaluated alternative plausible multiple regression models with different combinations of predictor variables and selected the best model as the one that explained the highest percentage deviance with the lowest Akaike information criterion (AIC) (Quinn and Keough, 2002). We also checked to ensure that overdispersion was not present in the models.

After selecting the best multiple regression models, we converted them into continuous map surfaces that reflected the predicted number of fires that would intersect fuel breaks across the entire forest. We created these maps by applying the Poisson regression formula and predicted coefficients onto the GIS layers of the significant explanatory variables (as in Syphard et al., 2008). We evaluated the correspondence of the predicted number of intersections to the actual intersections that occurred through Pearson correlation coefficients. We also quantified the magnitude of discrepancy among predicted and observed values by calculating the root mean square error (RMSE).

To test how well the models that explained the number of intersections on one national forest matched the models in the other forests, we applied the models developed on each forest to the entire South Coast Ecoregion and compared the maps. To quantify the spatial correspondence among the maps, we used a Pearson's correlation coefficient to calculate pairwise correlations (Termansen et al., 2006; Syphard and Franklin, 2009). High correlations among maps would indicate that the factors controlling the spatial pattern of fire and fuel break intersections were similar among the forests, and low correlations would suggest that those factors vary.

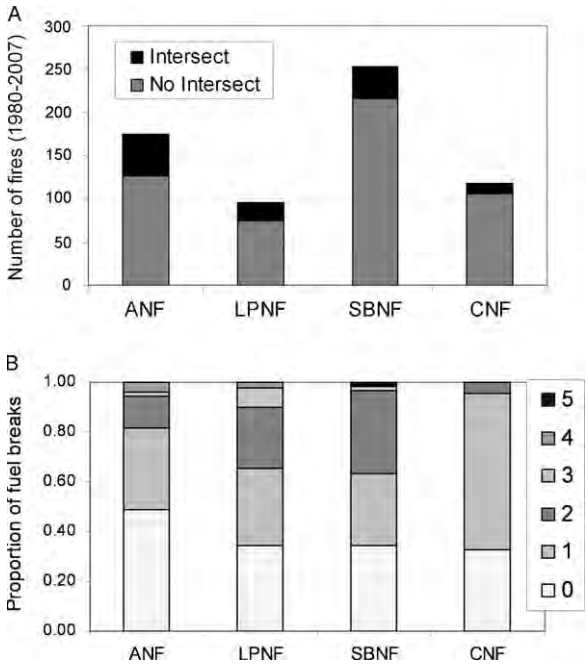


Fig. 2. Number of fires that occurred in four national forests divided into those that intersected a fuel break and those that did not intersect a fuel break (A); and proportion of fuel break area intersected by 0–5 fires from 1980 to 2007 (B). ANF is Angeles National Forest, CNF is Cleveland National Forest, LPNF is Los Padres National Forest, and SBNF is San Bernardino National Forest.

3. Results

3.1. Summary of fuel break and fire intersections and outcomes

During the 28 years of the analysis, 641 fires occurred within the boundaries of the four national forests. On average, 23% of those fires intersected a fuels treatment, but the proportion of intersections varied among the forests (Fig. 2A). In fact, the number of intersections among fires and fuel breaks on the Cleveland National Forest was only 13 (11% of the intersections), and this small number precluded us from including that forest in our statistical analyses.

For the fuel breaks that we considered in our spatial analysis of intersections (i.e., those constructed on or before 1980), approximately 25–50% of the fuel break area never intersected a fire. On the other hand, approximately 10–45% of the fuel break area intersected multiple (two or more) fires. The proportion of fuel break area that intersected fires varied among the four forests (Fig. 2B).

When fires intersected fuel breaks, the percentage that stopped at the fuel breaks ranged from 22 to 47%, and the percentage that crossed over the fuel breaks ranged from 29 to 65%, depending on the forest (Fig. 3). We distinguished another group of fuel break intersections where fires crossed over fuel breaks, but the fuel breaks did change fire behavior enough to facilitate firefighter access and eventually help with the suppression of the fire. When this group is considered along with the other cases in which the fuel break held a portion of the fire, the percentage ranged from 10 to 23% (Fig. 3).

3.2. Fuel treatment outcome: structural equation modeling

Among the three national forests that we analyzed, there were seven variables that significantly affected fuel break/fire outcomes. However, the structural equation models revealed differences in the number and combination of important variables as well as

Author's personal copy

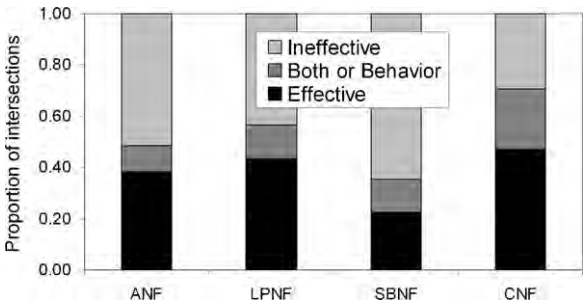


Fig. 3. Proportion of fire and fuel break intersections in four forests divided into those that effectively stopped a fire (Effective); those in which only a portion stopped a fire or that changed fire behavior (Both or Behavior); and those in which the fires crossed over the fuel break (Ineffective). ANF is Angeles National Forest, CNF is Cleveland National Forest, LPNF is Los Padres National Forest, and SBNF is San Bernardino National Forest.

differences in the interrelationships among them. We tested alternative models with different explanatory variables and different direct and indirect effects. The final model varied among the forests (Fig. 4). Despite these differences, most of the variables were common to at least two of the three forests; and three variables were common to all forests: firefighter access, fire size, and fuel break condition.

Firefighter access was the only variable to directly improve the outcome in all three forests, and it was the most influential variable for the Los Padres and Angeles National Forests. The proportion of events in which firefighters had access to fuel breaks was slightly lower in the Angeles than in the other two forests (Fig. 5C). On the Los Padres and San Bernardino forests, fire size was directly and negatively related to fuel break outcome; in the Angeles, fire size negatively affected firefighter access and thus indirectly influenced fuel break outcome. On average, the fires were smaller in the Angeles, but fire sizes were highly variable on all of the forests (Fig. 6). On the Los Padres and Angeles forests, fuel break condition facilitated firefighter access to fuel break and thus indirectly improved fuel break outcome; the relationship was direct in the San Bernardino, which reported the largest proportion of fuel breaks with low scores for fuel break condition (Fig. 5B).

The Los Padres was the only forest for which season was not important in explaining fuel break outcome, as later-season fires (i.e., September through November) had a direct negative influence on outcome for the Angeles; and for the San Bernardino, later-season fires contributed to increased fire size, so the effect was indirectly negative. Most of the fires on the Los Padres occurred in the summer months, whereas fires in the autumn were most common for the other two forests (Fig. 5E). The Los Padres was the only forest in which firefighting resources were not influential in explaining outcome. On both the Angeles and San Bernardino, resources indirectly improved fuel treatment outcome; but on the Angeles, the primary relationship was by improving access and on the San Bernardino, the primary relationship was through reduction in fire size. The overall distribution of firefighting resources, according to the interviews, was variable among the forests (Fig. 5A). Finally, the Los Padres was the only forest in which fuel break length had a significant direct and positive impact on fuel treatment outcome, and this forest had longer fuel breaks, on average, than the other two forests (Fig. 6).

The Angeles was the only forest in which vegetation age was not important. On the Los Padres, younger vegetation surrounding the fuel breaks improved firefighter access to the treatment, so the relationship was indirectly negative. On the San Bernardino, the relationship was direct and positive. Although the average vegetation age was lowest on the San

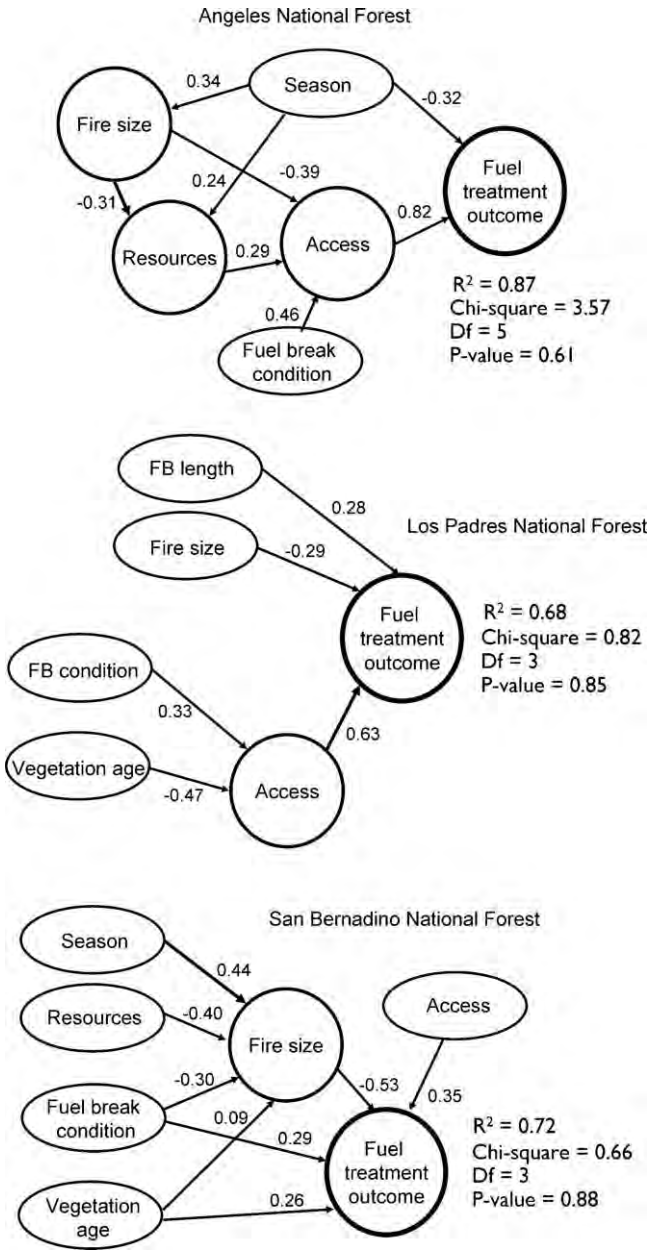


Fig. 4. Structural equation model of factors that directly and indirectly explain why fires stopped at fuel breaks in the Angeles, Los Padres, and San Bernardino National Forests. Solid arrows represent direction of effect, and coefficients shown along arrows are standardized values. Circles represent endogenous (or dependent) variables in the models. Due to insufficient number of fuel break/fire intersections the Cleveland National Forest was not included.

Bernardino, there was a lot of variability in age for all the forests (Fig. 6).

3.3. Number of intersections: multiple regression and predictive mapping

Of the variables we considered for explaining the number of fire and fuel break intersections in the forests, historic fire frequency was the only one that was retained in all three of the multiple regression models (Table 2). For all three forests, the number of intersections was strongly and positively related to the number of fires that had occurred since 1878 (date of the earliest fire in the database). Ignition density was also positively related to the number of intersections on the Angeles and Los Padres National

Author's personal copy

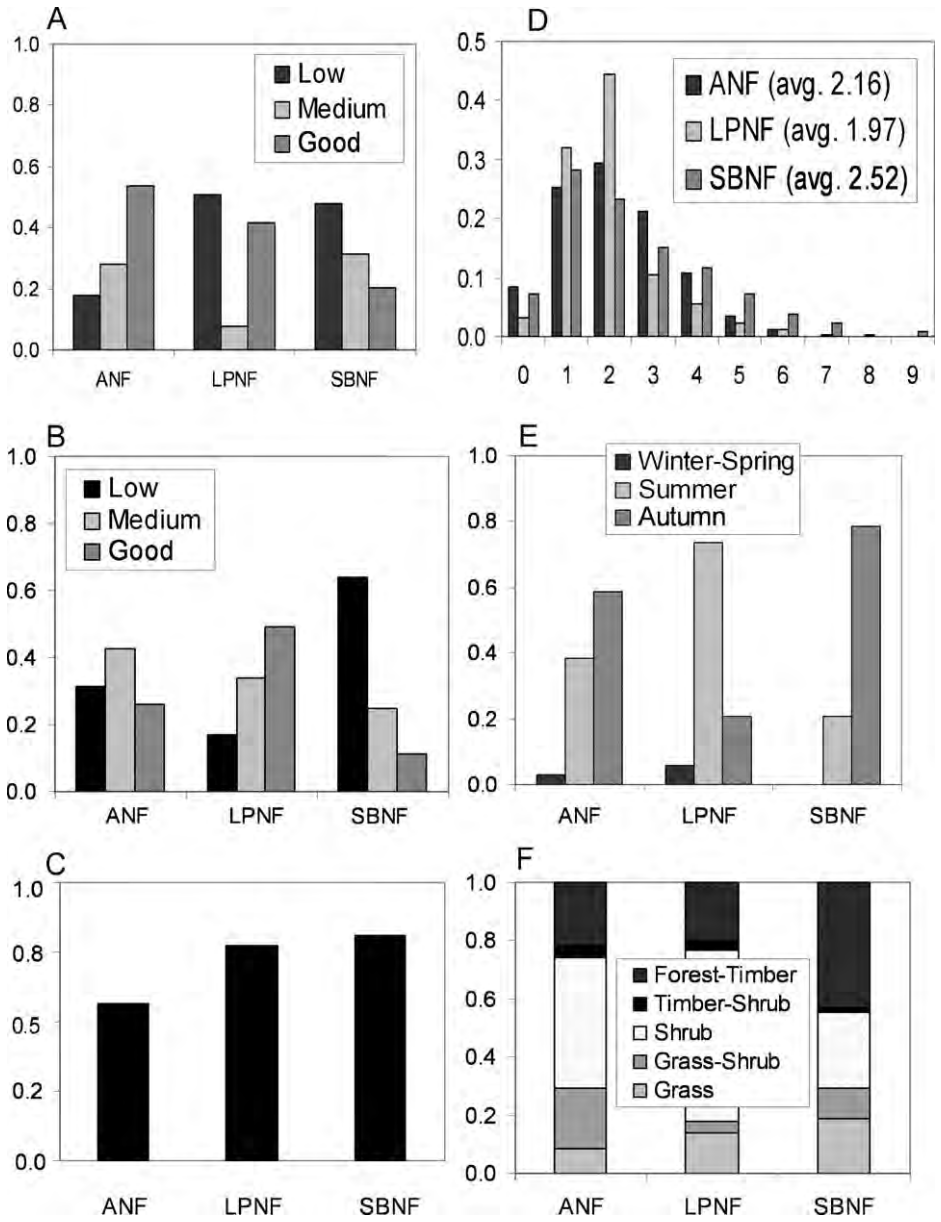


Fig. 5. Distribution of categorical variables for three national forests that were significant in any of the statistical models. The *y*-axis for all charts represents the proportion of observations within each forest. The charts represent (A) firefighting resources; (B) fuel break condition; C) Access to fuel break; (D) historic fire frequency (with the average for each forest indicated in the legend); (E) season when intersection occurred; (F) fuel type. ANF is Angeles National Forest, LPNF is Los Padres National Forest, and SBNF is San Bernardino National Forest.

Forests, but was not retained in the model for the San Bernardino National Forest. The Los Padres had the lowest average number of fires and lowest ignition density, whereas the San Bernardino had the highest fire frequency and ignition density (Figs. 5D and 6).

For both the Angeles and San Bernardino National Forests, the number of intersections was negatively related to elevation, which was slightly higher on average on the San Bernardino than the other forests (Fig. 6). The fuel model parameter was also significant in explaining model variation for only the Angeles and San Bernardino. A larger number of intersections occurred in forest and timber fuel models on the San Bernardino National Forest ("TU" or "TL", Scott and Burgan (2005)), whereas the shrub models ("SH", Scott and Burgan (2005)) were more influential in the Angeles (Fig. 5F). Three variables were retained in the multiple-regression model for the Los Padres that were not important in the other forests. On the Los Padres, fires were more likely to intersect fuel breaks when fuel breaks were in close proximity to trails, distance to roads was intermediate, and winter solar radiation was low. Both the average distance to trails and solar radiation were lower on the Los Padres than in the other two forests, but the average distance to roads was similar, with high variation in the three forests (Fig. 6).

The three map surfaces developed by applying the multiple-regression model formulas and coefficients to the GIS maps of the significant variables reflect a continuous probability distribution of where fires and fuel breaks are most likely to intersect (Fig. 6). The Pearson's correlation coefficients between the observed number of intersections and the number of intersections predicted by the model ranged between 0.59 and 0.74 (Table 3), and the root mean squared error ranged from 0.28 to 1.31 intersections. The correlations among the three maps generated by the differ-

Author's personal copy

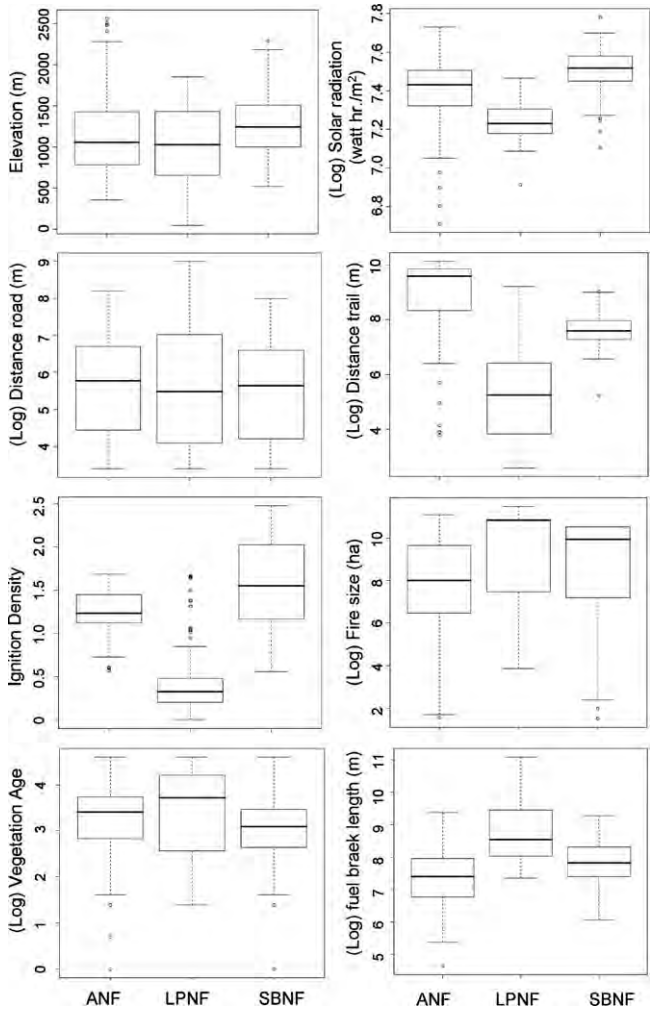


Fig. 6. Distribution of continuous variables for three national forests that were significant in any of the statistical models.

ent multiple-regression models were lower, particularly for the Los Padres model (correlation of 0.21 with the Angeles and 0.16 with the San Bernardino). The Angeles and San Bernardino maps, however, had a much stronger correlation (0.54) (Fig. 7).

4. Discussion

The four southern California national forests studied here all share several features in common; they are in rugged terrain, are dominated by non-forested ecosystems, and contain a substantial amount of wildland–urban interface. These national forests, however, differ in the proportions of vegetation types, biophysical characteristics, and the relative proportions of wildland–urban interface and intermix landscapes. These differences are part of the reason the significant factors explaining fuel break/fire outcomes and number of intersections were different among forests. Nevertheless, several factors were consistently important across all forests in explaining the number of intersections between fuel breaks and big fires and the role of fuel breaks in altering fire spread. These similarities support several general conclusions about the role of fuel breaks in controlling large fires in southern California.

One conclusion is that the primary role of fuel breaks in the region is to facilitate fire management activities. Two of the three fire management variables we considered (access and fuel break condition) were important in all three structural equation models (Fig. 4), and firefighter resources was important for two of the forests (Angeles and San Bernardino). Furthermore, while other important variables in the models (related to vegetation structure, fire size, and season) were not directly related to management, these variables often indirectly influence management, for example, by affecting access to treatment areas. Demonstrating the strength of these indirect effects is one of the benefits to structural equation modeling (Grace, 2006).

Firefighter access to fuel breaks was the most influential factor in fuel treatment outcome for the Los Padres and Angeles, and was also highly significant for the San Bernardino. The high level of significance for this variable supports the notion that, without firefighters present to control fires, fires will generally not stop at fuel breaks. Although three fires stopped on their own at the top of ridges on the San Bernardino, these fires constituted less than 1% of the cases. Only one fire stopped passively on the Los Padres, and none of the fires in our analysis stopped without firefighters on the Angeles. Despite this conclusion, it is important to point out that the fire perimeter database only includes fires greater than 10 ha; therefore, it is possible that some smaller fires do stop passively (i.e., without fire fighting actions) at fuel breaks. Many fire management personnel understand that fuel breaks are unlikely to passively stop most fires, particularly during extreme weather conditions, but the public, news media, and policy-makers may unrealistically expect otherwise. Our results show that such beliefs could lead to a false sense of security about the protective value of fuel breaks.

Most of the largest fire events in southern California occur during severe weather conditions in autumn, prior to winter rains, when dry, offshore Santa Ana winds can exceed 30 ms^{-1} (Miller and Shlegel, 2006; Moritz et al., 2010). Fighting fires during these weather conditions can be extremely dangerous, and during these wind events, multiple fires often break out simultaneously. These severe weather conditions likely explain why fire size was another variable that was highly significant in explaining fuel treatment outcome in all three forests. Discussions during the interviews confirmed that fires were more difficult to control, and likely to become large, under severe weather conditions. There are a number of reasons for this: the speed of such fires, which can cover 10,000 ha within a day or two, and thus the lack of time for accessing fuel breaks, the danger of aggressively attacking fires under such conditions, and firefighting resources spread too thin because of multiple fire fronts. Consistent with the effect of fire size, fire season was significant on the Angeles and San Bernardino because Santa Ana winds typically occur during the fall (and this was the season when fuel treatment/fire outcomes were poorest). The reason that season was not important for the Los Padres, but fire size was, is that Santa Ana winds are much less predictable there (Moritz et al., 2004, 2010). The Los Padres regularly experiences strong, hot wind downcanyon wind events known as "sundowners," typically in summer (Ryan, 1996), but these are not annual events as are Santa Ana winds. It is possible for severe-weather fire events to occur in any season, not just the fall, across the entire southern California region. This explains why fire size was important on all three forests.

In addition to fire management and fire weather (i.e., size and season), there was evidence that vegetation structure played an

Table 3
Pearson correlation coefficients among prediction maps for three national forests and among predicted and observed number of intersections within each forest. Root mean squared error (RMSE) is calculated between the observed and predicted number of intersections within each forest.

	Angeles	Los Padres	San Bernardino
Angeles map	1.00	0.21	0.54
Los Padres map	0.21	1.00	0.16
San Bernardino map	0.54	0.16	1.00
Observed *N* intersections	0.61	0.59	0.74
RMSE	1.31	0.76	0.28

Author's personal copy

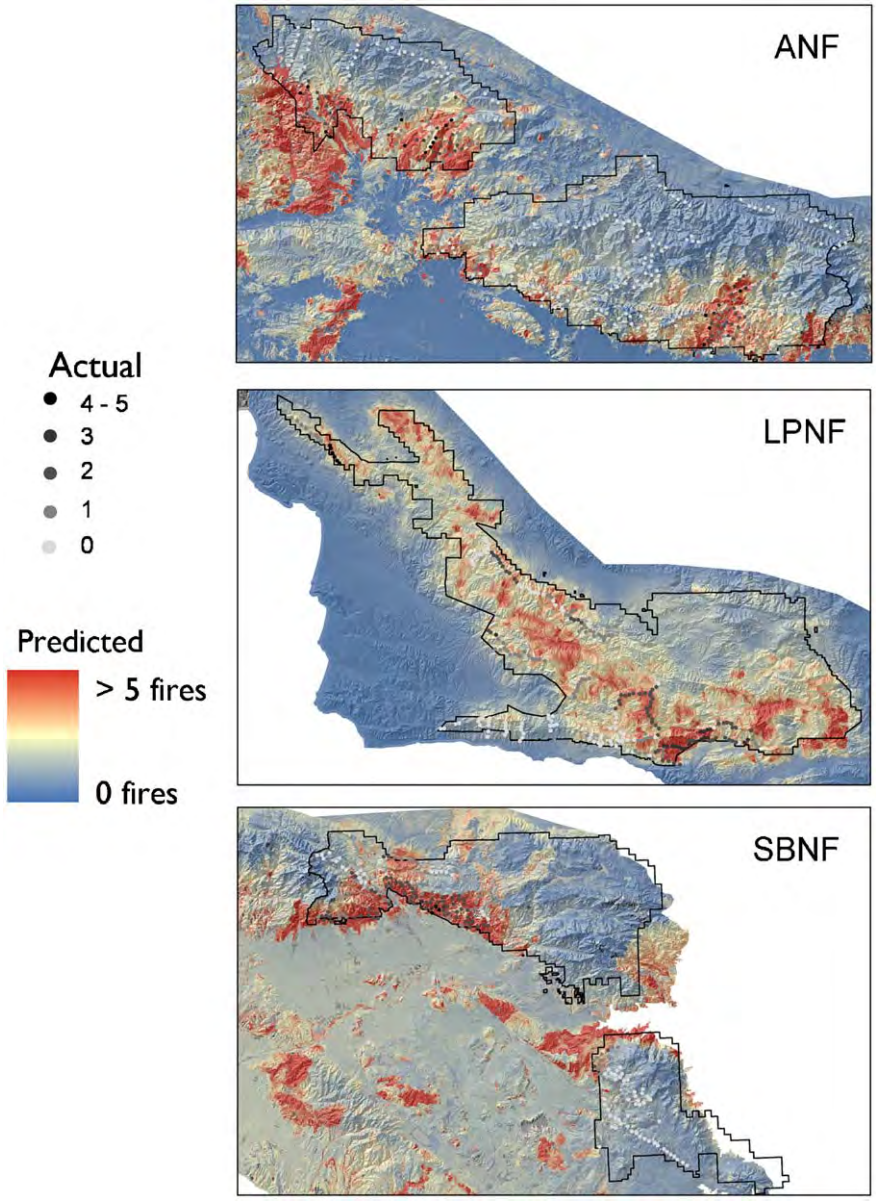


Fig. 7. Maps showing predicted distribution of areas most likely to intersect fuel breaks in the Angeles, Los Padres, and San Bernardino National Forests. The sample points along the fuel breaks also show the actual number of times fires intersected fuel breaks at those locations from 1980 to 2007.

important role in improving fuel break outcome in all three forests, and this was generally because well-maintained fuel breaks were much easier for firefighters to access in time to prepare the fuel break for suppression activities. Because young vegetation typically has a lower fuel load than old vegetation, one of the premises of conducting fuel manipulation is that young vegetation can directly slow or stop the spread of fire. However, in southern California shrublands, stand age and fuel loads play a limited role in stopping the spread of fire, particularly during extreme weather conditions, when fires often spread through or over very young age classes (Keeley and Zedler, 2009; Moritz, 1997; Moritz et al., 2004). Accordingly, while vegetation age was significant in the Los Padres, younger vegetation did not directly prevent fires from spreading, but helped facilitate firefighter access to fuel breaks. There are some parts of the Los Padres where, because of the lack of consistent Santa Ana influence, fuel age may play a role in controlling fire spread (Moritz, 1997). This particularly applies to the coastal area near the city of Santa Barbara. Regardless, the most significant relationship was between vegetation age and firefighter access.

Fuel break condition (i.e., how well it was maintained) played a similar role as vegetation age, and it was influential in all three forests. While the relationship was direct on the San Bernardino, better-maintained fuel breaks improved access to fuel breaks in the Los Padres and the Angeles, and thus, the relationship was indirect. Southern California chaparral forms a dense, continuous cover that is extremely difficult to maneuver in (Halsey, 2005), which likely explains why well-maintained fuel breaks improved the outcome.

As in the models for fuel break outcome, the models explaining the number of fire and fuel break intersections reflected regional landscape diversity and differences among the forests, while nevertheless suggesting several general conclusions. By far the most significant variable, and the only variable consistently significant for all forests, was historic fire frequency. This result is not surprising because areas that have burned most frequently in the past are likely to be most fire-prone in general. Ignition density patterns were also significant for two of the forests. Nevertheless, fire history was not the only factor explaining why fuel breaks intersect fires more in some places than in others. Fire and fuel break

Author's personal copy

intersections were a function of a combination of biophysical and human variables for all the forests, but the biophysical variables were generally more important than the human ones. This is consistent with other regional studies that have shown biophysical factors to be strongly related to patterns of fire occurrence and area burned, whereas human variables are most significant for explaining ignition patterns and fire frequency (Parisien and Moritz, 2009; Syphard et al., 2007, 2008).

The maps of predicted distribution of areas where fuel breaks are most likely to intersect with large fires did not correlate well among the forests, yet there was good correlation among observed and predicted number of intersections within the forests. In other words, the combination of factors that best predicted the number of intersections in one forest did not match well with the combination of factors that best predicted the intersections in the other forests. These differences reflect how the environmental controls of fire regimes vary from region to region, even within a single ecoregion. Therefore, a "one size fits all" management approach would be inappropriate if the objective were to map likely areas for fires and fuel treatments to intersect. While developing a model for one region and applying it to a different region may be inappropriate, the modeling methodology adopted here could easily be applied anywhere. These types of maps could be part of a manager's toolset in helping to identify areas where new fuel breaks could be constructed or where current fuel breaks should be maintained.

We cannot directly attribute differences in the influential variables of our models to differences among the forests because we only statistically analyzed three national forests. Nevertheless, the differences among the national forests do provide a perspective on the variability of the region, despite the fact that it all falls within the same ecoregion. This is striking considering that southern California has a distinctive fire regime, owing to the defining characteristics of the region's Mediterranean-type climate. Because of the cool, wet winters and hot, dry summers, and the specific properties of chaparral, this vegetation is particularly flammable for a substantial portion of the year and burns in large, stand-replacing, high-intensity fires (Pyne et al., 1996). The region's fire regime and fire management issues are typically most starkly contrasted against those in forested regions (Keeley et al., 2009). While it has been recognized that many fire management practices in forested regions are inappropriate for southern California shrublands (Halsey, 2005; Keeley and Fotheringham, 2006), this study shows how certain aspects of fire management may need to be individually tailored at even finer scales, dependent on terrain, proximity to urban environments, regional weather patterns, and fuel type composition.

In southern California, fuel treatments can lead to ecological degradation because they often involve complete removal of vegetation, facilitate the spread of exotic species, and may thus indirectly contribute to increased fire frequency in a region where recurrent fire already threatens the native shrublands (Merriam et al., 2006, 2007). These resource costs should be considered relative to the benefits of protecting communities, and these trade-offs should be considered when constructing new fuel breaks in the region. This is in contrast to forested regions, where the objective of protecting communities is often coupled with the objective of reshaping the age structure and composition of forests to resemble historic conditions (Reinhardt et al., 2008). In these forests, fuel breaks and resource benefits generally are mutually beneficial. Regardless of the region, mitigating fire risk to communities is a priority for federal land managers, yet most fuel treatments are not placed within the wildland–urban interface where they may have the greatest potential for protecting homes. Across the western United States, only 3% of the area treated from 2004 to 2008 was located in this interface (Schoennagel et al., 2009).

Many new fuel breaks are currently being constructed in southern California. In fact, the most likely reason there were not enough fire and fuel break intersections to complete a statistical analysis in the Cleveland National Forest is because a large proportion of the fuel treatments have been recently constructed. Despite the large amount of new fuel break construction, the results of this study show that many fires never actually intersect fuel breaks, and large areas of fuel breaks never intersect fire. Also, the forests that had the highest density and area of fuel breaks did not have the highest overall effectiveness of fuel breaks, suggesting that treating more area alone does not necessarily increase the safety of a region. It may be more effective to have fewer fuel breaks in strategically placed locations than to have greater area of fuel breaks overall, at least in terms of protecting communities. The results from all three forests show that fuel breaks played an important role in controlling large fires primarily where they provided access for firefighting activities. Strategically locating fewer fuel breaks could also reduce the potential for resource costs.

Discussion in the interviews revealed that many strategic decisions do go into placing fuel breaks. While these decisions are often based on years of fire management experience, quantitative and spatially explicit analyses could potentially be helpful in refining these strategic decisions. For example, maps like the ones generated here, showing where fuel treatments are mostly likely to intersect fires, could be combined with further spatial analyses of where access is best and where communities need the most protection. In particular, this study strongly supports the notion of constructing fuel breaks along the wildland–urban interface where firefighters will have better access to the fuel breaks, and where the fuel breaks will provide an immediate line of defense adjacent to homes that are at risk. The case studies from all four national forests demonstrate that fuel breaks will not stop fires without firefighter presence. Therefore, constructing fuel breaks in remote, backcountry locations will do little to save homes during a wildfire because most firefighters will be needed to protect the wildland–urban interface, and fires will not be stopped by those fuel breaks that are located farther away. Finally, because access to fuel breaks was consistently improved when vegetation structure was favorable, this study suggests that maintaining fuel breaks in strategic locations may be just as important as constructing new fuel breaks.

Acknowledgments

Support for this paper was provided by the USGS Multi-Hazards Demonstration Project. Any use of trade, product, or firm names in this publication is for descriptive purposes only and does not imply endorsement by the U.S. government.

References

Agee, J.K., Bahro, B., Finney, M.A., Omi, P.N., Sapsis, D.B., Skinner, C.N., van Wagtendonk, J.W., Weatherspoon, C.P., 2000. The use of fuelbreaks in landscape fire management. Forest Ecology and Management 127, 55–66.

Agresti, A., 1996. An Introduction to Categorical Data Analysis. John Wiley and Sons, New York.

Bollen, K.A., 1989. Structural Equation Modeling with Latent Variables. John Wiley and Sons, New York, NY.

Bowman, D.M.J.S., Balch, J.K., Artaxo, P., Bond, W.J., Carlson, J.M., Cochrane, M.A., D'Antonio, C.M., DeFries, R.S., Doyle, J.C., Harrison, S.P., Johnston, F.H., Keeley, J.E., Krawchuk, M.A., Kull, C.A., Marston, J.B., Moritz, M.A., Prentice, I.C., Roos, C.I., Scott, A.C., Swetnam, T.W., van der Werf, G.R., Pyne, S.J., 2009. Fire in the Earth system. Science 324, 481–484.

Butry, D.T., Mercer, D.E., Prestemon, J.R., Pye, J.M., Holmes, T.P., 2001. What is the price of catastrophic wildfire? Journal of Forestry 99, 9–17.

Cardille, J.A., Ventura, S.J., Turner, M.G., 2001. Environmental and social factors influencing wildfires in the Upper Midwest, United States. Ecological Applications 11, 111–127.

Davis, L.S., 1965. The Economics of Wildfire Protection with Emphasis on Fuel Break Systems. State of California, Resources Agency, Sacramento, CA.

Author's personal copy

Dellasala, D.A., Williams, J.E., Williams, C.D., Franklin, J.F., 2004. Beyond smoke and mirrors: a synthesis of fire policy and science. Conservation Biology 18, 976–986.
Finney, M.A., 2003. Calculating fire spread rates across random landscapes. International Journal of Wildland Fire 12, 167–174.
Finney, M.A., McHugh, C.W., Grenfell, I.C., 2005. Stand and landscape effects of prescribed burning on two Arizona wildfires. Canadian Journal of Forest Resources 35, 1714–1722.
Finney, M.A., Seli, R.C., McHugh, C.W., Ager, A.A., Bahro, B., Agee, J.K., 2007. Simulation of long-term landscape-level fuel treatment effects on large wildfires. International Journal of Wildland Fire 16, 712–727.
Flannigan, M.D., Krawchuk, M.A., de Groot, W.J., Wotton, B.M., Gowman, L.M., 2009. Implications of changing climate for global wildland fire. International Journal of Wildland Fire 18, 483–507.
Franklin, J.F., Agee, J.K., 2003. Forging a science-based national forest fire policy. Issues in Science and Technology 20, 59–66.
Grace, J.B., 2006. Structural Equation Modeling and Natural Systems. Cambridge University Press, New York, NY.
Grace, J.B., Pugesek, B.H., 1998. On the use of path analysis and related procedures for the investigation of ecological problems. The American Naturalist 152, 151–159.
Green, L.R., 1977. Fuel breaks and other fuel modification for wildland fire control. In: USDA Agric. Hdbk., 1977, p. 499.
Guisan, A., Zimmermann, N.E., 2000. Predictive habitat distribution models in ecology. Ecological Modelling 135, 147–186.
Halsey, R.W., 2005. Fire, Chaparral and Survival in Southern California. Sunbelt Publications, San Diego, CA.
Hooper, D., Coughlan, J., Mullen, M.R., 2008. Structural equation modeling: guidelines for determining model fit. The Electronic Journal of Business Research Methods 6, 53–60.
Hunter, R., 1999. South Coast Regional Report: California Wildlands Project vision for wild California. Davis, CA.
Keeley, J.E., 2006. South coast bioregion. In: Sugihari, N.G., van Wagtendonk, J.W., Shaffer, K.E., Fites-Kaufman, J., Thode, A.E. (Eds.), Fire in California's Ecosystems. University of California Press, Berkeley, CA, pp. 350–390.
Keeley, J.E., Fotheringham, C.J., 2003. Impact of past, present and future fire regimes on North American Mediterranean shrublands. In: Veblen, T.T., Baker, W.L., Montenegro, G., Swetnam, T.W. (Eds.), Fire and Climate Change in Temperate Ecosystems of the Western Americas. Springer, New York, pp. 218–262.
Keeley, J.E., Fotheringham, C.J., Morais, M., 1999. Reexamining fire suppression impacts on brushland fire regimes. Science 284, 1829–1832.
Keeley, J.E., Fotheringham, C.J., 2004. Lessons learned from the wildfires. In: Halsey, R.W. (Ed.), Fire, Chaparral and Survival in Southern California. Sunbelt Publications, El Cajon, CA, pp. 69–75.
Keeley, J.E., Fotheringham, C.J., 2006. Wildfire management on a human dominated landscape: California chaparral wildfires. In: Wuerthner, G. (Ed.), Wildfire – A Century of Failed Forest Policy. Island Press, Covelo, CA.
Keeley, J.E., Zedler, P.A., 2009. Large, high intensity fire events in southern California shrublands: debunking the fine-grained age-patch model. Ecological Applications 19, 69–94.
Keeley, J.E., Aplet, G.H., Christensen, N.L., Conard, S.G., Johnson, E.A., Omi, P.N., Peterson, D.L., Swetnam, T.W., 2009. Ecological foundations for fire management in North American forest and shrubland ecosystems. In: USDA Forest Service, Pacific Northwest Research Station, p. 92.
Martinson, E.J., Omi, P.N., 2003. Performance of fuel treatments subjected to wildfires. In: Omi, P.N., Joyce, L.A. (Eds.), Fire, Fuel Treatments, and Ecological Restoration. USDA Forest Service Rocky Mountain Research Station, Fort Collins, CO, pp. 7–13.
Mell, W.E., Manzello, S.L., Maranghides, A., Butry, D.T., Rehm, R.G., 2010. The wildland–urban interface fire problem – current approaches and research needs. International Journal of Wildland Fire 19, 238–251.
Merriam, K.E., Keeley, J.E., Beyers, J.L., 2006. Fuel breaks affect nonnative species abundance in Californian plant communities. Ecological Applications 16, 515–527.
Merriam, K.E., Keeley, J.E., Beyers, J.L., 2007. The role of fuel breaks in the invasion of nonnative plants. In: USGS Scientific Investigations Report, p. 69.
Miller, C., Urban, D.L., 2000. Modeling the effects of fire management alterations on Sierra Nevada mixed-conifer forest. Ecological Applications 10, 85–94.
Miller, N.L., Shlegel, N.J., 2006. Climate change projected fire weather sensitivity: California Santa Ana wind occurrence. Geophysical Research Letters 33, 1–5.
Miller, J.D., Safford, H.D., Crimmins, M., Thode, A.E., 2009. Quantitative evidence for increasing forest fire severity in the Sierra Nevada and southern Cascade Mountains, California and Nevada, USA. Ecosystems 12, 16–32.
Moritz, M.A., 1997. Analyzing extreme disturbance events: fire in Los Padres National Forest. Ecology 7, 1252–1262.
Moritz, M.A., Keeley, J.E., Johnson, E.A., Schaffner, A.A., 2004. Testing a basic assumption of shrubland fire management: how important is fuel age? Frontiers in Ecology and the Environment 2, 67–72.
Moritz, M.A., Moody, T.J., Krawchuk, M.A., Huges, M., Hall, A., 2010. Spatial variation in extreme winds predicts large wildfire locations in chaparral ecosystems. Geophysical Research Letters 37, L04801.
NIFC, 2009. Wildland fire statistics. In: U.S. Department of the Interior, Bureau of Land Management, Boise, ID.
Noss, R.F., Franklin, J.F., Baker, W.L., Schoennagel, T., Moyle, P.B., 2006. Managing fire-prone forests in the western United States. Frontiers in Ecology and the Environment 4, 481–487.
Parisien, M.-A., Moritz, M.A., 2009. Environmental controls on the distribution of wildfire at multiple spatial scales. Ecological Applications 79, 127–154.
Pausas, J.G., Keeley, J.E., 2009. A burning story: the role of fire in the history of life. Bioscience 59, 593–601.
Prestemon, J.R., Pye, J.M., Butry, D.T., Holmes, T.P., Mercer, D.E., 2002. Understanding broadscale fire risks in a human-dominated landscape. Forest Science 48, 685–693.
Pyne, S.J., Andrews, P.L., Laven, R.D., 1996. Introduction to Wildland Fire. Wiley, New York.
Pyne, S.J., 2004. Tending Fire Coping With America's Wildland Fires. Island Press, Washington, D.C.
Quinn, G.P., Keough, M.J., 2002. Experimental Design and Data Analysis for Biologists. Cambridge University Press, Cambridge, UK.
Radeloff, V.C., Hammer, R.B., Stewart, S.I., Fried, J.S., Holcomb, S.S., McKeefry, J.F., 2005. The wildland–urban interface in the United States. Ecological Applications 15, 799–805.
Raymond, C.L., Peterson, D.L., 2005. Fuel treatments alter the effects of wildfire in a mixed-evergreen forest, Oregon USA. Canadian Journal of Forest Research 35, 2981–2995.
Reinhardt, E.D., Keane, R.E., Calkin, D.E., Cohen, J.D., 2008. Objectives and considerations for wildland fuel treatment in forested ecosystems of the interior western United States. Forest Ecology and Management 256, 1997–2006.
Ryan, G., 1996. Downslope winds of Santa Barbara, California. In: US National Weather Service Technical Memorandum NWS–WR–240.
Schmidt, D.A., Taylor, A.H., Skinner, C.N., 2008. The influence of fuels treatment and landscape arrangement on simulated fire behavior, Southern Cascade range California. Forest Ecology and Management 225, 3170–3184.
Schoennagel, T., Veblen, T.T., Romme, W.H., 2004. The interaction of fire, fuels, and climate across rocky mountain forests. Bioscience 54, 661–676.
Schoennagel, T., Nelson, C.R., Theobald, D.M., Carnwath, G.C., Chapman, T.B., 2009. Implementation of National Fire Plan treatments near the wildland–urban interface in the western United States. Proceedings of the National Academy of Sciences 106, 10706–10711.
Scott, J.H., Burgan, R.E., 2005. Standard fire behavior fuel models: a comprehensive set for use with Rothermel's surface fire spread model. In: U.S. Department of Agriculture ,. Forest Service Rocky Mountain Research Station, Fort Collins, CO, p. 72.
Schwilk, D.W., Keeley, J.E., Knapp, E.E., McIver, J., Bailey, J.D., Fettig, C.J., Fiedler, C.E., Harrod, R.J., Moghaddas, J.J., Outcalt, K.W., Skinner, C.N., Stephens, S.L., Waldrop, T.A., Yaussy, D.A., Youngblood, A., 2009. The national fire and fire surrogate study: effects of fuel reduction methods on forest vegetation structure and fuels. Ecological Applications 19, 285–304.
Syphard, A.D., Franklin, J., Keeley, J.E., 2006. Simulating the effects of frequent fire on southern California coastal shrublands. Ecological Applications 16, 1744–1756.
Syphard, A.D., Radeloff, V.C., Keeley, J.E., Hawbaker, T.J., Clayton, M.K., Stewart, S.I., Hammer, R.B., 2007. Human influence on California fire regimes. Ecological Applications 17, 1388–1402.
Syphard, A.D., Radeloff, V.C., Keuler, N.S., Taylor, R.S., Hawbaker, T.J., Stewart, S.I., Clayton, M.K., 2008. Predicting spatial patterns of fire on a southern California landscape. International Journal of Wildland Fire 17, 602–613.
Syphard, A.D., Franklin, J., 2009. Differences in spatial predictions among species distribution models vary with species traits and environmental predictors. Ecography 32, 907–918.
Syphard, A.D., Radeloff, V.C., Hawbaker, T.J., Stewart, S.I., 2009. Conservation threats due to human-caused increases in fire frequency in mediterranean-climate ecosystems. Conservation Biology 23, 758–769.
Syphard, A.D., Keeley, J.E., Brennan, T.J., in press-a. Factors affecting fuel break effectiveness in the control of large fires on the Los Padres National Forest, California. International Journal of Wildland Fire.
Syphard, A.D., Scheller, R.M., Ward, B.C., Spencer, W.D., Strittholt, J.R., in press-b. Simulating landscape-scale effects of fuels treatments in the Sierra Nevada, California. International Journal of Wildland Fire.
Termansen, M., McClean, C.J., Preston, C.D., 2006. The use of genetic algorithms and Bayesian classification to model species distributions. Ecological Modelling 192, 410–424.
Wakimoto, R.H., 1977. Chaparral growth and fuel assessment in southern California. In: Mooney, H.A., Conrad, C.E. (Eds.), Proceedings of the symposium on environmental consequences of fire and fuel management in Mediterranean ecosystems. USDA Forest Service, pp. 412–418.
Wells, M.L., O'Leary, J.F., Franklin, J., Michaelsen, J., McKinsey, D.E., 2004. Variations in a regional fire regime related to vegetation type in San Diego County, California. Landscape Ecology 19, 139–152.
Westerling, A.L., Cayan, D.R., Brown, T.J., Hall, B.L., Riddle, L.G., 2004. Climate, Santa Ana winds and autumn wildfiresin Southern California Eos. Transactions, American Geophysical Union 85, 289–300.
Westerling, A.L., Hidalgo, H.G., Cayan, D.R., Swetnam, T.W., 2006. Warming and earlier spring increase western US forest wildfire activity. Science 313, 940–943.
Whelan, R.J., 1995. The Ecology of Fire. Cambridge University Press, Cambridge, Great Britain.

CSIRO PUBLISHING

www.publish.csiro.au/journals/ijwf *International Journal of Wildland Fire* **yyyy**, ●●, ●●●–●●●

Factors affecting fuel break effectiveness in the control of large fires on the Los Padres National Forest, California

Alexandra D. Syphard[A,D], *Jon E. Keeley*[B,C] *and Teresa J. Brennan*[B]

[A]Conservation Biology Institute, 10423 Sierra Vista Avenue, La Mesa, CA 91941, USA.
[B]US Geological Survey, Western Ecological Research Center, Sequoia–Kings Canyon Field Station, Three Rivers, CA 93271, USA.
[C]Department of Ecology and Evolutionary Biology, University of California, Los Angeles, CA 90095-1606, USA.
[D]Corresponding author. Email: asyphard@consbio.org

Abstract. As wildfires have increased in frequency and extent, so have the number of homes developed in the wildland–urban interface. In California, the predominant approach to mitigating fire risk is construction of fuel breaks, but there has been little empirical study of their role in controlling large fires. We constructed a spatial database of fuel breaks on the Los Padres National Forest in southern California to better understand characteristics of fuel breaks that affect the behaviour of large fires and to map where fires and fuel breaks most commonly intersect. We evaluated whether fires stopped or crossed over fuel breaks over a 28-year period and compared the outcomes with physical characteristics of the sites, weather and firefighting activities during the fire event. Many fuel breaks never intersected fires, but others intersected several, primarily in historically fire-prone areas. Fires stopped at fuel breaks 46% of the time, almost invariably owing to fire suppression activities. Firefighter access to treatments, smaller fires and longer fuel breaks were significant direct influences, and younger vegetation and fuel break maintenance indirectly improved the outcome by facilitating firefighter access. This study illustrates the importance of strategic location of fuel breaks because they have been most effective where they provided access for firefighting activities.

Additional keywords: chaparral, firefighter, mapping, pre-fire fuel treatment, southern California, strategic location, structural equation model, suppression, wildland–urban interface.

Manuscript received 30 June 2010, accepted 4 January 2011
Published online 1 September 2011

Introduction

In recent decades, wildfire frequency, extent or severity have increased across much of the western United States (Stephens 2005; Westerling *et al*. 2006; Miller *et al*. 2009), as well as other regions around the world (e.g. Pausas and Vallejo 1999; Montenegro *et al*. 2004). Concurrently, the number of homes built in the wildland–urban interface (WUI, where development meets or intermixes with wildland vegetation), and the areal extent of the WUI have grown dramatically – and are expected to continue growing for decades to come (Radeloff *et al*. 2005; Theobald and Romme 2007). The social and financial cost of so many homes located in fire-prone areas has been high. From 2002 to 2006 in the western US, US$6.3 billion was spent fighting fires, 92 lives were lost and more than 10 000 homes were destroyed (Gude *et al*. 2008). Considering the enormity of these effects, there is tremendous pressure to develop wildland fire-management practices to reduce urban losses.

Although reducing wildfire losses ultimately will require a combination of urban and wildland changes, historically the main focus has largely centred on wildland fuel reduction, often in the form of mechanical fuel treatments (Dellasala *et al*. 2004). Between 2001 and 2006, federal land management agencies in the western United States spent US$2.7 billion for fuel treatments (Schoennagel *et al*. 2009). Although the objective for constructing fuel treatments is generally to reduce the severity and spread of wildfires, specific expectations regarding how fuel treatments are supposed to function tend to vary among different stakeholders (e.g. public, special-interest groups, policy-makers or management agencies (Reinhardt *et al*. 2008). The typical objective of fuel treatments in many western US forests is to change fire behaviour, reduce the severity of fire effects and restore forest structure to conditions that would safely support a natural fire regime of frequent, low-intensity fires (Reinhardt *et al*. 2008). In urbanised areas, treatments are instead intended to prevent fire from spreading into development (Raab and Martin 2001; Radeloff *et al*. 2005), but there may be unrealistic expectations that these treatments can 'fire-proof' those areas (Reinhardt *et al*. 2008; Keeley *et al*. 2009*a*).

Along with differing expectations, the effectiveness or appropriateness of treatments are also likely to vary according to regional differences in vegetation type and structure, natural fire regime, weather conditions and local topography

© IAWF 2011
10.1071/WF10065

(Stratton 2004). The ecological implications of fuel treatments, and ecological effects of altered fire regimes, are also likely to vary from region to region, but ecological considerations are rarely incorporated into current forest laws and policies (Noss *et al*. 2006). Although fuel treatments and resource benefits are likely to be compatible in many forest types (Schwilk *et al*. 2009), treatments potentially create negative ecological effects in non-forested communities such as chaparral shrublands in southern California (Keeley *et al*. 2009*b*). Unlike forests, in which mechanical fuel treatments typically remove only surface fuel (preserving larger, older trees), fuel break construction in chaparral typically involves complete removal of vegetation, chemical herbicides and permanent conversion of native shrublands to weedy herbaceous associations (Wakimoto 1977). The range of ecological effects includes exotic species expansion, erosion and watershed issues, and fragmentation of important habitat for threatened and endangered species.

Despite the potential ecological effects of fuel treatments in southern California shrublands, the pressure to mitigate fire risk is enormous. In this region, almost 1 million ha of land has burned since 2000, much of which was consumed in fires larger than 50 000 ha. In the fires of 2003 and 2007, ~5000 homes were destroyed. The population of the region is growing rapidly, and much of the housing development is distributed in scattered patterns that create thousands of miles of edge between houses and fire-prone vegetation (Pincetl *et al*. 2008). There are consequently complex trade-offs among the costs and benefits related to fuel management in southern California, as well as other fire-prone regions dominated by extensive development: creating fuel breaks is costly financially and may result in substantial ecological effects, but fuel breaks may play an important role in protecting communities from catastrophic losses.

Adding to the dilemma over costs and benefits in implementing fuel treatments is the uncertainty over the conditions under which fuel treatments are effective at mitigating fire risks. For example, the behaviour of chaparral fires under moderate weather conditions is very different than the behaviour during Santa Ana conditions, and the role of fuel breaks may vary accordingly (Keeley 2005; Keeley *et al*. 2009*a*). Although many managers recognise that the primary role of fuel breaks in developed areas and the WUI is to provide an anchor point and a safe place for firefighters to control and extinguish fires (Conard and Weise 1998; Witter and Taylor 2005), sometimes too much faith is placed in the ability of treatments to passively stop the spread of fire, which may be unlikely under severe weather conditions. A quantitative analysis of the role of fuel breaks may therefore provide critical insights that can inform peoples' expectations and can help to construct fuel breaks more efficiently.

Most research on fuel-treatment effectiveness has been conducted with simulation models at relatively small scales (e.g. Miller and Urban 2000; Finney *et al*. 2007; Schmidt *et al*. 2008), and there is some empirical research documenting how fires have responded to individual fuel treatments (e.g. Schoennagel *et al*. 2004; Raymond and Peterson 2005; Safford *et al*. 2009). However, there are insufficient examples to form general conclusions, particularly at a landscape scale.

Another consideration is that, if fuel breaks are constructed in locations where fires rarely or never encounter them, then those treatments will have no opportunity to play any role. In other words, two conditions need to be satisfied before a fuel treatment can function effectively: (1) the fire needs to actually intercept the treatment, and (2) the treatment must perform according to its expected role.

Considering these two conditions, and to better understand what role fuel treatments have played in reducing the effects of large fires, we analysed the relationships among fires and fuel breaks in the Los Padres National Forest in southern California over a period of 28 years to answer these research questions:

1. What proportion of treatments intersected fires, and can we explain and predict why some treatments encounter more fires than others?
2. What is the role of fuel breaks in controlling large fires, and what factors influence this role?

We expected this study to provide deeper understanding of the relative importance of factors influencing fuel-treatment success in southern California and to provide guidance on how to develop more efficient treatment strategies.

Methods

Study area

Our study area included all lands (~590 000 ha) within the Main Division (central ranger districts) of the Los Padres National Forest in southern California. The climate is Mediterranean, with cool wet winters and hot dry summers. The landscape is dominated by chaparral shrublands, which are highly flammable owing to dense community structure and the annual 6 months of drought every summer and autumn (Radtke *et al*. 1982; Conard and Regelbrugge 1994). Broad swaths of chaparral are often broken up by patches of coastal sage scrub, riparian woodlands, oak woodlands, grassland and coniferous forest. The region is topographically complex and rugged, with slopes often exceeding 35°, and much of the interior of the Los Padres National Forest study area is relatively inaccessible.

Adjacent to this rugged terrain are several urban areas, such as Santa Barbara and Ojai, and housing developments border much of the forest boundary, increasing the potential for wildfire to threaten lives and property. Slightly more than 10% of the land inside the forest boundary is occupied by privately owned inholdings (V. Radeloff, unpubl. data), and low-density housing exists within much of the forest, particularly near the boundary. Thus, the primary objective of firefighting and constructing fuel breaks is to stop fires and to prevent them from threatening structures. Humans also cause the majority of fire ignitions in the region (Moritz 1997).

Fuel treatment and fire data

The Los Padres National Forest provided written, pictorial and oral data on historic fuel treatments. Many recent fuel-treatment locations were provided digitally, but we also digitised older fuel breaks from hard-copy maps. To identify case studies for follow-up interviews and subsequent analysis, and to analyse the intersections among fuel treatments and fires, we used a Geographic Information System (GIS) to overlay the fuel treatment data with fire perimeter polygons, compiled by the California Department of Forestry-Fire and Resource Assessment Program (CALFIRE). The fire perimeter data only

represent the largest fires (with a minimum mapping unit of 4.04 ha (10 acres)), but they serve as the most comprehensive source of fire data in the state. The largest fires also account for the majority of area burned.

Quantifying number of intersections

Through GIS overlay analysis, we counted the number of times fires crossed fuel breaks from 1980 to 2007. We restricted our analysis to fires that occurred after 1980 owing to greater uncertainty in accuracy of GIS data before 1980 and because of the limited availability of firefighters and managers familiar with fires before 1980, which was critical for personal interviews. Some sections of fuel breaks intersected fires more frequently than other sections, so we stratified each fuel break spatially and classified it according to the number of intersections (ranging from 0 to 4). From this spatially stratified data layer, we randomly selected point samples (244 points; see below) to extract environmental data to relate to the number of intersections that occurred at those points. To ensure that all fuel breaks had an equal chance of intersecting fire, for this part of the analysis, we only evaluated those fuel breaks that had been constructed before 1980 and were intersected by fire that occurred in the period 1980–2007.

Based on a previous analysis of fire frequency (Syphard *et al*. 2008), we suspected that fire intersections and our predictor variables were likely to be spatially autocorrelated, which would violate the assumption of independence in regression models and potentially inflate model significance (Fortin *et al*. 1989; Haining 1990). The influence of spatial autocorrelation can be avoided by using a minimum distance to separate observations that is larger than the range of spatial autocorrelation (Miller *et al*. 2007). Therefore, after we estimated initial regressions models (see below), we plotted semivariograms of the models' deviance residuals. We determined that spatial autocorrelation was present when samples were within 1 km of each other, so we subsampled our data to avoid observations within that lag distance, which resulted in a sample size of 244 observations.

Selecting fuel break case studies

Through GIS overlay analysis, we identified all events in which a fire occurred within 100 m of a fuel break, to account for any spatial uncertainty in the boundaries of either the fires or the fuel breaks. For this analysis, we considered fuel breaks constructed at any date, but only fires later than the date of fuel break construction were included. After identifying all potential intersections between fires and fuel breaks, we conducted preliminary analyses to identify whether the fire appeared to have stopped at the fuel break or whether it spread across it. We then arranged personal interviews with fire personnel having first-hand knowledge of the incident.

Explanatory variables

To understand and to predict why fires intersect some sections of fuel breaks more than others, we explored the potential influence of several human and biophysical variables known to be associated with the spatial distribution of fire at a landscape scale (Syphard *et al*. 2008). We also considered the potential for historic fire regime (fire frequency and ignition density) to explain the number of intersections because we expected the fire history to reflect how some areas in a landscape are more fire-prone than others. Because the data for the number of fuel break intersections were collected from across the entire time period in the study (1980–2007), we did not consider variables related to specific points in time for that analysis. However, to identify the primary factors that affect the role of fuel breaks, we additionally considered variables related to fire events, including characteristics of the fires, fuel breaks, suppression activities and vegetation age, although we did not consider historic fire regime.

For the environmental and fire regime variables, we used a GIS to extract data values to relate to the dependent variables. For the analysis of number of intersections, we extracted data from the locations of the random sample points. For the case studies where fires intersected fuel breaks, we extracted data from the portion of the fuel break where the fire intersected and averaged the values for that area. By constraining the area of analysis, we ensured that we were only considering the potential local influence of those variables because some fuel breaks are quite long and may span large areas.

Human and biophysical environmental variables

Because the majority of fires in California are started by humans, the spatial distribution of fire tends to be strongly related to the distribution of human infrastructure (Syphard *et al*. 2007, 2008). Therefore, our explanatory human variables included distance to development, roads and trails (as in Syphard *et al*. 2008). We expected a larger number of intersections to occur in close proximity to human infrastructure, and we expected fires to stop more frequently near human infrastructure because firefighters would be able to access those areas more quickly. We used the Development Footprint data layer from CALFIRE (http://frap.cdf.ca.gov/data/frapgisdata/select.asp, accessed 13 July 2011) that delineates developed lands from 2000 Census block data, 2000 land ownership data, 1990s US Geological Survey National Land Cover Data (NLCD), and 2000 Census Urbanised Area data at 30-m resolution. The road data came from the 2000 US Topologically Integrated Geographic Encoding and Referencing system TIGER/Line files. The trail data came from the US Forest Service online GIS clearinghouse (http://www.fs.fed.us/r5/rsl/clearinghouse/gis-download.shtml, accessed 13 July 2011).

Independently of human influence, a region's fire regime and the distribution of fire patterns are influenced by biophysical factors, or the fire environment (Pyne *et al*. 1996). Based on the biophysical variables that significantly influenced fire patterns in another southern California landscape (Syphard *et al*. 2008), we explored the potential influence of elevation, slope gradient, solar radiation, fuel model and vegetation age. We also considered several climate variables, but they were strongly correlated with elevation, so we removed them from the analysis. Because these biophysical variables may affect fire spread rate, fuel moisture, flammability of fuels and fire intensity both directly and indirectly (Whelan 1995), we expected that their distribution and spatial variability would influence where fires would most frequently intersect fuel breaks. We expected them to also potentially influence the role of fuel breaks in constraining fire because of their influence on fire spread rates, which could inhibit firefighting efforts.

We acquired elevation data from the 30-m US Geological Survey Digital Elevation Model, and used it to derive slope gradients and to develop grids of terrain-distributed solar radiation, which mediates temperature and available fuel moisture (Dubayah and Rich 1995). Solar radiation tools in the Spatial Analyst extension of *ArcGIS 9.x* were used to calculate daily insolation for winter solstice with site latitude of 33°N, sky size of 200 cells per side and 0.2 clear sky irradiance, the fraction of global normal radiation flux that is diffuse. This has been shown to be a significant predictor of regional plant species distributions (Syphard and Franklin 2009).

Vegetation and fuel characteristics are often classified into fuel models that exemplify relatively uniform fire behaviour and rates of spread. We obtained spatial fuel model data from statewide maps developed by the US Forest Service (N. Amboy, pers. comm. January 2010) at 30-m resolution to evaluate whether number of intersections would vary according to fuel models. We were unable to evaluate fuel model in the statistical analysis of fuel break outcome because there were several fuel model types with only one observation in the data.

We also evaluated whether or not fuel break outcome would vary based on the age of surrounding vegetation at the time of fire. Because the majority of fires are stand-replacing in California shrublands, we used fire-history maps to determine the age of the vegetation by subtracting the time of last fire from the year of every fire event.

Fire history

Because some parts of a landscape are more fire-prone than others, we expected the number of intersections among fires and fuel breaks to be positively associated with those areas that have historically burned most frequently. To associate number of intersections with historic fire regime, we converted the fire perimeter polygon data layer into a continuous grid surface that reflected the number of fires that occurred in each cell throughout the fire history (1878–2007). We included the full history of fires for this variable because it provided a larger sample of fires to quantify which parts of the landscape tend to burn more frequently than others.

In addition to the fire perimeter database, we also used a database of ignitions (that occurred from 1970 to 2007) to evaluate whether number of intersections was positively related to areas of high ignition density. The ignition data were compiled from original fire reports on file at the Los Padres National Forest and included 1380 ignitions (71% caused by humans). To create the ignition-density grid, we used a point density function in a GIS that calculated, across the entire landscape, the relative magnitude of ignition occurrences per unit area based on the number ignition points that fell within a specified neighbourhood (3 km) around each cell.

Fire events

We calculated the size of every fire that intersected a fuel break using a GIS, and the month of the fire was listed in the fire perimeter database. To reduce the degrees of freedom in the analysis, we reclassified the fire months into spring–summer (April through July) *v.* fall (autumn)–winter (September–December). No fires occurred in the month of August in our dataset.

We explored two sets of weather data in relation to the fires that intersected fuel breaks. One was from the global surface summary of day product from the National Oceanic and Atmospheric Administration (NOAA) National Climatic Data Center (NCDC) (ftp://ftp.ncdc.noaa.gov/pub/data/gsod). There were seven NOAA weather stations within the proximity of the study area, and the available data included the mean, maximum and minimum daily temperature, mean and maximum wind speed, and daily precipitation. For some historic fires that burned over the course of many days, we had no way of knowing the date when the fire intersected the fuel break. Therefore, we downloaded and explored data for all dates in which the case-study fires occurred. We calculated the mean, maximum and minimum values, as well as the range and standard deviation, of weather data during the duration of the fire to relate them to fuel break outcome.

In addition to the NOAA data, we explored a data product developed by John Abatzoglou and colleagues at the Desert Research Institute Western Regional Climate Center in Reno, NV. The development of this product involved a hierarchical process in which 32-km North American Regional Reanalysis data, including relative humidity, temperature and wind speed parameters (http://www.emc.ncep.noaa.gov/mmb/rreanl/) were bias-corrected to fine-scale 4-km PRISM (Parameter-elevation Regressions on Independent Slopes Model) climate data, monthly temperature and precipitation (http://www.prism.oregonstate.edu/) and further corrected using Remote Automated Weather (RAWS) stations. From the 4-km continuous grids of weather data, we extracted minimum and maximum daily relative humidity, temperature, wind speed and direction from within the perimeters of case-study fires during the range of dates that they occurred. As with the NOAA data, we explored the potential influence of mean, maximum and minimum values, as well as the range and standard deviation, of weather data during the duration of the fire to relate them to fuel break outcome.

Characteristics of fuel breaks

We used GIS to calculate the length of the fuel breaks, and we included the entire fuel break length as our explanatory variable. The fuel break width was included in the attributes of the files that the forest service crews provided and ranged from 6 to 183 m (20–600 feet). A few of the fuel break widths were presented as ranges (e.g. 6–12 m or 91–180 m), so we used the mean of the range for the width value of those fuel breaks.

Because it was difficult to determine the condition of the fuel break (i.e. the amount of vegetation regrowth) at the moment of intersection through maintenance records or through GIS mapping, we asked fire personnel to indicate the condition of the fuel break on a scale from one to three (poor to excellent). All personnel based their ranking on the same criteria. A ranking of one meant that the fuel break was barely discernable from the surrounding vegetation; a ranking of two meant that the fuel break was apparent, but that vegetation was starting to regrow; and a ranking of three meant that the fuel break was in excellent condition with no vegetation regrowth or was primarily grass.

Suppression activities and other fire event information

Data on suppression activities were obtained during personal interviews based on a questionnaire to determine whether there

was access to the fuel break (yes or no) and the availability of firefighting resources (manpower and equipment) on a scale from one to three. For firefighting resources, a ranking of one meant that the firefighters did not have the equipment or manpower available to fight the fire; a ranking of two meant that equipment and manpower were available but not completely sufficient for properly fighting the fire; a ranking of three meant that the firefighters had all the equipment and manpower they needed to fight the fire. We also asked the firefighters to specify the vegetation type at the time of fire, but this variable was highly correlated with condition of fuel break, so we did not include that variable in the statistical analysis. In addition to asking specific interview questions, we documented any additional notes or insights about the fire events.

Statistical analysis

Number of intersections

To evaluate the influence of the explanatory variables on number of fuel break–fire intersections, we developed Poisson regression models because they are appropriate for count data (Agresti 1996). To explore the effects of the explanatory variables independently of their interactions with other variables, we first developed simple regression models. We evaluated linear and quadratic relationships for all the continuous variables, and then ranked variable importance based on the deviance explained in the simple models. In generalised linear models (which include Poisson and logistic regression), models are optimised through deviance reduction, and the deviance explained (D^2) is the equivalent to the R^2 in ordinary least-square models (Guisan and Zimmermann 2000). We used the rankings to establish the order to enter variables in a multiple regression, and we considered those variables that were significant at $P \leq 0.15$ and that were not correlated with other variables (bivariate correlation ≥ 0.3). Because distance to development was correlated with ignition density ($R = -0.4$) and distance to road ($R = 0.37$), we removed it from the multiple-regression analysis.

For the multiple-regression modelling, we were primarily interested in selecting the best model for predicting and mapping the number of intersections. Therefore, we identified several plausible multiple-regression models and selected the best-fit model as the one that explained the highest percentage deviance explained with the lowest Akaike information criterion (AIC) (Quinn and Keough 2002). We checked our Poisson model to ensure that overdispersion did not exist and that our residual deviance was equal to our residual degrees of freedom.

To evaluate the multiple-regression model, we predicted the number of intersections for the random sample points and calculated the Pearson's correlation coefficient between the actual number of intersections and the predicted number of intersections. We also calculated the root mean square error (RMSE) to quantify the discrepancy between observed and predicted values. All modelling was carried out in the R 2.7.0 statistical programming environment (R Development Core Team 2004).

We converted the multiple-regression model into a predictive map surface by applying the formula from model to the entire landscape using the regression coefficients and the GIS layers for the significant explanatory variables. For Poisson regression, the formula is:

$$n = \exp(B_0 + B_1 \times X_1 + B_2 \times X_2 + \ldots + B_k \times X_k)$$

where n is the number of fire–fuel break intersections, B_0 is a constant, and B_i are coefficients of the explanatory variables.

Fuel-treatment outcome

The response variable for fuel-treatment outcome was binary and indicated whether the fuel treatment constrained the fire or not. Therefore, instead of using Poisson regression, we estimated simple and multiple logistic regression models using the same approach as for number of intersections, although we did not create a predictive map. To evaluate the performance of the logistic multiple-regression model, we performed a leave-one-out cross-validation, which iteratively leaves one observation out of the model, fits the model and then calculates the predicted probability of the observation for every observation in the sample. Based on the cross-validated predictions, we calculated the area under the curve (AUC) for a receiver operating characteristic (ROC) plot (Hanley and McNeil 1982). The AUC ranges from 0.5 to 1, and, in this case, indicates the overall probability that, for a randomly selected set of binary observations (one in which fire stopped at a fuel break and the other in which fire did not stop), the model correctly identifies them.

After exploring the relationships among the explanatory variables through regression modelling and correlation analysis, we developed a structural equation model (SEM) to confirm hypotheses about the factors and interactions that were significant in explaining fuel-treatment outcome. We developed our hypotheses based on the regression analysis as well an exploration of correlations among all the variables. SEM has advantages over multiple-regression modelling because it can test whether our hypotheses are consistent with our data and can also test for indirect interactions (Grace and Pugesek 1998). Rather than a predictive modelling approach, SEM serves as a framework for interpreting relationships among a network of interrelated factors (Grace *et al*. 2010). We supplemented the multiple-regression analysis with SEM because our objective was to better understand the interactions among factors influencing the role of fuel breaks in controlling fires.

Because we were modelling categorical outcomes, we used the weighted least-squares with mean and variance adjustment (WLSMV) estimator, and evaluated model fit using chi-square and associated P values as well as other fit indices, including RMSE of approximation and weighted root mean square residual (Hooper *et al*. 2008). Owing to our limited dataset, we included paths that were significant at $P \leq 0.15$; however, we compared alternative models by removing one path at a time to ensure that, if a path were removed, the chi-square did not increase more than 3.84 points (the single degree-of-freedom test) (J. B. Grace, pers. comm.). We performed the structural equation modelling with *Mplus version 5.1*.

Results

There were ~550 km of mapped fuel breaks in the study area (Fig. 1), including fuel break backbones along ridgelines as well

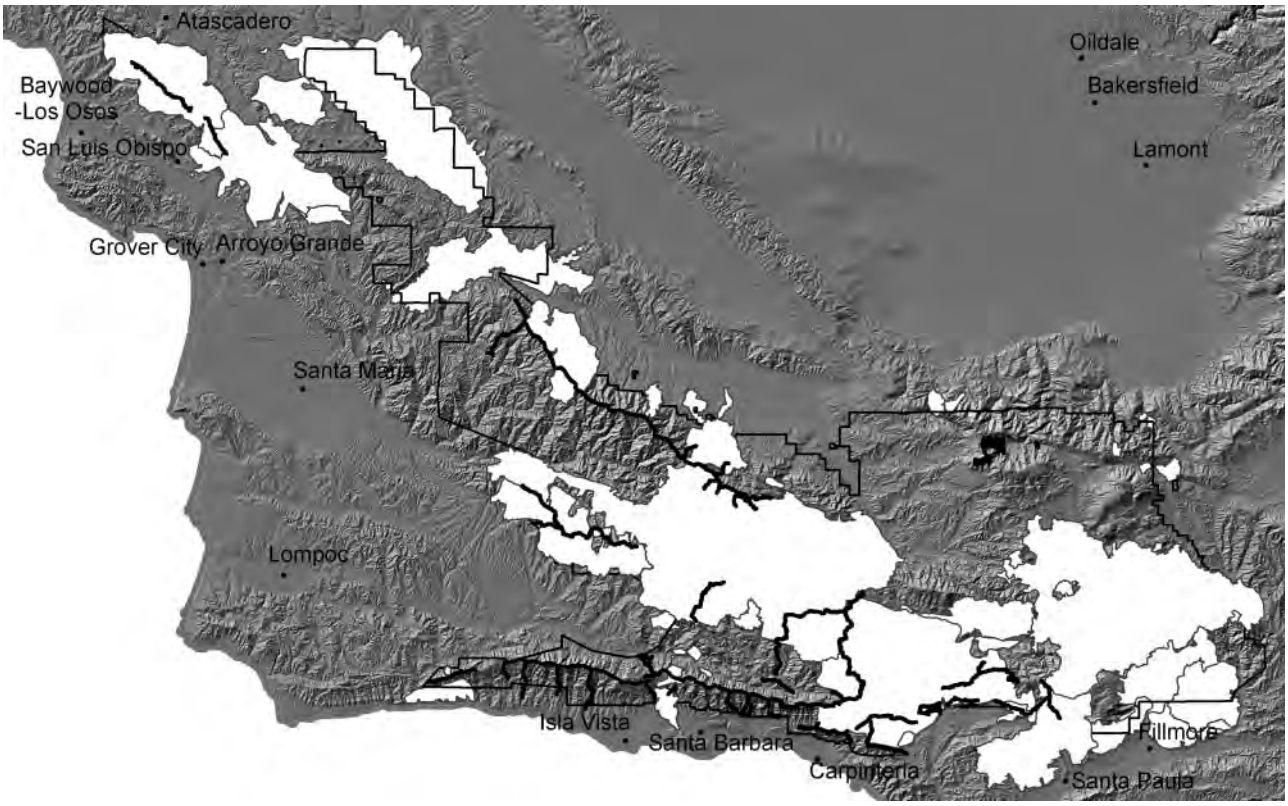


Fig. 1. Map showing location of fuel breaks (thick black lines) and fires (in white) that occurred between 1980 and 2007 in the Los Padres National Forest, CA. The thinner black line shows the study area.

as laterals. Most were constructed before 1980, but several were created within the last decade. Often, a combination of methods were used to create and maintain the fuel breaks, including dozers, discs, herbicide or spot herbicide, hand pile and burn, hand pile and chip, or mastication. These methods often varied along the length of individual fuel breaks, and maintenance methods changed over time. Although one fuel break (~28 km) was shaded, the rest of the fuel breaks were constructed similarly, as linear features on the landscape in which shrublands were converted primarily to grasslands.

From 1980 to 2007, 95 fires intersected the study area, with sizes ranging from 5 to almost 100 000 ha (the Zaca fire of 2007) (Fig. 1). Of these, 20 fires (21%) intersected at least one fuel break, and 8 of these 20 fires (40%) intersected more than one fuel break. Some portions of the fuel breaks never intersected any fires, but during the 28-year study period, some portions of fuel breaks intersected up to four fires (Fig. 2).

The GIS analysis identified 74 unique events in which fires intersected fuel breaks, but during personal interviews, 21 of those intersections were removed from the analysis owing to one of the following reasons: in one case, two fires were unnamed and nobody remembered them; in another, several fires did not spread into the fuel break, but rather spread away from it or parallel to it; and lastly, one of the fires in the database apparently never occurred. We did not consider fires spreading away from or parallel to the fuel break because the firefighters claimed in the interviews that the fuel break in those cases would have been irrelevant in the control of the fires. Therefore, the final number of fire and fuel break intersections was 53.

For 23 of the 53 events (46%), the fire was effectively constrained by the fuel breaks, and for 30 (54%) of the events, the fire spread across the fuel break. In all but one of the events in which fires stopped at the fuel breaks, firefighters had access to the treatment for suppression activities. For the events in which fires spread across fuel breaks, there were 11 occasions (37%) in which fire crews did not have access to the treatment and 19 events (63%) in which crews had access to the treatment, but the fire spread across it.

Results from the interviews with the firefighters revealed that the primary reasons that fires crossed fuel breaks were: (1) scarce resources were available if the fire was large or if other fires were burning simultaneously; (2) winds shifted during the event, making fire behaviour unpredictable; (3) the fuel break had not been maintained and was difficult to manoeuvre around; or (4) fire crews did not put suppression resources on the treatment.

During the interviews, the fire crews also described how they frequently ran dozers down the fuel breaks before the fires reached them. In wilderness areas, dozers are prohibited, so crews instead used hand-lines or hose-lay in preparation for the fire. If the fuel breaks were already type-converted to grass, the crews did not dozer them, but dropped retardant and water. If safe, firefighters waited for the fire with a hose-lay and hand-line to bare dirt. In many cases, substantial areas of the recorded fires

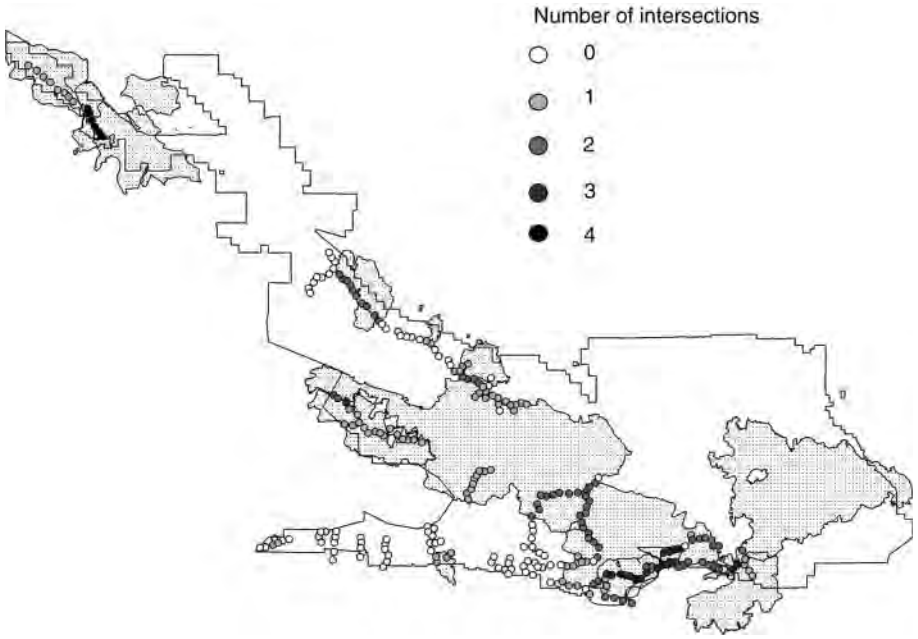


Fig. 2. Map of sample points on fuel breaks classified according to the number of times fires had intersected them from 1980 to 2007. Perimeters of fires that intersected fuel breaks are also shown.

had been burned through backfires to prevent the actively spreading fire from reaching the treatment. In one case (the ~100 000-ha Zaca fire), nearly 33 000 ha burned from backfire activity.

The crews described that they focussed most of their suppression efforts on the backbone fuel breaks, which are typically located along ridge lines. The lateral fuel breaks, running perpendicular to the backbone, were used to contain smaller fires that potentially were spreading within a drainage basin. The crews often put dozer lines down the laterals during the fire under those conditions.

For seven (13%) of the events cases, the fuel break changed the fire behaviour after the intersection such that crews could manoeuvre around the vicinity of the treatment and ultimately successfully suppress the fire.

Statistical analysis

Number of intersections

Almost 40% of the fuel treatments never intersected a fire, but ~30% of the treatments intersected two or more fires. Fires were most likely to intersect fuel breaks in areas where: historic fire frequency was high ($D^2 = 0.18$, $P < 0.001$); fuel breaks were in close proximity to trails ($D^2 = 0.07$, $P = 0.09$); distance to roads was intermediate ($D^2 = 0.04$, $P = 0.001$); historic ignition density was low ($D^2 = 0.02$, $P = 0.04$); and winter solar radiation was low ($D^2 = 0.02$, $P = 0.02$). None of the other variables explained significant variation in number of intersections.

All of these variables that were significant in the bivariate simple regressions were retained in the multiple-regression model explaining number of intersections; however, whereas the linear term and its quadratic were both significant for distance to roads in the simple model, only the linear term was retained in the multiple-regression model, which was highly significant ($D^2 = 0.28$, $P < 0.001$).

The map surface generated by applying the formula and coefficients of the multiple-regression model to the original GIS maps of the predictor variables showed the relative distribution of where fires are predicted to intersect fuel breaks most frequently (Fig. 3). The Pearson's correlation coefficient for the observed versus predicted observations was 0.57, and the RMSE was 0.74.

Fuel-treatment outcome

Five of the independent variables explained more than 5% of the residual deviance ($D^2 > 5$) in the bivariate simple regression analysis. Fires were most likely to stop at a fuel break when: there was firefighter access to treatment ($D^2 = 0.12$, $P = 0.01$); fire size was smaller ($D^2 = 0.11$, $P = 0.009$); vegetation age was younger ($D^2 = 0.10$, $P = 0.01$); fuel breaks were longer ($D^2 = 0.07$, $P = 0.03$); and there were adequate firefighting resources ($D^2 = 0.07$, $P = 0.12$). The fuel break outcome was not significantly explained by fire season, weather, any of the biophysical variables or distance to human infrastructure.

There was significant multicollinearity between access to treatment and vegetation age ($D^2 = 0.05$, $P = 0.09$). Access to treatment was also significantly related (again through simple bivariate regression) to the condition of the fuel break (better condition contributed to better access, $D^2 = 0.10$, $P = 0.05$) and fuel break width (wider fuel breaks contributed to better access, $D^2 = 0.06$, $P = 0.08$). These two variables were not considered in the multiple-regression model, but their effects were indirectly evaluated in the SEM.

After entering the significant variables in order of deviance explained and performing forward and backward stepwise regression, the final multiple-regression model for fuel-treatment outcome retained access, fire size and length of fuel break. The model was significant at $P = 0.006$, with a D^2

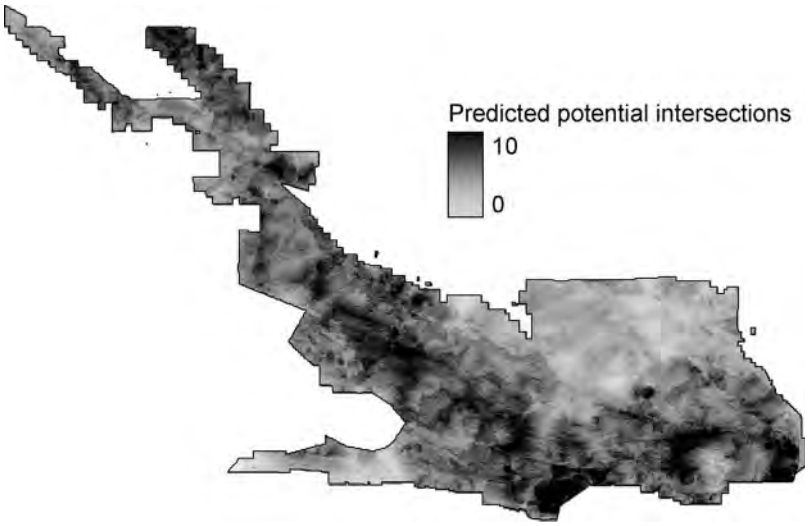


Fig. 3. Map showing predicted distribution of areas where fires and fuel breaks are most likely to intersect in the Los Padres National Forest, CA.

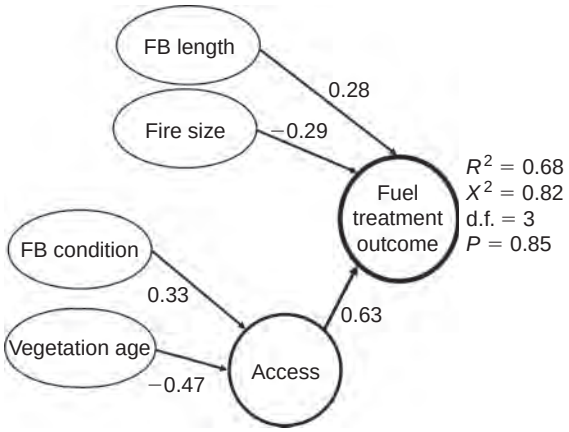


Fig. 4. Structural equation model of factors that directly and indirectly explain why fires stopped at fuel breaks (FBs) in the Los Padres National Forest. Coefficients shown along arrows are standardised values.

of 0.29. The leave-one-out cross-validation of the multiple-regression model resulted in an AUC of 0.84.

Based on exploration of the relationships among the variables, our structural equation model that explained why fires stopped at fuel breaks included the direct effects of the significant explanatory variables from the multiple regression (access, fire size and fuel break length) as well as indirect effects of vegetation age and fuel break condition based on their influence on treatment access (Fig. 4). The model chi-square was low (0.82), with a high P value (0.85) that indicated there was no significant difference between the data and our hypothesised model. The proportion of variance explained in fuel treatment outcome ($R^2 = 0.68$) was substantially higher than the generalised linear mode (GLM) multiple-regression model equivalent ($D^2 = 0.29$). Removal of any paths in the model resulted in an increase of chi-square that was greater than 3.84. The standardised coefficients in the SEM results indicated that fuel-treatment effectiveness was positively related to access to treatment and fuel break length and negatively related to fire size. There was a positive indirect effect of fuel break condition and a negative indirect effect of vegetation age on fuel-treatment outcome due to their direct effects on access to treatment.

Discussion

Because prefire fuel manipulation is one of the primary strategies used to manage wildfire, we evaluated the role that fuel breaks have played in controlling the extent of large fires in southern California. For a fuel break to function, it must: (1) encounter a fire, and (2) successfully function as expected, which in the WUI is to stop the spread of fire, either directly or by facilitating the alteration of fire behaviour. During the nearly three decades of our analysis, most of the fires that occurred (79%) burned without intersecting a fuel break, and many segments of fuel breaks never encountered a fire. However, certain fuel breaks intersected several fires, and our results showed that we can identify the factors that influence the likelihood of intersection and we can map where on the landscape treatments are likely to intersect fires. Our results also showed that the primary role of fuel breaks is to provide firefighters safe access to perform suppression activities. Only a few of the other variables that we considered as potentially influencing the role of fuel breaks were statistically significant.

A potential reason that some environmental variables did not significantly affect the fuel break–fire outcome is that they may have been relatively uniform across our study area relative to the sample size, which may have been too small to adequately explain substantial variation. In other words, there may be additional reasons that fires stop at fuel breaks, but there were not enough samples to adequately quantify these different effects. Regardless, the results strongly suggest that fires will

generally not stop at fuel breaks in our study area unless firefighters are present to suppress the fire. There was only one event in our analysis in which a fire stopped at a fuel break without active fire suppression. With firefighter control, however, fuel breaks had a decent success rate (46%), which is the exact same success rate found in old (and one of the only other) analyses of fuel break effectiveness in the region (Cecil 1941).

It is important to keep in mind that our statistical analysis was based on a response variable describing whether the fire stopped at the fuel break and did not reflect the role of fuel breaks in changing fire behaviour. In seven cases, the treatments did change the behaviour of the fire that ultimately allowed subsequent control, and if these are included, the success rate increases to 56%. The key variables that may be most important to consider in fire management and planning, therefore, may be related to those that affect firefighting activities.

Our results showed that access to the fuel break was critical in the success of fire control, and this was echoed by firefighters who generally viewed access as a function of the spread rate of the fire relative to location of fire origin, the location of the fuel break and the location of the crews at the time of the fire. Also, if the fire started at night, there were fewer people available, so they would have to travel from home to work to get to the engine. The speed of response is an important component in successful fire control (Halsey 2005), and this has been recognised for many decades, particularly in the Los Padres National Forest, which has extensive roadless and trailless areas (Show *et al*. 1941).

Once firefighters were in the vicinity of the fuel break, vegetation structure played an important role in determining whether they could access the fuel break in time to stop the fire, and this is reflected in our SEM (Fig. 4). In the high-elevation chaparral of the Los Padres National Forest, as well as chaparral elsewhere, stand age and fuel loads play a limited role in stopping the spread of fire, particularly during extreme weather conditions when fires will readily spread through all age classes of vegetation (Moritz 1997; Moritz *et al*. 2004; Keeley and Zedler 2009). Therefore, whereas young fuels may constrain fire in other vegetation types, the primary relationship in the present study is with firefighter access to fuel breaks. Chaparral is composed of dense, woody shrubs that form a continuous cover that makes it difficult to manoeuvre and contributes to dangerous flame lengths (Conard and Weise 1998), and therefore, younger vegetation makes it easier for crews to access the fuel break and establish an anchor point. In many cases, the crews will re-establish the fuel break (e.g. through dozers or handlines) once they arrive. However, if the fuel break is close to a fast-moving fire, there may not be time to re-establish the break and to fully prepare. Therefore, the condition of the fuel break was significant in explaining access to treatment owing to the time required to restore a fuel break in poor condition, especially when fires were fast and near. This suggests that maintaining current fuel breaks may be an important component of effective fire management.

Although maintaining current fuel breaks may increase their success rate, the length of the fuel break was also important, although fuel break width was insignificant. A possible reason that fuel break width was insignificant is that the widths provided in the data may have been approximations, and we also needed to average the range of widths for several of the fuel breaks. We considered that fuel break length may have facilitated firefighter access, but those two variables were not correlated. Therefore, longer fuel breaks may potentially provide greater number of opportunities for fires to intersect fuel breaks. Another consideration is that we did not explore the relative difference of main fuel breaks versus secondary or lateral fuel breaks (which tend to be shorter in length), and other research in the region has shown that laterals are not as effective and do not substantially improve firefighting (Omi 1977).

Although interviews confirmed that the rate of fire spread and fire weather conditions play an important role in the efficacy of fuel breaks (e.g. they determine whether fire crews can access the treatment on time or whether conditions are safe enough to anchor at the break), the only variable related to fire spread rate that was significant in our study was fire size. Although fire size can be a function of multiple interacting factors, larger fires are generally associated with faster spread rates (Anderson 1983; Finney 2003), and faster, or erratic, spread rates are likely to vary as a function of fire–atmosphere couplings as well as fire-induced wind (Sun *et al*. 2009). We made the basic assumption that fire size is correlated with rate of spread at least during some point during the duration of the fire, and consistent with our expectations, small fires were more likely to stop at fuel breaks than large fires. Although there is also the possibility fire size is smaller when fuel breaks are effective because the fuel break played a role in constraining the fire, conversations with firefighters during the interviews confirmed that larger fires are typically associated with severe weather conditions and are much more difficult and dangerous to control.

Although we explored two different sets of weather data, and multiple weather indicators, the likely reason that we found no statistically significant relationships is that many of our fires burned over several days, and we had no way of knowing the exact date and time that the intersection with the fuel break actually occurred. Because weather is highly variable over space and time, we were therefore unable to assign exact weather conditions to the location or moment of intersection. One example of the effect of weather on fuel break outcome that we were unable to capture was the Wheeler Fire number 2 of 1985, which burned for 2 weeks. The weather conditions during the first 4 days were erratic and extreme; the only fuel breaks that were effective were those that intersected the fire after these first 4 days (Salazar and González-Cabán 1987).

Even in other forest types, the influence of fuel breaks on fire spread and severity can be variable and are likely to vary according to weather conditions and other variables (Schoennagel *et al*. 2004). A ‘one size fits all’ approach to fire management has been cautioned against in several recent papers (Noss *et al*. 2006; Reinhardt *et al*. 2008; Keeley *et al*. 2009*b*) and we reiterate the warning for chaparral. There is high variability and complexity in the circumstances leading up to the intersection of fires and fuel breaks and the outcome of what happens (Keeley *et al*. 2009*a*), and the effectiveness of the fuel break in our study could not be predicted by variables such as fuel type, elevation, slope or average climate conditions. Furthermore, our study only accounted for the final realisation of the fire event and not for finer-scale factors that change fire behaviour during the course of the fire event or firebrand production during the spread of the fire.

Although many of the biophysical variables we considered did not significantly explain the role of fuel breaks in stopping fires, a suite of biophysical and human variables was important for developing a model that can predict which parts of the landscape are likely to experience the highest number of fire and fuel break intersections, at least on the landscape from which the model was developed. It was no surprise that historic fire frequency was the strongest predictor of number of fire–fuel break intersections because some areas are inherently more fire-prone than others. The negative relationship between ignition density and number of intersections was unexpected, but may be because the relationship between humans and fire tends to be non-linear (Syphard *et al*. 2007, 2009), and different factors control fire ignitions versus fire occurrence or spread (Syphard *et al*. 2007, 2008). Aside from solar radiation (which varies slowly over time), the other significant variables (distance to trails and roads) tend to be spatially dynamic (as more roads or trails are constructed), which means that predictive mapping models may have to be refitted as landscapes change.

The fact that a substantial proportion of the fuel breaks never intersected a fire during the course of the study suggests that fuel breaks have not historically been placed in areas where fires are most likely to intersect them. Although it is possible that a fire may cross these fuel breaks in the future, fire managers might want to consider focussing maintenance and new construction in areas where fires and fuel treatments are most likely to intersect and thus provide greater opportunities for controlling fires. Construction of fuel breaks can be costly (Agee *et al*. 2000) and may lead to negative resource effects in the chaparral (Witter and Taylor 2005; Merriam *et al*. 2006). Therefore, mapping where fires are most likely to intersect fuel treatments could be part of the planning process to increase efficiency of new construction.

Although fuel breaks surrounding communities clearly serve an important role in creating a safe space for firefighting activities, fuel breaks in remote areas and in areas that rarely or never intersect fires have a lower probability to serve a beneficial function. It is important to consider strategic placement in terms of values at risk, near communities and the WUI, in shrubland ecosystems or other areas where the resource benefits of fuel treatments have not been demonstrated as they have been in forests. Despite strong arguments for locating fuel breaks near communities where protection is most needed (Winter *et al*. 2002; Halsey 2005; Keeley *et al*. 2009*b*), most fuel break proposals continue to be located in more remote wildland areas (Ingalsbee 2005; Schoennagel *et al*. 2009). Other finer-scale factors may also be important for strategic placement (e.g. placing them on ridgelines or other landscape features that offer tactical advantages; Ingalsbee 2005). It is also important to consider that many homes are not ignited owing to direct fire spread, but from firebrands, and more research is needed on the location of fuel breaks relative to firebrand production and structure exposure (Mell *et al*. 2010).

Although this study focussed on the role of fuel breaks in southern California, the increasing threat of fire to human lives and structures, as well as to natural resources, is far-reaching within the United States as well as many other regions in the world. As more fuel breaks are being constructed to mitigate fire risk, there is ongoing need to better understand their role in controlling wildfires. Our methods of systematically exploring the historic role of fuel breaks could be adopted anywhere, and indeed, the specific factors affecting the role of fuel breaks are likely to vary even within the southern California region. Controls over fire regimes vary at multiple scales (Falk *et al*. 2007). Although there are substantial differences in fire regimes between conifer forests and shrublands, southern California is also spatially diverse, and the relative importance of variables predicting fuel break effectiveness, and where fires intersect fuel breaks, may vary according to the scale of the analysis or across the region.

Acknowledgements

Funding for this research was provided by the US Geological Survey Multi-Hazards Demonstration Project. We thank John Abatzoglou and Tim Brown for providing weather data, Jim Grace for providing guidance on structural equation modelling and Steve Davis for providing expert knowledge about firefighting on the Los Padres National Forest. Thanks also to Erik C. Berg, Richard Halsey, Brian Halstead and Hugh Safford for reviewing the manuscript and offering many valuable suggestions. Any use of trade, product or firm names in this publication is for descriptive purposes only and does not imply endorsement by the US government.

References

Agee JK, Bahro B, Finney MA, Omi PN, Sapsis DB, Skinner CN, van Wagtendonk JW, Weatherspoon CP (2000) The use of fuelbreaks in landscape fire management. *Forest Ecology and Management* **127**, 55–66. doi:10.1016/S0378-1127(99)00116-4

Agresti A (1996) 'An Introduction to Categorical Data Analysis.' (John Wiley and Sons: New York)

Anderson HE (1982) Aids to determining fuel models for estimating fire behavior. USDA Forest Service, Intermountain Forest and Range Experiment Station, General Technical Report INT-122. (Ogden, UT)

Anderson HE (1983) Predicting wind-driven wildland fire size and shape. USDA Forest Service, Intermountain Forest and Range Experiment Station, Research Paper, INT-305. (Ogden, UT)

Cecil GH (1941) Conclusions, firebreak study pages historical documents numbers 3024 to 3028 1936–1940. Pacific Southwest Region, Forest Fire Laboratory, National Archives and Records Administration (Washington, DC)

Conard SG, Regelbrugge JC (1994) On estimating fuel characteristics in California chaparral. In '12th Conference on Fire and Forest Meteorology', 26–28 October 1993, Jekyll Island, GA. pp. 120–129. (Society of American Foresters: Bethesda, MD)

Conard SG, Weise DR (1998) Management of fire regime, fuels, and fire effects in southern California chaparral: lessons from the past and thoughts for the future. *Tall Timbers Ecology Conference Proceedings* **20**, 342–350.

Dellasala DA, Williams JE, Williams CD, Franklin JF (2004) Beyond smoke and mirrors: a synthesis of fire policy and science. *Conservation Biology* **18**, 976–986. doi:10.1111/J.1523-1739.2004.00529.X

Dubayah R, Rich PM (1995) Topographic solar radiation for GIS. *International Journal of Geographic Information Systems* **9**, 405–419. doi:10.1080/02693799508902046

Falk DA, Miller C, McKenzie D, Black AE (2007) Cross-scale analysis of fire regimes. *Ecosystems* **10**, 809–823. doi:10.1007/S10021-007-9070-7

Finney MA (2003) Calculation of fire spread rates across random landscapes. *International Journal of Wildland Fire* **12**, 167–174. doi:10.1071/WF03010

Finney MA, Seli RC, McHugh CW, Ager AA, Bahro B, Agee JK (2007) Simulation of long-term landscape-level fuel treatment effects on large

wildfires. *International Journal of Wildland Fire* **16**, 712–727. doi:10.1071/WF06064

Fortin M, Drapeau P, Legendre P (1989) Spatial autocorrelation and sampling design in plant ecology. *Vegetatio* **83**, 209–222. doi:10.1007/BF00031693

Grace JB, Pugesek BH (1998) On the use of path analysis and related procedures for the investigation of ecological problems. *American Naturalist* **149**, 436–460. doi:10.1086/285999

Grace JB, Anderson TM, Olff H, Scheiner SM (2010) On the specification of structural equation models for ecological systems. *Ecological Monographs* **80**, 67–87. doi:10.1890/09-0464.1

Gude PH, Rasker R, van den Noort J (2008) Potential for future development on fire-prone lands. *Journal of Forestry* **106**, 198–205.

Guisan A, Zimmermann NE (2000) Predictive habitat distribution models in ecology. *Ecological Modelling* **135**, 147–186. doi:10.1016/S0304-3800(00)00354-9

Haining R (1990) 'Spatial Data Analysis in the Social and Environmental Sciences.' (Cambridge University Press: Cambridge, UK)

Halsey RW (2005) 'Fire, Chaparral, and Survival in Southern California.' (Sunbelt Publications: San Diego, CA)

Hanley JA, McNeil BJ (1982) The meaning and use of the area under a receiver operating characteristics curve. *Radiology* **143**, 29–36.

Hooper D, Coughlan J, Mullen MR (2008) Structural equation modeling: guidelines for determining model fit. *The Electronic Journal of Business Research Methods* **6**, 53–60.

Ingalsbee T (2005) Fuelbreaks for wildland fire management: a moat or a drawbridge for ecosystem fire restoration? *Fire Ecology* **1**, 85–99. doi:10.4996/FIREECOLOGY.0101085

Keeley JE (2005) Chaparral fuel modification: what do we know – and need to know? *Fire Management Today* **65**, 11–12.

Keeley JE, Zedler PA (2009) Large, high-intensity fire events in southern California shrublands: debunking the fine-grained age-patch model. *Ecological Applications* **19**, 69–94. doi:10.1890/08-0281.1

Keeley JE, Safford HD, Fotheringham CJ, Franklin J, Moritz MA (2009a). The 2007 southern California wildfires: lessons in complexity. *Journal of Forestry* **107**, 287–296.

Keeley JE, Aplet GH, Christensen NL, Conard SG, Johnson EA, Omi PN, Peterson DL, Swetnam TW (2009*b*) Ecological foundations for fire management in North American forest and shrubland ecosystems. USDA Forest Service, Pacific Northwest Research Station, General Technical Report PNW-GTR-779. (Portland OR)

Mell WE, Manzello SL, Maranghides A, Butry D, Rehm RG (2010) The wildland–urban interface problem – current approaches and research needs. *International Journal of Wildland Fire* **19**, 238–251. doi:10.1071/WF07131

Merriam KE, Keeley JE, Beyers JL (2006) Fuel breaks affect non-native species abundance in Californian plant communities. *Ecological Applications* **16**, 515–527. doi:10.1890/1051-0761(2006)016[0515:FBANSA]2.0.CO;2

Miller C, Urban DL (2000) Modeling the effects of fire management alterations on Sierra Nevada mixed-conifer forest. *Ecological Applications* **10**, 85–94. doi:10.1890/1051-0761(2000)010[0085:MTEOFM]2.0.CO;2

Miller J, Franklin J, Aspinall R (2007) Incorporating spatial dependence in predictive vegetation models. *Ecological Modelling* **202**, 225–242. doi:10.1016/J.ECOLMODEL.2006.12.012

Miller JD, Safford HD, Crimmins M, Thode AE (2009) Quantitative evidence for increasing forest fire severity in the Sierra Nevada and southern Cascade Mountains, California and Nevada, USA. *Ecosystems* **12**, 16–32. doi:10.1007/S10021-008-9201-9

Montenegro G, Ginocchio R, Segura A, Keeley JE, Gomez M (2004) Fire regimes and vegetation responses in two Mediterranean-climate regions. *Revista Chilena de Historia Natural* **77**, 455–464. doi:10.4067/S0716-078X2004000300005

Moritz MA (1997) Analyzing extreme disturbance events: fire in Los Padres National Forest. *Ecology* **7**, 1252–1262.

Moritz MA, Keeley JE, Johnson EA, Schaffner AA (2004) Testing a basic assumption of shrubland fire management: how important is fuel age? *Frontiers in Ecology and the Environment* **2**, 67–72. doi:10.1890/1540-9295(2004)002[0067:TABAOS]2.0.CO;2

Noss RF, Franklin JF, Baker WL, Schoennagel T, Moyle PB (2006) Managing fire-prone forests in the western United States. *Frontiers in Ecology and the Environment* **4**, 481–487. doi:10.1890/1540-9295(2006)4[481:MFFITW]2.0.CO;2

Omi PN (1977) A case study of fuel management performances, Angeles National Forest, 1960–1975. In 'Proceedings of the Symposium on Environmental Consequences of Fire and Fuel Management in Mediterranean Ecosystems', 7 August 1977, Palo Alto, CA. (Eds H A Mooney, C E Conrad) USDA Forest Service, Publication WO-3, pp. 404–411. (Washington, DC)

Pausas JG, Vallejo R (1999) The role of fire in European Mediterranean ecosystems. In 'Remote Sensing of Large Wildfires in the European Mediterranean Basin'. (Ed. E Chuvieco) pp. 3–16. (Springer-Verlag: New York)

Pincetl S, Rundel PW, Clark de Blasio J, Silver D, Scott T, Keeley JE, Halsey RW (2008) It's the land use, not the fuels: fires and land development in southern California. *Real Estate Review* **37**, 25–43.

Pyne SJ, Andrews PL, Laven RD (1996) 'Introduction to Wildland Fire.' (Wiley: New York)

Quinn GP, Keough MJ (2002) 'Experimental Design and Data Analysis for Biologists.' (Cambridge University Press: Cambridge, UK)

R Development Core Team (2004) R: a language and environment for statistical computing. (R Foundation for Statistical Computing: Vienna, Austria) Available at http://www.r-project.org/ [Verified 13 July 2011]

Raab TK, Martin MC (2001) Visualizing rhizosphere chemistry of legumes with mid-infrared synchrotron radiation. *Planta* **213**, 881–887. doi:10.1007/S004250100554

Radeloff VC, Hammer RB, Stewart SI, Fried JS, Holcomb SS, McKeefry JF (2005) The wildland–urban interface in the United States. *Ecological Applications* **15**, 799–805. doi:10.1890/04-1413

Radtke KWH, Arndt AM, Wakimoto RH (1982) Fire history of the Santa Monica Mountains. In 'Proceedings of the Symposium on Dynamics and Management of Mediterranean-type Ecosystems', 22–26 June 1981, San Diego, CA. (Eds CE Conrad, WC Oechel) USDA Forest Service, Pacific Southwest Forest and Range Experiment Station, General Technical Report PSW-58, pp. 438–443. (Berkeley, CA)

Raymond CL, Peterson DL (2005) Fuel treatments alter the effects of wildfire in a mixed-evergreen forest, Oregon, USA. *Canadian Journal of Forest Research* **35**, 2981–2995. doi:10.1139/X05-206

Reinhardt ED, Keane RE, Calkin DE, Cohen JD (2008) Objectives and considerations for wildland fuel treatment in forested ecosystems of the interior western United States. *Forest Ecology and Management* **256**, 1997–2006. doi:10.1016/J.FORECO.2008.09.016

Rollins MG, Frame CK (2006) The LANDFIRE Prototype Project: nationally consistent and locally relevant geospatial data for wildland fire management. USDA Forest Service, Rocky Mountain Research Station, General Technical Report RMRS-GTR-175. (Fort Collins, CO)

Safford HD, Schmidt DA, Carlson C (2009) Effects of fuel treatments on fire severity in an area of wildland–urban interface, Angora Fire, Lake Tahoe Basin, California. *Forest Ecology and Management* **258**, 773–787. doi:10.1016/J.FORECO.2009.05.024

Salazar LA, González-Cabán A (1987) Spatial relationship of a wildfire, fuelbreaks, and recently burned areas. *Western Journal of Applied Forestry* **2**, 55–58.

Schmidt DA, Taylor AH, Skinner CN (2008) The influence of fuels treatment and landscape arrangement on simulated fire behavior, Southern Cascade Range, California. *Forest Ecology and Management* **255**, 3170–3184. doi:10.1016/J.FORECO.2008.01.023

Schoennagel T, Veblen TT, Romme WH (2004) The interaction of fire, fuels, and climate across Rocky Mountain forests. *Bioscience* **54**, 661–676. doi:10.1641/0006-3568(2004)054[0661:TIOFFA]2.0.CO;2

Schoennagel T, Nelson CR, Theobald DM, Carnwath GC, Chapman TB (2009) Implementation of National Fire Plan treatments near the wildland–urban interface in the western United States. *Proceedings of the National Academy of Sciences of the United States of America* **106**, 10706–10711. doi:10.1073/PNAS.0900991106

Schwilk DW, Keeley JE, Knapp EE, McIver J, Bailey JD, Fettig CJ, Fiedler CE, Harrod RJ, Moghaddas JJ, Outcalt KW, Skinner CN, Stephens SL, Waldrop TA, Yaussy DA, Youngblood A (2009) The national fire and fire surrogate study: effects of fuel reduction methods on forest vegetation structure and fuels. *Ecological Applications* **19**, 285–304. doi:10.1890/07-1747.1

Show SB, Abell CA, Deering RL, Hanson PD (1941) A planning basis for adequate fire control on the southern California national forests. *Fire Control Notes* **5**, 1–59.

Stephens SL (2005) Forest fire causes and extent on United States Forest Service lands. *International Journal of Wildland Fire* **14**, 213–222. doi:10.1071/WF04006

Stratton RD (2004) Assessing the effectiveness of landscape fuel treatments on fire growth and behavior. *Journal of Forestry* **102**, 32–40.

Sun R, Krueger SK, Jenkins MA, Zulauf MA, Charney JJ (2009) The importance of fire–atmosphere coupling and boundary-layer turbulence to wildfire spread. *International Journal of Wildland Fire* **18**, 50–60. doi:10.1071/WF07072

Syphard AD, Franklin J (2009) Differences in spatial predictions among species distribution models vary with species traits and environmental predictors. *Ecography* **32**, 907–918. doi:10.1111/J.1600-0587.2009.05883.X

Syphard AD, Radeloff VC, Keeley JE, Hawbaker TJ, Clayton MK, Stewart SI, Hammer RB (2007) Human influence on California fire regimes. *Ecological Applications* **17**, 1388–1402. doi:10.1890/06-1128.1

Syphard AD, Radeloff VC, Keuler NS, Taylor RS, Hawbaker TJ, Stewart SI, Clayton MK (2008) Predicting spatial patterns of fire on a southern California landscape. *International Journal of Wildland Fire* **17**, 602–613. doi:10.1071/WF07087

Syphard AD, Radeloff VC, Hawbaker TJ, Stewart SI (2009) Conservation threats due to human-caused increases in fire frequency in Mediterranean-climate ecosystems. *Conservation Biology* **23**, 758–769. doi:10.1111/J.1523-1739.2009.01223.X

Theobald DM, Romme WH (2007) Expansion of the US wildland–urban interface. *Landscape and Urban Planning* **83**, 340–354. doi:10.1016/J.LANDURBPLAN.2007.06.002

Wakimoto RH (1977) Chaparral growth and fuel assessment in southern California. In 'Proceedings of the Symposium on Environmental Consequences of Fire and Fuel Management in Mediterranean Ecosystems', 1–5 August 1977, Palo Alto, CA. (Eds H A Mooney, CE Conrad) USDA Forest Service, General Technical Report WO-3, pp. 412–418. (Washington, DC)

Westerling AL, Hidalgo HG, Cayan DR, Swetnam TW (2006) Warming and earlier spring increase western US forest wildfire activity. *Science* **313**, 940–943. doi:10.1126/SCIENCE.1128834

Whelan RJ (1995) 'The Ecology of Fire.' (Cambridge University Press: Cambridge, UK)

Winter GJ, Vogt C, Fried JS (2002) Fuel treatments at the wildland–urban interface: common concerns in diverse regions. *Journal of Forestry* **100**, 15–21.

Witter M, Taylor RS (2005) Preserving the future: a case study in fire management and conservation from the Santa Monica Mountains. In 'Fire, Chaparral, and Survival in Southern California'. (Ed. RW Halsey) pp. 109–115. (Sunbelt Publications: San Diego, CA)

Guiterman *et al. Fire Ecology* (2022) 18:6
https://doi.org/10.1186/s42408-022-00131-w

Fire Ecology

FORUM

Open Access

Vegetation type conversion in the US Southwest: frontline observations and management responses

Christopher H. Guiterman[1,2,3*], Rachel M. Gregg[4], Laura A. E. Marshall[5,6], Jill J. Beckmann[7,8], Phillip J. van Mantgem[7], Donald A. Falk[1,5], Jon E. Keeley[9,10], Anthony C. Caprio[11], Jonathan D. Coop[12], Paula J. Fornwalt[13], Collin Haffey[14], R. Keala Hagmann[15,16], Stephen T. Jackson[17,18], Ann M. Lynch[19], Ellis Q. Margolis[20], Christopher Marks[21], Marc D. Meyer[22], Hugh Safford[23,24], Alexandra Dunya Syphard[25,26], Alan Taylor[27], Craig Wilcox[28], Dennis Carril[29], Carolyn A. F. Enquist[17], David Huffman[2], Jose Iniguez[30], Nicole A. Molinari[31], Christina Restaino[32] and Jens T. Stevens[20]

Abstract

Background: Forest and nonforest ecosystems of the western United States are experiencing major transformations in response to land-use change, climate warming, and their interactive effects with wildland fire. Some ecosystems are transitioning to persistent alternative types, hereafter called "vegetation type conversion" (VTC). VTC is one of the most pressing management issues in the southwestern US, yet current strategies to intervene and address change often use trial-and-error approaches devised after the fact. To better understand how to manage VTC, we gathered managers, scientists, and practitioners from across the southwestern US to collect their experiences with VTC challenges, management responses, and outcomes.

Results: Participants in two workshops provided 11 descriptive case studies and 61 examples of VTC from their own field observations. These experiences demonstrate the extent and complexity of ecological reorganization across the region. High-severity fire was the predominant driver of VTC in semi-arid coniferous forests. By a large margin, these forests converted to shrubland, with fewer conversions to native or non-native herbaceous communities. Chaparral and sagebrush areas nearly always converted to non-native grasses through interactions among land use, climate, and fire. Management interventions in VTC areas most often attempted to reverse changes, although we found that these efforts cover only a small portion of high-severity burn areas undergoing VTC. Some areas incurred long (>10 years) observational periods prior to initiating interventions. Efforts to facilitate VTC were rare, but could cover large spatial areas.

Conclusions: Our findings underscore that type conversion is a common outcome of high-severity wildland fire in the southwestern US. Ecosystem managers are frontline observers of these far-reaching and potentially persistent changes, making their experiences valuable in further developing intervention strategies and research agendas. As its drivers increase with climate change, VTC appears increasingly likely in many ecological contexts and may require

*Correspondence: christopher.guiterman@noaa.gov

[3] Present address: Cooperative Institute for Research in Environmental Sciences, University of Colorado at Boulder, 325 Broadway, E/GC3, Boulder, CO 80305, USA

Full list of author information is available at the end of the article

© The Author(s) 2022. **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/.

management paradigms to transition as well. Approaches to VTC potentially include developing new models of desired conditions, the use of experimentation by managers, and broader implementation of adaptive management strategies. Continuing to support and develop science-manager partnerships and peer learning groups will help to shape our response to ongoing rapid ecological transformations.

Keywords: Adaptive management, Alternative stable states, Forest management, High-severity fire, Post-fire recovery, Resilience, Vegetation type conversion, Community reorganization, Wildland fire

Resumen

Antecedentes: Los ecosistemas boscosos y no boscosos en el oeste de los EE.UU. están experimentando grandes transformaciones en respuesta al cambio de uso de la tierra, el calentamiento del clima y sus efectos interactivos con los incendios naturales. Algunos ecosistemas están en transición hacia tipos alternativos persistentes, a partir del ahora denominado "conversión del tipo de vegetación" VTC, por sus siglas en inglés. VTC es uno de los temas que más presión ejerce en cuestiones de manejo en el sudoeste de los EEUU, aunque las estrategias actuales para intervenir y abordar el cambio usan frecuentemente acercamientos de prueba y error ideados después del evento. Para entender mejor cómo manejar el VTC, reunimos gestores, científicos y practicantes de todo el sudoeste de los EEUU para recolectar sus experiencias con desafíos de la VTC, respuestas de manejo, y resultados.

Resultados: Los participantes en dos talleres proveyeron 11 casos descriptivos y 61 ejemplos de VTC de sus propios campos de observación. Estas experiencias demostraron la amplitud y la complejidad de la reorganización ecológica a través de la región. Los incendios de alta severidad fueron los conductores predominantes del VTC en bosques semiáridos de coníferas. Por un amplio margen, estos bosques se convirtieron en arbustales, con algunas conversiones a comunidades herbáceas nativas y no nativas. Áreas de chaparral y de artemisia casi siempre se convirtieron en pastizales no nativos a través de interacciones como el uso de la tierra, el clima y el fuego. Las intervenciones de manejo en áreas de VTC intentaron más frecuentemente revertir cambios, a pesar de que encontramos que estos esfuerzos cubrieron solamente una pequeña porción de áreas quemadas con alta severidad que experimentaron VTC. Algunas áreas tuvieron largos períodos de observación (>10 años), previos a iniciarse las intervenciones. Los esfuerzos para facilitar el VTC fueron raros, pero pudieron cubrir áreas amplias.

Conclusiones: Nuestros resultados ponen en relieve que este tipo de conversión es una consecuencia común de fuegos de alta severidad en el sudoeste de los EE.UU. Los que manejan los ecosistemas son observadores de primera línea de estos cambios de largo alcance y potencialmente persistentes, haciendo que sus experiencias sean además valiosas para desarrollar estrategias de intervención y en agendas de investigación. A medida que las causas se incrementan con el cambio climático, los VTC aparecen cada vez más probables en varios contextos ecológicos, y pueden requerir también paradigmas de manejo hacia la transición. Acercamientos al VTC incluyen potencialmente nuevos modelos de desarrollo con condiciones deseadas, el uso de la experimentación por parte de los gestores, y una amplia implementación de estrategias de manejo adaptativas. El continuo apoyo y desarrollo a las asociaciones científicas y de gestión y de grupos de aprendizaje entre colegas ayudará a formar nuestra respuesta a las transformaciones ecológicas rápidas que están ocurriendo.

Introduction

When disturbances overwhelm resilience mechanisms, vegetative communities change in composition, structure, and trajectory (Beisner et al. 2003; Millar and Stephenson 2015; Coop et al. 2020; Falk et al. 2022). If the new state is persistent and resilient to, or reinforced by, further disturbance, it can be considered a vegetative type conversion (VTC, Syphard et al. 2019; van Mantgem et al. 2020). Key drivers of VTC in the southwestern US are associated with climatic warming, land-use change, introductions of non-native species, and anthropogenically-altered fire regimes. Throughout semi-arid forests of the region, the widespread disruption of historical fire regimes in the late 19th century has led to increased stand densities (Covington and Moore 1994), increasingly large and severe fires (Miller et al. 2009; Singleton et al. 2019), and accelerating fire frequencies in shrub-dominated landscapes subject to high numbers of anthropogenic ignitions (Balch et al. 2017). Simultaneously, climate change facilitates VTC by producing "hotter droughts" that stress existing vegetation (Williams et al. 2013; Allen et al. 2015), increase

fire severity (Mueller et al. 2020; Parks and Abatzoglou 2020), and limit the success of ecosystem re-establishment and recovery (Keeley 1991; Keeley et al. 2019; Stevens-Rumann and Morgan 2019; Davis et al. 2019). Novel drought effects are now emerging as a consequence of interactions between climate change, land-use change, and human-induced declines in water availability, particularly in arid environments with growing human populations (Crausbay et al. 2020). Acute moisture deficits are increasingly recognized as a driver of ecological transformation that may be irreversible (Crausbay et al. 2017; Batllori et al. 2020). As anthropogenic climate change continues to amplify these trends (Nolan et al. 2018; Williams et al. 2020), transitions to novel ecosystem types can be expected to become increasingly common.

Conifer-dominated, historically frequent-fire forests in the southwestern US are particularly vulnerable to VTC. Here, we focus on Arizona, California, Colorado, and New Mexico, but many events and trends we discuss are relevant elsewhere in western North America (Hessburg et al. 2019). Southwestern dry-conifer forests are defined as those dominated by ponderosa (*Pinus ponderosa*) or Jeffrey pine (*P. Jeffreyi*) and often include associated species such as Douglas-fir (*Pseudotsuga menziesii*), red fir (*Abies magnifica*), southwestern white pine (*P. strobiformis*), limber pine (*P. flexelis*), and white fir (*A. concolor*). Over the last century or more, these forests have undergone significant changes in structure and function, mainly due to the lack of recurrent fire activity (Allen et al. 2002; Hagmann et al. 2021). Throughout the region, loss of Native American burning practices, industrial logging, livestock grazing, and active fire suppression disrupted historical fire regimes (Swetnam et al. 2016). With climate warming, recent fires often include large areas of high-severity (stand-replacing) fire effects that can result in rapid post-fire transitions to hardwood-, shrub-, herb-, or grass-dominated ecosystems (Savage and Mast 2005; Airey Lauvaux et al. 2016; Tepley et al. 2017; Coop et al. 2020). Post-fire recovery depends largely on the extent of parent tree survival, understory composition, and local- to micro-scale temperature and soil moisture conditions. Recovery is most challenged in uncharacteristically large high-severity burn patches that include spatially extensive mortality of parent trees and potentially severe and long-lasting impacts to the soil (Shive et al. 2018; Safford and Vallejo 2019; Dove et al. 2020). In warm and semi-arid regions, higher elevation and north-facing localities within a species distribution tend to be more favorable for post-fire recovery (Collins and Roller 2013; Korb et al. 2019; Stevens-Rumann and Morgan 2019). Fire-catalyzed VTC may be most common at warm/dry ecotones or in areas experiencing drought events, where low moisture availability had already stressed or killed overstory trees prior to burning (Allen et al. 2015) and subsequently reduced post-fire regeneration rates (Rother and Veblen 2016; Young et al. 2019; Davis et al. 2019; Rodman et al. 2020). However, these same ecotonal forests are often resilient to recurrent low-severity fire, even with climate warming (Harris and Taylor 2020).

Recovery following stand-replacing disturbances in dry conifer forests can include successional pathways through aspen (*Populus tremuloides*), hardwood, or shrub-dominated stages, but current climatic and fire regime trends are enhancing the likelihood of permanent conversion and the spatial extent of hardwood and shrub dominance in many parts of the southwestern US. In portions of the Colorado Plateau and southern Rockies, ponderosa pine and mixed-conifer forests are converting to shrublands of Gambel oak (*Quercus gambelii*) and New Mexico locust (*Robinia neomexicana*) (Guiterman et al. 2015, 2018; Coop et al. 2016; Rodman et al. 2020). In the Sky Island ecosystems of southern Arizona and New Mexico, Madrean oak woodland species (e.g., *Q. arizonica* and *Q. hypoleucoides*) and *Ceanothus* shrubs are replacing conifers, even where a resprouting pine species (*P. leiophylla*) is common (Minor et al. 2017; Barton and Poulos 2018). In parts of southern Oregon and northern California, repeated high severity fires are helping to expand the colonization of knobcone pine (*Pinus attenuata*), a serotinous-cone species that is highly adapted to such a fire regime (Reilly et al. 2019). Elsewhere in California, severe fires typically induce a strong shrub response, often from *Ceanothus* or *Arctostaphylos* species, which compete intensively with conifer regeneration (Helms and Tappeiner 1996). Because they resprout, hardwoods—especially oaks—can benefit from conifer mortality, and their density has been generally increasing in California montane forests for decades due to interactions between forest disturbance and climate warming (Dolanc et al. 2014; McIntyre et al. 2015). Subsequent burning tends to reinforce hardwood and shrub response (Coppoletta et al. 2016; Haffey et al. 2018; Keyser et al. 2020), especially where other factors including sparsity of parent trees already inhibit conifer recovery. Reburning at low- to mixed-severity within decades of the initial high-severity fire may explain centuries-long persistence of shrublands in which fire was historically frequent (Iniguez et al. 2009; Guiterman et al. 2018; Roos and Guiterman 2021). As these examples illustrate, there is no intrinsic, single time scale that can be used to define when a type conversion has occurred without imposing an arbitrary standard. The distinction between transient and persistent reorganization depends more on the mechanisms at work, in particular, if the converted state is reinforced by altered climate or disturbance regimes (Falk et al. 2022).

The spread of non-native grasses and forbs (e.g., *Bromus* spp., *Avena* spp., *Erodium* spp.) due to interactions among land uses, climate, and changing fire regimes is generating substantial change in chaparral and sagebrush areas. These herbaceous species can support uncharacteristically frequent fire relative to historical intervals, resulting in positive feedback with fire that is driving extensive VTC (Balch et al. 2013; Syphard et al. 2019). The mechanism for woody decline and conversion is the relatively long period of recovery required to regenerate post-fire. Chaparral requires 10–15 years for recovery (Keeley et al. 2011; Keeley and Brennan 2012; Lippitt et al. 2013), while sagebrush may require several decades under favorable conditions (Shriver et al. 2018). These lapse periods are outpaced by the spread of non-native species such as cheatgrass (*B. tectorum*) that invade under and throughout shrub ecosystems, increase flammability, and set the stage for post-fire community reorganization (D'Antonio and Vitousek 1992).

Prevention of VTC is emphasized in forest and shrubland management in the southwestern US through measures that promote species or community resistance or recovery (e.g., Franklin et al. 2018). Current intervention strategies that include fuel reduction and repeated low-severity fire have a strong scientific foundation (Allen et al. 2002; Prichard et al. 2021) and are effective (Stoddard et al. 2021). These strategies often accord with the cultural burning activities of many Indigenous groups across the southwestern US (Kimmerer and Lake 2001; Roos et al. 2021), and, where they are conducted in diverse collaborations with tribes and other stakeholders, can have benefits to social systems that extend beyond ecosystem resilience (Lake et al. 2017).

Management after extensive high-severity fires is more challenging than prevention because we simply have not obtained adequate knowledge or experience. Research on VTC is relatively new, and we have yet to capture the scale of the phenomenon in space and time, including how many areas are undergoing VTC and how many areas might not experience VTC despite major post-fire changes. Studies on both natural and managed recovery following fires have yet to answer how future climate and disturbances interact with treatments to either promote recovery or reorganization.

To better understand the challenge of managing ongoing VTC, we held two multi-day workshops in 2019 that brought together managers, scientists, and practitioners to discuss their observations of, perspectives on, and experiences with VTC events (Gregg and Marshall 2020a, 2020b). Participants voiced a need for greater clarity on the regional extent of VTC and responses to it, felt that focusing on their own management units (though many are quite extensive) limited their understanding of others' experiences with similar challenges, and found limited resources in the scientific literature to help answer questions. In this paper, we address these concerns by presenting the firsthand experiences of the workshop participants through a series of 11 case studies and a summary of 61 VTC examples (Fig. 1). During the workshops and throughout this paper, we categorized management responses to VTC as (i) *Reverse change*: restore pre-fire conditions or manage recovery such that the affected ecosystem is brought to a recognizable (perhaps pre-fire exclusion) and ideally more resilient composition and structure; (ii) *Observe change*: exercise patience and monitor the system and its post-disturbance trajectory; and (iii) *Facilitate change*: push the system along a new, potentially novel, trajectory (Table 1). We recognize that these responses generally align with the resist-accept-direct (RAD) framework (Schuurman et al. 2020) and chose to maintain our classifications because many of the VTC examples lack a specific management response, which may or may not constitute intentional selection of "accept" as the desired future condition. Below, we summarize the VTC case studies and the individual examples, then synthesize these in the context of pressing management challenges and opportunities. The full case study descriptions and details regarding our approach are provided in the online Supplemental Information that accompanies this article.

Case studies

Participant-provided case studies of VTC demonstrate the profound complexity of ecological reorganization in the region. For example, the conversion of forests by high-severity wildfire illustrates that history and land-use changes are important. In each case, processes that led to VTC started a century or more earlier with the disruption of historical fire regimes and associated changes to composition and structure. This slow but profound change set the stage for multiple disturbance agents often acting in conjunction to fundamentally shift the ecosystem type or its dominant species. Management responses have been similarly diverse, reflecting individual situations, constraints, and goals. We note that in several case studies, more than one category of management response is described, representing the evolving nature of VTC management and its trial-and-error approach.

Reversing change

One possible management response to VTC is to actively attempt to reverse changes. Such responses are highlighted by recovery efforts on the *Klamath Reservation in southern Oregon* (case study #1) where long-term fire exclusion allowed tree encroachment into important

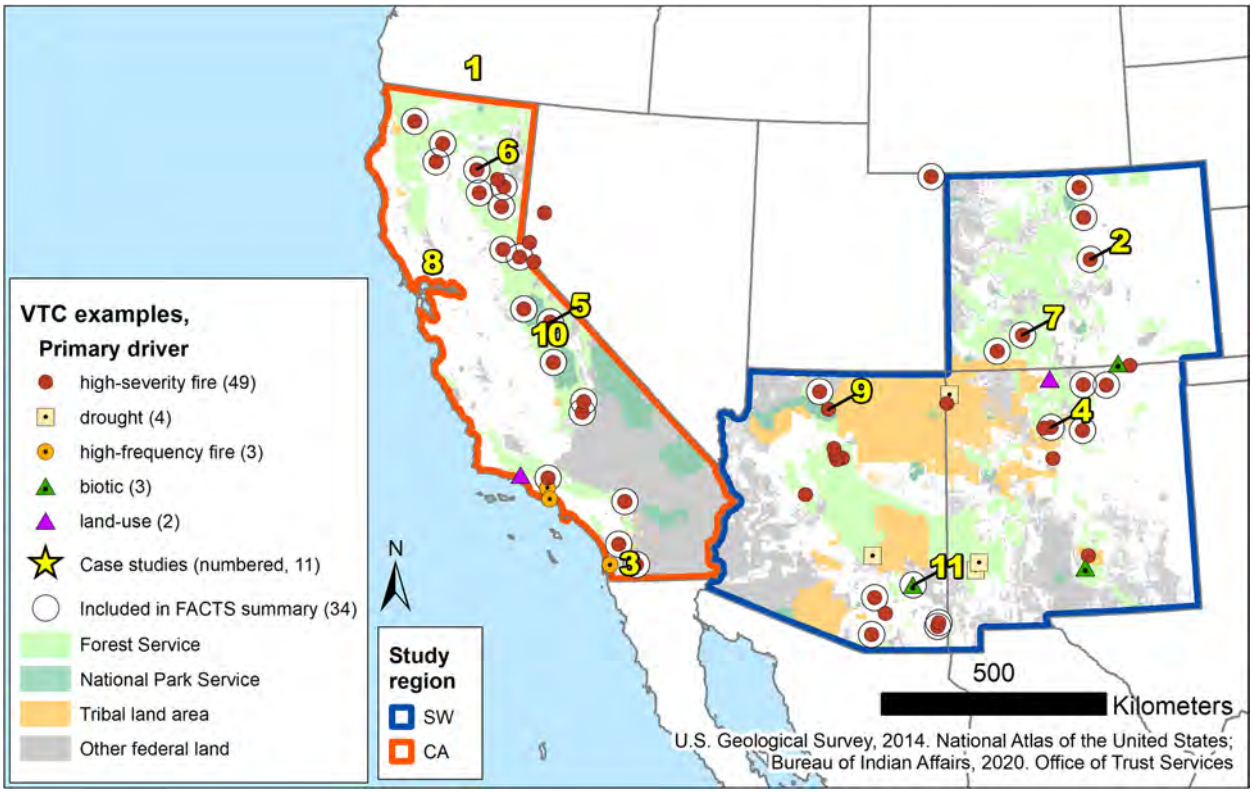


Fig. 1 Observations of vegetation type conversions (VTCs) and their primary drivers. Workshops focused on two subregions, California (CA) and three southwestern states (SW). Case study numbers refer to the individual descriptions provided in the online Supplemental Information

Table 1 Descriptions of management responses to VTC from workshop participants along with case study examples

Management response	Description	Case study examples
Reverse change	Actively try to reverse change via: • Coupled thinning and prescribed fire treatments to reduce fuel loads and fire severity and promote fire-dependent species and ecosystem recovery (Stephens et al. 2009) • Planting or seeding pre-VTC species • Removing or managing new or undesirable species (e.g., non-native grasses and shrubs that may increase fire frequency and/or severity) • Fire suppression to reduce fire extent and allow for recovery time • Preventing post-disturbance soil loss to sustain ecological functions	1. Klamath Reservation, southern Oregon 2. Southern Front Range, Colorado 3. Laguna Mountain, California
Observe change	Take no active intervention measures and adopt monitoring to assess ecosystem trajectory over time. This approach may be most appropriate where there is: • Limited management capacity (e.g., high upfront and maintenance costs of active intervention, limitations to access in sites such as those in wilderness or roadless lands) (Rother et al. 2015; Aplet and Mckinley 2017) • High uncertainty of unintended consequences of active intervention (e.g., one workshop participant noted that "sometimes doing something is worse than doing nothing") (Landres 2010). This approach is consistent with restoration paradigms emphasizing a spectrum of approaches to spread risk (Aplet and Mckinley 2017).	4. Eastern Jemez Mountains, New Mexico 5. Devils Postpile National Monument, California 6. Lassen Volcanic National Park, California 7. San Juan Mountains, Colorado 8. Inner Coast Range, northern California
Facilitate change	Actively direct system toward alternative and/or novel acceptable conditions by: • Planting or seeding with focus on more drought- and fire-tolerant species compared to pre-disturbance species (e.g., assisted gene flow; Young et al. 2020) • Follow-up wildfires with ecologically-credible fuel reduction activities	9. North Rim of the Grand Canyon, Arizona 10. Southern Sierra Nevada, California 11. Pinaleño Mountains, Arizona

wetland and moist forest areas, altering the hydrology of the ecosystem and triggering the loss of culturally-important plants and environments. Tribal forest managers are working to restore forest structure and composition, improve wetland habitats, and recover the historical forest resilience and ecosystem services of the area. These efforts will hopefully stave off the kind of high-severity fires that are affecting areas of the *southern Front Range in Colorado* (#2). There, managers are achieving relatively high survival of planted ponderosa pine and Douglas-fir seedlings in the footprint of the 2002 Hayman Fire, despite years of drought since the planting operations (Fig. 2A). The success to date is credited to early spring planting operations targeted to the most productive sites, often at higher elevations and on northerly slopes, and using coarse-woody debris or other objects for additional shade. On *Laguna Mountain in southern California* (#3), however, a series of droughts, fires, and bark beetles have slowed or stopped post-fire recovery efforts in Jeffrey pine forests (Fig. 2B). Years of drought following the 2003 Cedar Fire prevented any tree recruitment and all planting operations failed. As managers were accepting the conversion to shrubland and herbland with scattered black oak (*Q. kelloggii*) and Coulter pine (*P. coulteri*), the newly established non-native goldspotted oak borer (*Agrilus auroguttatus*) decimated mature oaks (Safford and Vallejo 2019).

Observing change

The complexity of compounding disturbances including fire, insects, and climate warming can incapacitate recovery efforts. In many cases, observing changes is necessary to gauge ecological trajectories, decide whether and how far outside of the natural range of variation the system has moved (Jackson 2012), and plan future management actions. In the *eastern Jemez Mountains of New Mexico* (#4), a series of high-severity fires culminating in the 2011 Las Conchas Fire left tens of thousands of hectares depleted of living conifers (Fig. 3A). Nearly 10 years post-fire, a coalition of stakeholders emerged with diverse plans to employ a variety of actions across the RAD framework based on variability in post-fire environments, community needs, tribal resources, and the risks of floods and debris flows originating from the burned area. Managers at the *Devils Postpile National Monument in California* (#5) found an array of post-fire trajectories in the decades following a mixed-severity fire. The pre-fire forest was recovering in lower-severity burn areas, but extensive shrublands were developing following complete overstory mortality in high-severity patches. Similar findings come from *Lassen Volcanic National Park in California* (#6) where mixed-conifer forests were widely transformed into shrublands, except where earlier prescribed fires reduced the intensity and severity of wildfire. In lodgepole pine (*P. contorta*) forests, low to moderate fire severity in 1984 generated legacy effects in a 2012 fire in which recent post-fire regeneration is abundant everywhere except for areas twice-burned at high-severity. The trajectory of these un-regenerated lodgepole pine forests is uncertain in light of warming temperatures, and may not return to pre-fire conditions. The same is true for subalpine forests in the *San Juan Mountains of southern Colorado* (#7) where a severe bark beetle outbreak and subsequent high-severity fire resulted in high aspen

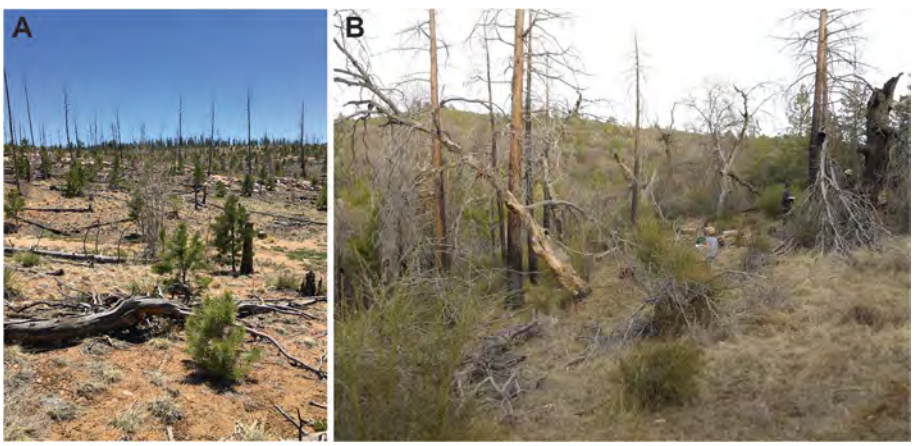


Fig. 2 Examples of reversing change. **A** The distribution of coarse woody debris around planted ponderosa pine seedlings following the 2002 Hayman Fire in Colorado is credited with helping to mitigate drought effects on the developing seedlings (credit: Paula Fornwalt). **B** Forest Service staff inventory stand conditions in a former Jeffrey pine-black oak forest on Laguna Mountain, Cleveland National Forest, eastern San Diego County, California (**B**). This site was impacted by multiyear drought, then severe wildfire, then drought again, Jeffrey pine beetle mortality, and most recently by an oak borer outbreak (credit: Hugh Safford)

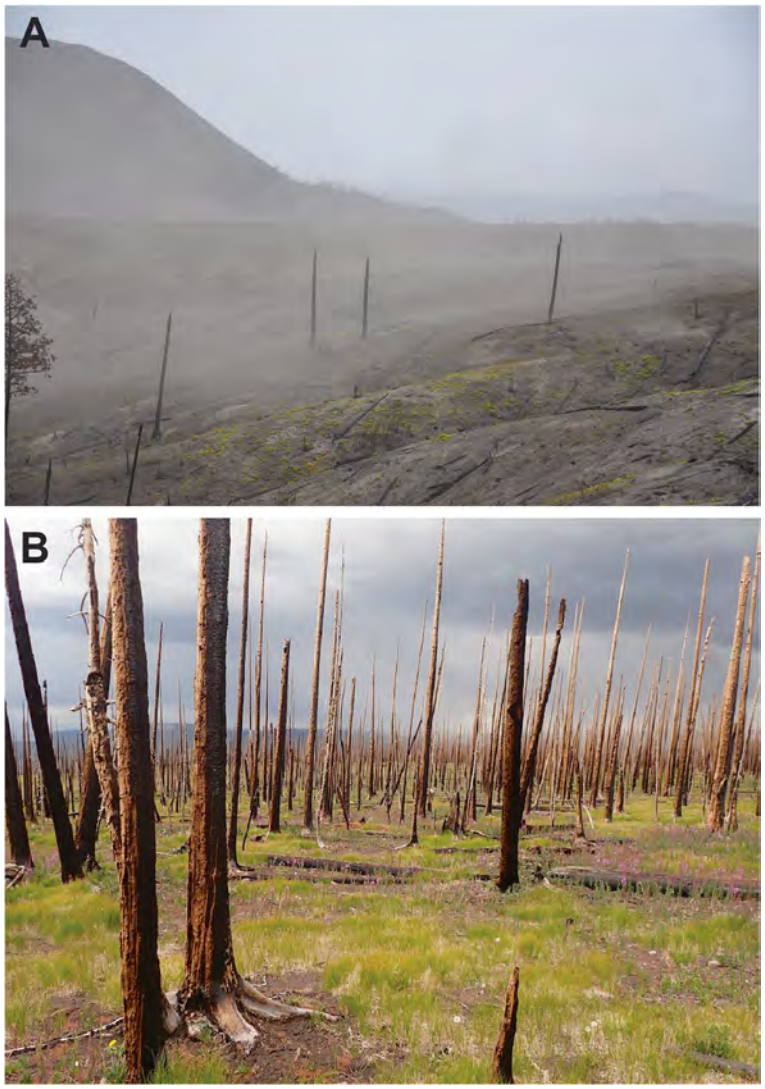


Fig. 3 Examples of observing change. **A** Light wind mobilizes ash and dried soil in a high-severity burn patch of the 2011 Las Conchas Fire, where it reburned an earlier high-severity patch. This photo was taken on April 26, 2012, nearly 1 year after the fire when only some herbaceous plants were growing (credit: Chris Guiterman). **B** Former Engelmann spruce-dominated forest impacted by spruce beetle and fire within the 2013 West Fork Complex Burn, Colorado. Matchstick-like snags are indicative that the trees were killed by beetles prior to the fire (credit: Jonathan Coop)

reproduction in some areas and a variety of herbaceous vegetation in others (Fig. 3B). That these VTC events occur in designated wilderness areas can limit management including fire suppression, prescribed fire, and tree planting. In one of the largest wildland-urban interface regions of the United States, the *Inner Coast Range of California* (#8), VTC has only recently emerged following the disruption of historical fire regimes and associated reduction in the spatial diversity of the grassland-woodland-forest mosaic. The devastating "wine country" wildfires in 2017 marked the return of fire to this coupled human-natural ecosystem. Some areas have now experienced four fires in the last 5 years. Beyond losses to human life and property, the entire ecological mosaic has been affected, with major loss of chaparral communities, fundamentally changing the landscape to non-native grasslands and leaving human infrastructure vulnerable to flooding and debris flows.

Facilitating change

Facilitation of VTC is the least common management response documented in our study, though ideas of when, where, and how to direct changes are becoming clearer (Millar and Stephenson 2015). The facilitation

case studies we present include management actions that direct change knowingly but perhaps without the explicit intention of promoting type change. In the case of the *North Rim of the Grand Canyon in Arizona* (#9), fire managers successfully reintroduced fire in ponderosa pine forests following many decades of fire exclusion. However, with more recurrent fire activity, they noted higher-than-expected conifer mortality in surface fires, which is benefiting Gambel oak and slowly converting the forests to shrubby woodlands (Fig. 4A). Some of the small shrubland patches that are established in high-severity burn areas are expanding as large, downed fire-killed trees burn in subsequent fires with enough intensity to expand the shrubland gaps, sometimes merging into large patches. Frequent fire may be more in line with projected climate conditions but also threatens large, old trees. The management goal to maintain fire as an ecological process (https://www.nps.gov/grca/learn/management/upload/grca_fmp.pdf) is promoting this ecological transition. In the *southern Sierra Nevada of California* (#10), a decade of drought and recurrent fires is rapidly removing conifers from commercial forest areas where thinning has reduced relative mortality but progressed the transition from conifer-dominated forests to oak- and hardwood-dominated woodlands (Fig. 4B). Now, unthinned areas are vulnerable to fire due to their composition of dense fire-intolerant tree species and heavy loading of drought-killed trees, but thinned stands dominated by oak trees are vulnerable to the advance of goldspotted oak borers. Finding a balance between these options is challenging, so managers are utilizing new decision support tools to guide post-fire recovery efforts and the facilitation of VTC in some areas to be used as fuel breaks in generating a landscape mosaic. Along the



Fig. 4 Examples of facilitating change. **A** Tree mortality of ponderosa pines following two high-severity fire events on the North Rim of the Grand Canyon, AZ. This expanding gap is now dominated by forbs and New Mexico locust with no pine regeneration (credit: Chris Marks). **B** Tree mortality following a multi-year drought in a pre-drought thinned ponderosa pine and black oak stand on the Sierra National Forest, southern Sierra Nevada, California. The foreground illustrates the current open stand conditions dominated by black oak and canyon live oak with an understory of mountain misery (*Chamaebatia foliolosa*) following the cutting and piling of dead conifers (mostly ponderosa pine and sugar pine). The background shows post-drought stand conditions prior to conifer removal (credit: Marc Meyer)

high summit of *Pinaleño Mountains in Arizona* (#11) spruce-fir (*Picea engelmannii* and *Abies lasiocarpa* var. *arizonica*) forests are critical habitat for the endangered Mount Graham red squirrel (*Tamiasciurus fremonti grahamensis*) (USFWS 2011) but were decimated by two fires in 2004 and 2016 (Merrick et al. 2021). Managers recognize that re-planting a spruce-fir forest will neither rapidly re-establish habitat nor be resilient and productive given the changing climate. They have therefore opted to plant a native, but more drought- and insect-resilient, mix of conifer species (including spruce and fir) that could, once mature, potentially aid in the return of the spruce-fir type. The key idea here is to help push the system in a trajectory of conifer forest, rather than shrub or grassland conditions.

VTC examples

In order to capture the regional scope and diversity of VTC, workshop participants identified sites undergoing VTC on printed maps that we later geolocated in a geographic information system. Each workshop had a subregional focus (Fig. 1). The workshop in Tucson, AZ (March 2019) focused mainly on Arizona, New Mexico, and Colorado (Southwest (SW) study region). The workshop in Sacramento, CA (December 2019) focused on California and adjacent environments (CA study region). For each location they marked, participants described their observations on paper forms that included the (1) location of the VTC, (2) land ownership of the area, (3) ecosystem types before and after the VTC, (4) year of any precipitating event(s), (5) driving mechanism(s) of change, (6) species of interest in the area, and (7) management actions, if any, taken to address the VTC. We emphasize that these examples of VTC represent the site-specific knowledge and expert opinion of scientists and practitioners who attended the workshops and are not an attempt to identify or quantify the true extent of regional VTC. The examples were summarized in the context of two large-scale spatially explicit data sets, Monitoring Trends in Burn Severity (MTBS, Eidenshink et al. 2007) and the US Forest Service Activity Tracking System (FACTS) (https://data.fs.usda.gov/geodata/edw/datasets.php), to describe broad patterns in the VTC observations (see online supplemental information for details).

Workshop participants provided 61 examples of VTC across six southwestern US states (Fig. 1), with 26 in the CA study area and 35 in the SW (each example is provided in the online Supplemental Table). The vast majority (80%) of these examples related to high-severity fire (Fig. 5A). Drought, biotic agents, high-frequency fire, and land use each account for <10% of the identified VTC drivers. Some examples represent changes across vast areas that could not be accurately portrayed by our approach. For example, within the land-use category, only a single record in southern CA describes widespread fuel breaks in which repeated disturbances including bulldozing, prescribed fire, herbicide applications, and mastication of vegetation have converted chaparral within the fire lines to herbaceous dominance, predominantly non-native grasses. Although these actions were intentional, they were not necessarily intended for the establishment of non-native vegetation.

Trajectories of VTC underscore the commonality of forest-to-shrubland transitions (Fig. 5B). In total, 59% of the examples include conversion to shrubland. In the SW, both ponderosa pine and dry mixed-conifer forests (which often include ponderosa pine, Romme et al. 2009), are seen to almost always transition to shrublands. In CA, 54% of the examples include the shrubland trajectory, predominantly resulting from fire-driven conversions of mixed-conifer and Jeffrey pine forests. Grasslands dominated by mostly native herbaceous vegetation are the next most common post-VTC type, with non-native grass making up 15% of the examples, all of which were reported in CA. This latter group includes a variety of pre-VTC vegetation communities such as chaparral, Jeffrey pine forest, and sagebrush.

Reversing change was the most common management response to VTC (Fig. 5C). The second most common response was either no management (often written as "none") or was not provided. If we could not supplement the participant's entry with information from FACTS, we report what the participants provided, leaving 13 examples in which a management action was not provided. There were three examples that included observing change, and one example (the fuel breaks described above) of facilitate change. These examples show that interventions to reverse change were more common in CA than in the SW, and by contrast, observing change was more common in the SW than in CA. These subregional differences were notable in our analysis of the FACTS data (Fig. 6), in which we explored 34 examples of VTC that were within patches of high-severity fire, as recorded in MTBS. We identified 55 high-severity burn areas over the 34 individual sites, suggesting that repeated high-severity fire may have been a factor in some examples of VTC. FACTS data show that in CA, most post-fire management interventions occur within 5 years of the fire and aim to reverse change (commercial tree removal, fuel reduction, and tree establishment). Little observation of change was recorded for CA, and none occurred after 5 years, whereas in the SW, observation was more common than tree removal or fuel reduction, and could last as long as 20 years post-fire. The rate of tree establishment dwindled in CA after 15 years post-fire, while it only increased in the SW through 20 years

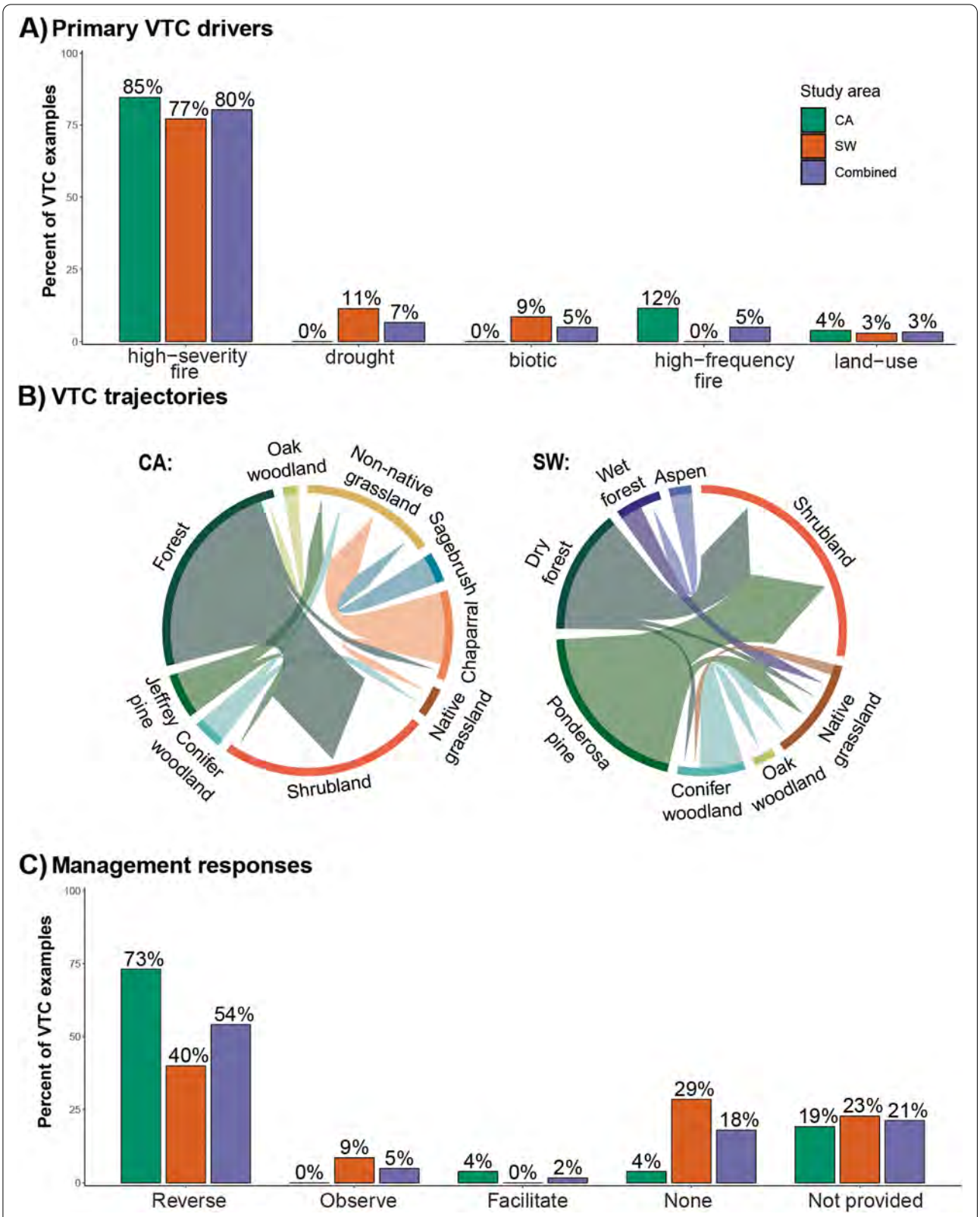


Fig. 5 Summary of 61 participant-provided VTC examples across the southwestern US. **A** Drivers, **B** trajectories, and **C** management responses. Legend colors are shared between the **A** and **C** panels. In **B**, broad arrows are unidirectional, and do not imply further transitions beyond a single workshop example. The "forest" classification in each region was usually provided as "mixed-conifer forest," with the difference between "wet" and "dry" in the SW pertaining to whether or not the sites were occupied by ponderosa pine (sensu Romme et al. 2009)

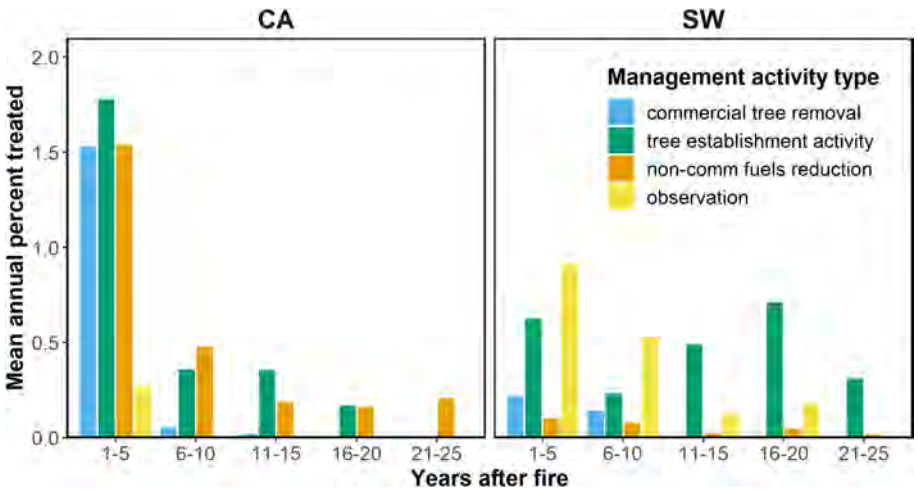


Fig. 6 US Forest Service Activity Tracking System management activity units completed by activity type within high-severity portions of named fires in CA and the SW

post-fire. Across all of these management responses, however, the spatial coverage of treatments recorded in FACTS shows that less than 25% of individual high-severity burn areas saw any treatment.

Synthesis

Across the breadth of ecosystems represented in our case studies and VTC examples, we found that forests typically convert to shrubland, and chaparral or sagebrush communities convert to herblands, often dominated by non-native grasses. The post-fire types represent transitions to vegetative states that are shorter in height, better adapted to disturbance and drought, and, as more areas are affected, reduce landscape-scale diversity in ecological structure. Our findings emphasize that altered fire regime characteristics, including frequency and severity, are likely to generate novel transitions. In general, these processes increase overstory mortality among trees and chaparral, which is the key trigger of a state transition, especially in larger patches (Chambers et al. 2016; Falk et al. 2022). Other mortality agents, such as insect outbreaks, often in combination with fire, further promote transitions. Recovery to the initial state is likely to be inhibited by a hotter and drier climate (Davis et al. 2019; Stewart et al. 2020). When all of these factors align, as they have in recent decades across most of the Southwest, VTC is the likely outcome.

Once converted, new vegetative states are highly persistent. This underscores the need for management to consider undertaking preventive strategies that capitalize on the persistence mechanisms of intact vegetative types (Falk et al. 2022), if these are the desired long-term communities (see Matonis and Binkley 2018). Effective prevention strategies often include fuel reduction and re-introduction of recurrent low-severity fire (Stoddard et al. 2021), which can be accomplished in diverse partnerships that promote important ecocultural products and values along with a suite of ecosystem services (Hessburg et al. 2021; case study #1). Treatments are ideally conducted at landscape scales, but smaller, targeted actions can be undertaken to promote refugia areas following future wildfires that would help recovery efforts by providing seed sources (Krawchuk et al. 2020).

While some prevention strategies are effective, they do not address all concerns regarding VTC. Participants in our workshops are frontline observers to ecological changes rarely witnessed until recent decades. As the case study descriptions echo, there is a palpable sense of futility when confronting the scale and uncertain ecological trajectories of VTC. Indeed, in many cases, little can be done to reverse changes wrought by multiple compounding disturbances and long-term drivers. The rapid and stubborn spread of non-native species further frustrates recovery and intervention strategies. This emphasizes the importance of management frameworks that have an option to accept rapid and profound change (Lynch et al. 2021) and calls on increasing research to evaluate a variety of approaches (Crausbay et al. 2021).

Reversing change is often resource intensive. To expand recovery efforts and maximize often limited resources, it may be critical for managers to prioritize particular sites. Recovery via planting conifers has received mixed success (Ouzts et al. 2015; case studies #2, 3, 11), and thus more focus is currently being placed on targeted planting operations that have the highest potential for survival through drought and subsequent fire (Dumroese et al. 2016; North et al. 2019). Recovery efforts will have to rely on appropriate seed sources and planting stock, but the

necessary infrastructure has declined in recent decades (Fargione et al. 2021), as has the availability of appropriate species. Opting to plant more drought-tolerant or more commercially-desired species could represent a choice to facilitate change rather than resist it (case study #3). Federal support and local efforts are needed to re-establish nursery production capacity, and doing so could present an opportunity to invest in underrepresented groups such as Native American communities and tribal forestry programs that have the capacity but may lack market demand to re-establish their nurseries. Open Source tools are also emerging that help to identify potential seed sources for planting operations (e.g., https://seedlotselectiontool.org/sst/, https://climaterestorationtool.org/csrt/) as well as where natural regeneration after disturbance may be insufficient (https://code.usgs.gov/werc/redwood_field_station/poscrptr) and when and where planting operations may be most efficacious (e.g., https://reforestation.shinyapps.io/preset/).

The option of observing change may be determined by a desire to "wait and see," a lack of the resources needed to take more deliberate intervention measures to reverse change or by constraints in land designations, such as in wilderness areas. Uncertainties regarding unintended consequences of active intervention (e.g., moving towards "undesired" conditions, "sometimes doing something is worse than doing nothing") may also delay or prevent other actions. Allowing managers time to observe change is a valid approach to informed adaptive management (Sagarin and Pauchard 2010; Halofsky et al. 2018; Chazdon et al. 2021), especially given highly variable seasonal climates of recent years. Observing an ecosystem's trajectory and understanding the dynamics of the developing community will help managers gain a general sense of the probability of type conversion, and whether the site risks invasion by problematic non-native species. However, institutional constraints may limit the ability to experiment with different approaches, particularly with wildfire management (e.g., Abrams et al. 2021). For example, most agency mandates and funding streams are directed toward fire suppression rather than prevention or recovery, leading to a mismatch between policy directives and ecological needs in some cases. In other cases, the number of agency staff available to support fire prevention or recovery may be limited by budgetary constraints.

Choosing to facilitate or direct change depends on agency mandates, site objectives, individual managers' risk tolerance, and values. While examples of and research on intentional on-the-ground facilitation of VTC are generally lacking to date, more flexibility in management directives would allow for opportunities to better understand the dynamics of novel systems (Millar and Stephenson 2015). Findings from other efforts to facilitate change (e.g., assisted gene flow, assisted range expansion), while not specific to fire-driven VTC, may be useful for inspiration and lessons learned (McLane and Aitken 2012; McPherson et al. 2017; Richardson and Chaney 2018; Crotteau et al. 2019).

Trepidation in confronting the scale of VTC stems in part from the uncertainty of its trajectory given slow and variable recovery processes. Insights from Indigenous knowledge can aid in understanding the degree of a possible departure from historical ranges of variability, whether changes are undesirable from an ecocultural perspective, and options for management that proved effective in the past (Lake et al. 2017). Paleoecological and historical studies are helpful in gauging the long-term dynamics and persistence of various ecological communities (Jackson 2012). Our understanding of the mechanisms and drivers of VTC is improving apace, with critical reviews on resilience and its properties (Falk et al. 2019; Syphard et al. 2019; Coop et al. 2020; Falk et al. 2022) that provide a basis for comparison among events, and a focused language by which managers can compare events and areas (Stevens et al. 2021). Efforts are also underway to estimate landscape resilience or lack thereof, and thus the probability of VTC ahead of disturbance (Walker et al. 2018; Marshall and Falk 2020).

As management paradigms shift to accommodate impending change (e.g., Truitt et al. 2015; Schuurman et al. 2020), decisions around whether and how to accept or direct change will require new datasets and detailed models of plausible future ecological scenarios. Defining "desired conditions" may necessitate new models of collaboration that deeply engage stakeholders including local communities, tribes, and the broader public to better incorporate social and economic considerations in ecological management discussions. Manager-scientist collaborations such as the Fire Science Exchange Networks (https://www.firescience.gov/JFSP_exchanges.cfm) provide opportunities for workshops and field gatherings, peer-to-peer efforts such as the Burned Area Learning Network (https://www.conservationgateway.org/ConservationPractices/FireLandscapes/FireLearningNetwork/RegionalNetworks/Pages/BALN.aspx), and regional and place-based nongovernmental group initiatives help to promote awareness and readiness for VTC events. These efforts are changing the perceptions of managers, scientists, and the public, helping to incorporate VTC into the planning and decision making of agencies and land managers as they strive for "desired conditions" in a changing climate. Developing and assessing the capacity for management to achieve these conditions will require abundant experimentation within a co-production framework and social license for less-than-certain success.

Opening the door to accepting and directing VTC has potentially far-reaching and long-lasting implications for species, ecosystems, and society. Managing for change represents a potentially dramatic departure from traditional land management philosophy, especially in areas designated as natural areas or wilderness. Engaging with VTC may require more intensive intervention in ecosystem processes in many cases, but foundational principles for how to do this do not exist as yet. New and shared ethical frameworks drawing on science, Indigenous knowledge, and social consensus will be needed to guide this transition.

Future directions

VTC is among the most pressing issues for ecosystem management in the southwestern United States. Although the phenomenon eludes a simple definition (van Mantgem et al. 2020), land managers "know it when they see it," and there is a strong sense of alarm at what they have been witnessing in recent years. The experiences and stories captured in 11 case studies presented here underscore that VTC is occurring at broad spatial and temporal scales (e.g., large patches to regional ecological ranges, from decadal land-use changes to rapid post-fire transitions) across most southwestern forest and woodland types to grasslands, shrublands, and chaparral. The rising sentiment among many managers appears to be that VTC at some scales and across many sites is a foregone conclusion following many high-severity fires in the study region. As VTC areas grow larger and more common, managers will increasingly need to shift their focus from persistence measures to recovery efforts in type-converted areas (Falk 2016). And as our collective understanding of VTC drivers, trajectories, and persistence mechanisms grow, options for its management will expand. Some may prove to be ineffective, such as traditional plantation layouts in large patches far from parent trees, while others may emerge that provide multiple benefits but might be considered acceptance or facilitation of VTC by current standards. More systematic collection and analyses of observations and on-the-ground experiences will be important to provide clarity and direction for research efforts that will help guide management. Land managers, practitioners, and scientists share many of the same trepidations regarding VTC, and the pace at which land management agencies are adapting to current conditions, but may also find strength in the collective experience and freedom to discuss experiences. Future adaptive management of VTC-prone areas and areas that are undergoing VTC depends on co-production and collaboration among managers, scientists, and stakeholders, particularly as we contend with rapid environmental changes.

Abbreviations

VTC: Vegetative type conversion; RAD: Resist-adapt-direct management framework; SW: Southwestern US study area, encompassing Arizona, Colorado, and New Mexico; CA: California and adjacent ecosystems study area; MTBS: Monitoring Trends in Burn Severity data set; FACTS: US Forest Service Activity Tracking System.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s42408-022-00131-w.

Additional file 1. Supplemental text describing 11 case studies and methods used to evaluate the VTC examples.

Acknowledgements

We thank the participants of the 2019 vegetation type conversion workshops for their insights and contributions. We also thank Anne Bradley, Ramona Butz, David Isackson, Eytan Krasilovski, Megan Matonis, and Derek Young for their help to formulate the ideas presented here. Robert Keane and three anonymous reviewers helped to improve the manuscript.

Authors' contributions

PvM, RMG, JEK, and DAF acquired funding. CHG, DAF, PvM, RMG, and LAEM designed the study. CHG, JJB, RMG, and LAEM carried out the research. CHG, DAF, PvM, JEK, JJB, and RMG interpreted the findings and wrote the initial draft. CHG, ACC, JDC, PJF, CH, RKH, AML, CM, MDM, HS, and AHT wrote the case studies. All authors validated the findings, contributed to revisions, and read and approved the manuscript.

Funding

This manuscript was funded by the US Geological Survey (USGS) Ecosystems Mission Area to the USGS Western Ecological Research Center and the USGS Southwest Climate Science Adaption Center. Further support was provided by the Ecological Restoration Institute at Northern Arizona University. Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the US Government.

Availability of data and materials

All data used in this manuscript was derived from publicly available sources. Materials consisting of observations from the workshops are provided in SI Table 1.

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Consent for publication not applicable as we did not use data from individual people.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Author details

[1]Laboratory of Tree-Ring Research, University of Arizona, 1215 E Lowell, St., Tucson, AZ 85721, USA. [2]Ecological Restoration Institute, Northern Arizona University, PO Box 15017, Flagstaff, AZ 86011, USA. [3]Present address: Cooperative Institute for Research in Environmental Sciences, University of Colorado at Boulder, 325 Broadway, E/GC3, Boulder, CO 80305, USA. [4]Environmental Science Associates, 5309 Shilshole Ave NW Suite 200, Seattle, WA 98107, USA. [5]School of Natural Resources and the Environment, University of Arizona, 1064 East Lowell Street, Tucson, AZ 85721, USA. [6]Forest and Rangeland Stewardship, Colorado State University, 1472 Campus Delivery, Fort Collins, CO 80523, USA. [7]U.S. Geological Survey, Western Ecological Research Center, 1655 Heindon Road, Arcata, CA 95521, USA. [8]School of Forestry, Northern Arizona

University, Flagstaff, AZ 86011-5018, USA. [9]U.S. Geological Survey, Western Ecological Research Center, Sequoia-Kings Canyon Field Station, Three Rivers, CA 93271, USA. [10]Department of Ecology and Evolutionary Biology, University of California, Los Angeles, CA 90095, USA. [11]Sequoia & Kings Canyon National Parks, 47050 Generals Highway, Three Rivers, CA 93271, USA. [12]School of Environment and Sustainability, Western Colorado University, 1 Western Way, Gunnison, CO 81231, USA. [13]USDA Forest Service, Rocky Mountain Research Station, 240 W. Prospect Rd., Fort Collins, CO 80526, USA. [14]New Mexico Forestry Division, Energy Minerals and Natural Resources Department, Santa Fe, NM 87505, USA. [15]Applegate Forestry LLC, Corvallis, OR 97330, USA. [16]College of the Environment-SEFS, University of Washington, Seattle, WA 98195, USA. [17]U.S. Geological Survey, Southwest and South Central Climate Adaptation Science Centers, 1064 E. Lowell St, Tucson, AZ 85721, USA. [18]Department of Geosciences and School of Natural Resources & Environment, University of Arizona, Tucson, AZ 85721, USA. [19]U.S. Forest Service, Rocky Mountain Research Station, 1215 E Lowell St., Box 210045, Tucson, AZ 85721, USA. [20]U.S. Geological Survey, New Mexico Landscapes Field Station, 15 Entrance Rd, Los Alamos, NM 87544, USA. [21]Grand Canyon National Park, 1824 S Thompson Street, Flagstaff, AZ 86001, USA. [22]USDA Forest Service, Region 5 Ecology Program, Southern Sierra Province, Bishop, CA 93514, USA. [23]USDA Forest Service, Pacific Southwest Region, 1323 Club Drive, Vallejo, CA 94592, USA. [24]Department of Environmental Science and Policy, University of California, Davis, CA 95616, USA. [25]Vertus Wildfire, 4237 Salisbury Rd, Jacksonville, FL 32216, USA. [26]Department of Geography, San Diego State University, San Diego, CA 92182, USA. [27]Department of Geography and Earth and Environmental Systems Institute, The Pennsylvania State University, University Park, State College, PA 16802, USA. [28]Lincoln National Forest, 3463 Las Palomas Road, Alamogordo, NM 88310, USA. [29]USDA Forest Service, Santa Fe National Forest, 11 Forest Lane, Santa Fe, NM 87508, USA. [30]USDA Forest Service, Rocky Mountain Research Station, 2500 Pine Knoll Dr, Flagstaff, AZ 86001, USA. [31]USDA Forest Service, Region 5 Ecology Program, Southern California Province, 1980 Old Mission Dr, Solvang, CA 93463, USA. [32]University of Nevada Cooperative Extension, 4955 Energy Way, Reno, NV 89502, USA.

Received: 13 December 2021 Accepted: 21 April 2022
Published online: 19 May 2022

References

Abrams, J., M. Greiner, C. Schultz, et al. 2021. Can forest managers plan for resilient landscapes? Lessons from the United States National Forest Plan Revision Process. *Environmental Management* 67: 574–588. https://doi.org/10.1007/s00267-021-01451-4.

Airey Lauvaux, C., C.N. Skinner, and A.H. Taylor. 2016. High severity fire and mixed conifer forest-chaparral dynamics in the southern Cascade Range, USA. *Forest Ecology Management* 363: 74–85. https://doi.org/10.1016/j.foreco.2015.12.016.

Allen, C.D., D.D. Breshears, and N.G. McDowell. 2015. On underestimation of global vulnerability to tree mortality and forest die-off from hotter drought in the Anthropocene. *Ecosphere* 6 (art129). https://doi.org/10.1890/ES15-00203.1.

Allen, C.D., M. Savage, D.A. Falk, et al. 2002. Ecological restoration of southwestern ponderosa pine ecosystems: A broad perspective. *Ecological Applications* 12: 1418–1433. https://doi.org/10.1890/1051-0761(2002)012[1418:EROSPP]2.0.CO;2.

Aplet, G.H., and P.S. Mckinley. 2017. A portfolio approach to managing ecological risks of global change. *Ecosystem Health and Sustainability* 3: e01261. https://doi.org/10.1002/ehs2.1261.

Balch, J.K., B.A. Bradley, C.M. D'Antonio, and J. Gómez-Dans. 2013. Introduced annual grass increases regional fire activity across the arid western USA (1980–2009). *Global Change Biology* 19: 173–183. https://doi.org/10.1111/gcb.12046.

Balch, J.K., B.A. Bradley, J.T. Abatzoglou, et al. 2017. Human-started wildfires expand the fire niche across the United States. *Proceedings of the National Academy of Sciences* 114: 2946–2951. https://doi.org/10.1073/pnas.1617394114.

Barton, A.M., and H.M. Poulos. 2018. Pine vs. oaks revisited: Conversion of Madrean pine-oak forest to oak shrubland after high-severity wildfire in the Sky Islands of Arizona. *Forest Ecology and Management* 414: 28–40. https://doi.org/10.1016/j.foreco.2018.02.011.

Batllori, E., F. Lloret, T. Aakala, et al. 2020. Forest and woodland replacement patterns following drought-related mortality. *Proceedings. National Academy of Sciences. United States of America* 117: 29720–29729. https://doi.org/10.1073/pnas.2002314117.

Beisner, B.E., D.T. Haydon, and K. Cuddington. 2003. Alternative stable states in ecology. *Frontiers in Ecology and the Environment* 1: 376–382. https://doi.org/10.1890/1540-9295(2003)001[0376:ASSIE]2.0.CO.

Chambers, M.E., P.J. Fornwalt, S.L. Malone, and M.A. Battaglia. 2016. Patterns of conifer regeneration following high severity wildfire in ponderosa pine – Dominated forests of the Colorado front range. *Forest Ecology and Management* 378: 57–67. https://doi.org/10.1016/j.foreco.2016.07.001.

Chazdon, R.L., D.A. Falk, L.F. Banin, et al. 2021. The intervention continuum in restoration ecology: Rethinking the activepassive dichotomy. *Restoration Ecology*. https://doi.org/10.1111/rec.13535.

Collins, B.M., and G.B. Roller. 2013. Early forest dynamics in stand-replacing fire patches in the northern Sierra Nevada, California, USA. *Landscape Ecology* 28: 1801–1813. https://doi.org/10.1007/s10980-013-9923-8.

Coop, J.D., S.A. Parks, S.R. McClernan, and L.M. Holsinger. 2016. Influences of prior wildfires on vegetation response to subsequent fire in a reburned southwestern landscape. *Ecological Applications* 26: 346–354. https://doi.org/10.1890/15-0775.1.

Coop, J.D., S.A. Parks, C.S. Stevens-Rumann, et al. 2020. Wildfire-driven forest conversion in western North American landscapes. *BioScience* 70: 659–673. https://doi.org/10.1093/biosci/biaa061.

Coppoletta, M., K.E. Merriam, and B.M. Collins. 2016. Post-fire vegetation and fuel development influences fire severity patterns in reburns. *Ecological Applications* 26: 686–699. https://doi.org/10.1890/15-0225.1.

Covington, W.W., and M.M. Moore. 1994. Southwestern ponderosa pine forest structure: Changes since euro-American settlement. *Journal of Forestry* 92: 39–47.

Crausbay, S.D., J. Betancourt, J. Bradford, et al. 2020. Unfamiliar territory: Emerging themes for ecological drought research and management. *One Earth* 3: 337–353. https://doi.org/10.1016/j.oneear.2020.08.019.

Crausbay, S.D., A.R. Ramirez, S.L. Carter, et al. 2017. Defining ecological drought for the twenty-first century. *Bulletin of the American Meteorological Society* 98: 2543–2550. https://doi.org/10.1175/BAMS-D-16-0292.1.

Crausbay, S.D., H.R. Sofaer, A.E. Cravens, et al. 2021. A science agenda to inform natural resource management decisions in an era of ecological transformation. *BioScience* 72: 71–90. https://doi.org/10.1093/biosci/biab102.

Crotteau, J.S., E.K. Sutherland, T.B. Jain, et al. 2019. Initiating climate adaptation in a Western larch Forest. *Forest Science.* https://doi.org/10.1093/forsci/fxz024.

D'Antonio, C.M., and P.M. Vitousek. 1992. Biological invasions by exotic grasses, the grass/fire cycle, and global change. *Annual Review of Ecology and Systematics* 23: 63–87.

Davis, K.T., S.Z. Dobrowski, P.E. Higuera, et al. 2019. Wildfires and climate change push low-elevation forests across a critical climate threshold for tree regeneration. *Proceedings National Academy Sciences* 201815107. https://doi.org/10.1073/pnas.1815107116.

Dolanc, C.R., H.D. Safford, S.Z. Dobrowski, and J.H. Thorne. 2014. Twentieth century shifts in abundance and composition of vegetation types of the Sierra Nevada, CA, US. *Applied Vegetation Science* 17: 442–455. https://doi.org/10.1111/avsc.12079.

Dove, N.C., H.D. Safford, G.N. Bohlman, et al. 2020. High-severity wildfire leads to multi-decadal impacts on soil biogeochemistry in mixed-conifer forests. *Ecological Applications* 30. https://doi.org/10.1002/eap.2072.

Dumroese, K., T. Landis, J. Pinto, et al. 2016. Meeting forest restoration challenges: Using the target plant concept. *Reforesta*: 37–52. https://doi.org/10.21750/refor.1.03.3.

Eidenshink, J., B. Schwind, K. Brewer, et al. 2007. A project monitoring trends in burn severity. *Fire Ecology* 3: 3–21. https://doi.org/10.4996/fireecology.0301003.

Falk, D.A. 2016. Resilience dilemma: Incorporating global change into ecosystem policy and management. *Arizona State Law Journal* 48: 145.

Falk, D.A., P.J. van Mantgem, J.E. Keeley, et al. 2022. Tamm review: Mechanisms of forest resilience. *Forest Ecology Management*In press. https://doi.org/10.1016/j.foreco.2022.120129.

Falk, D.A., A.C. Watts, and A.E. Thode. 2019. Scaling ecological resilience. *Frontiers in Ecology and Evolution* 7: 116. https://doi.org/10.3389/fevo.2019.00275.

Fargione, J., D.L. Haase, O.T. Burney, et al. 2021. Challenges to the reforestation pipeline in the United States. *Front Forests Global Change* 4: 629198. https://doi.org/10.3389/ffgc.2021.629198.

Franklin, J.F., K.N. Johnson, and D.L. Johnson. 2018. *Ecological forest management*. Long Grove: Waveland Press.

Gregg, R.M., and L.A. Marshall. 2020a. *Vegetation type conversion in the southwest: A workshop summary. Southwest fire science consortium*. 7 Available from https://www.swfireconsortium.org/2020/08/17/vegetation-type-conversion-in-the-southwest-a-workshop-summary/.

Gregg, R.M., and L.A. Marshall. 2020b. Fire-caused vegetation type conversion in California: A workshop summary. *California Fire Science Consortium*: 5 Available from https://www.cafiresci.org/research-publications-source/category/vtcworkshop.

Guiterman, C.H., E.Q. Margolis, C.D. Allen, et al. 2018. Long-term persistence and fire resilience of oak shrubfields in dry conifer forests of northern New Mexico. *Ecosystems* 21: 943–959. https://doi.org/10.1007/s10021-017-0192-2.

Guiterman, C.H., E.Q. Margolis, and T.W. Swetnam. 2015. Dendroecological methods for reconstructing high severity fire in pine-oak forests. *Tree-Ring Research* 71: 67–77. https://doi.org/10.3959/1536-1098-71.2.67.

Haffey, C., T.D. Sisk, C.D. Allen, et al. 2018. Limits to ponderosa pine regeneration following large high-severity forest fires in the United States southwest. *Fire Ecology* 14: 143–163. https://doi.org/10.4996/fireecology.140114316.

Hagmann, R.K., P.F. Hessburg, S.J. Prichard, et al. 2021. Evidence for widespread changes in the structure, composition, and fire regimes of western North American forests. *Ecological Applications*. https://doi.org/10.1002/eap.2431.

Halofsky, J.E., S.A. Andrews-Key, J.E. Edwards, et al. 2018. Adapting forest management to climate change: The state of science and applications in Canada and the United States. *Forest Ecology and Management* 421: 84–97. https://doi.org/10.1016/j.foreco.2018.02.037.

Harris, L.B., and A.H. Taylor. 2020. Rain-shadow forest margins resilient to low-severity fire and climate change but not high-severity fire. *Ecosphere* 11. https://doi.org/10.1002/ecs2.3258.

Helms, J.A., and J.C. Tappeiner. 1996. Silviculture in the sierra. In *Sierra Nevada ecosystem project: Final report to congress, vol. II. Centers for water; Wildland resources*, 439–476. Davis: University of California.

Hessburg, P.F., C.L. Miller, S.A. Parks, et al. 2019. Climate, environment, and disturbance history govern resilience of western North American forests. *Frontiers in Ecology and Evolution* 7: 239. https://doi.org/10.3389/fevo.2019.00239.

Hessburg, P.F., S.J. Prichard, R.K. Hagmann, et al. 2021. Wildfire and climate change adaptation of western North American forests: A case for intentional management. *Ecological Applications*. https://doi.org/10.1002/eap.2432.

Iniguez, J., T. Swetnam, and C. Baisan. 2009. Spatially and temporally variable fire regime on Rincon peak, Arizona, USA. *Fire Ecology* 5: 3–21. https://doi.org/10.4996/fireecology.0501003.

Jackson, S.T. 2012. Conservation and resource management in a changing world: Extending historical range of variation beyond the baseline. In *Historical environmental variation in conservation and natural resource management*, ed. J.A. Wiens, G.D. Hayward, H.D. Safford, and C.M. Giffen, 92–109. Wiley.

Keeley, J.E. 1991. Seed germination and life history syndromes in the California chaparral. *Botanical Review* 57: 81–116. https://doi.org/10.1007/BF02858766.

Keeley, J.E., and T.J. Brennan. 2012. Fire-driven alien invasion in a fire-adapted ecosystem. *Oecologia* 169: 1043–1052. https://doi.org/10.1007/s00442-012-2253-8.

Keeley, J.E., J. Franklin, and C. D'Antonio. 2011. Fire and invasive plants on California landscapes. In *The landscape ecology of fire*, ed. D. McKenzie, C. Miller, and D.A. Falk, 193–221. Dordrecht: Springer.

Keeley, J.E., P. van Mantgem, and D.A. Falk. 2019. Fire, climate and changing forests. *Nature Plants* 5: 774–775. https://doi.org/10.1038/s41477-019-0485-x.

Keyser, A.R., D.J. Krofcheck, C.C. Remy, et al. 2020. Simulated increases in fire activity reinforce shrub conversion in a southwestern US forest. *Ecosystems* 23: 1702–1713. https://doi.org/10.1007/s10021-020-00498-4.

Kimmerer, R.W., and F.K. Lake. 2001. The role of indigenous burning in land management. *Journal of Forestry* 99: 3641. https://doi.org/10.1093/jof/99.11.36.

Korb, J.E., P.J. Fornwalt, and C.S. Stevens-Rumann. 2019. What drives ponderosa pine regeneration following wildfire in the western United States? *Forest Ecology and Management* 454: 117663. https://doi.org/10.1016/j.foreco.2019.117663.

Krawchuk, M.A., G.W. Meigs, J.M. Cartwright, et al. 2020. Disturbance refugia within mosaics of forest fire, drought, and insect outbreaks. *Frontiers in Ecology and the Environment* 18: 235244. https://doi.org/10.1002/fee.2190.

Lake, F.K., V. Wright, P. Morgan, et al. 2017. Returning fire to the land: Celebrating traditional knowledge and fire. *Journal of Forestry* 115: 343–353. https://doi.org/10.5849/jof.2016-043R2.

Landres, P. 2010. Let it be: A hands-off approach to preserving wildness in protected areas [chapter 6]. In *Beyond naturalness: Rethinking park and wilderness stewardship in an era of rapid change*, ed. D.N. Cole and L. Yung, 88–105. Washington D.C.: Island Press.

Lippitt, C.L., D.A. Stow, J.F. O'Leary, and J. Franklin. 2013. Influence of short-interval fire occurrence on post-fire recovery of fire-prone shrublands in California, USA. *International Journal of Wildland Fire* 22: 184–193. https://doi.org/10.1071/WF10099.

Lynch, A.J., L.M. Thompson, E.A. Beever, et al. 2021. Managing for RADical ecosystem change: Applying the resist-accept-direct (RAD) framework. *Frontiers in Ecology and the Environment*: 2377. https://doi.org/10.1002/fee.2377.

Marshall, L.A., and D.A. Falk. 2020. Demographic trends in community functional tolerance reflect tree responses to climate and altered fire regimes. *Ecological Applications* 30: 116. https://doi.org/10.1002/eap.2197.

Matonis, M.S., and D. Binkley. 2018. Not just about the trees: Key role of mosaic-meadows in restoration of ponderosa pine ecosystems. *Forest Ecology and Management* 411: 120–131. https://doi.org/10.1016/j.foreco.2018.01.019.

McIntyre, P.J., J.H. Thorne, C.R. Dolanc, et al. 2015. Twentieth-century shifts in forest structure in California: Denser forests, smaller trees, and increased dominance of oaks. *Proc National Acad Sci* 112: 1458–1463. https://doi.org/10.1073/pnas.1410186112.

McLane, S.C., and S.N. Aitken. 2012. Whitebark pine (*Pinus albicaulis*) assisted migration potential: Testing establishment north of the species range. *Ecological Applications* 22: 142–153. https://doi.org/10.1890/11-0329.1.

McPherson, E.G., A.M. Berry, N.S. van Doorn, et al. 2017. Climate-ready tree study–update for Central Valley communities. *Western Arborist* 43: 44–51.

Merrick, M.J., M. Morandini, V.L. Greer, and J.L. Koprowski. 2021. Endemic population response to increasingly severe fire: A cascade of endangerment for the Mt. Graham red squirrel. *BioScience* 71: 161–173. https://doi.org/10.1093/biosci/biaa153.

Millar, C.I., and N.L. Stephenson. 2015. Temperate forest health in an era of emerging megadisturbance. *Science* 349: 823–826. https://doi.org/10.1126/science.aaa9933.

Miller, J.D., H. Safford, M. Crimmins, and A.E. Thode. 2009. Quantitative evidence for increasing forest fire severity in the Sierra Nevada and southern Cascade Mountains, California and Nevada, USA. *Ecosystems* 12: 16–32. https://doi.org/10.1007/s10021-008-9201-9.

Minor, J., D. Falk, and G. Barron-Gafford. 2017. Fire severity and regeneration strategy influence shrub patch size and structure following disturbance. *Forests* 8: 221. https://doi.org/10.3390/f8070221.

Mueller, S.E., A.E. Thode, E.Q. Margolis, et al. 2020. Climate relationships with increasing wildfire in the southwestern US from 1984 to 2015. *Forest Ecology and Management* 460: 117861. https://doi.org/10.1016/j.foreco.2019.117861.

Nolan, C., J.T. Overpeck, J.R.M. Allen, et al. 2018. Past and future global transformation of terrestrial ecosystems under climate change. *Science* 361: 920 LP–920923. https://doi.org/10.1126/science.aan5360.

North, M.P., J.T. Stevens, D.F. Greene, et al. 2019. Tamm review: Reforestation for resilience in dry western U.S. forests. *Forest Ecology and Management* 432: 209–224. https://doi.org/10.1016/j.foreco.2018.09.007.

Ouzts, J., T. Kolb, D. Huffman, and A. Sánchez Meador. 2015. Post-fire ponderosa pine regeneration with and without planting in Arizona and New Mexico. *Forest Ecology and Management* 354: 281–290. https://doi.org/10.1016/j.foreco.2015.06.001.

Parks, S.A., and J.T. Abatzoglou. 2020. Warmer and drier fire seasons contribute to increases in area burned at high severity in western US forests from 1985 to 2017. *Geophysical Research Letters* 47: 1–10. https://doi.org/10.1029/2020GL089858.

Prichard, S.J., P.F. Hessburg, R.K. Hagmann, et al. 2021. Adapting western North American forests to climate change and wildfires: Ten common questions. *Ecological Applications*: e02433. https://doi.org/10.1002/eap.2433.

Reilly, M.J., V.J. Monleon, E.S. Jules, and R.J. Butz. 2019. Range-wide population structure and dynamics of a serotinous conifer, knobcone pine (*Pinus attenuata L.*), under an anthropogenically-altered disturbance regime. *Forest Ecology and Management* 441: 182–191. https://doi.org/10.1016/j.foreco.2019.03.017.

Richardson, B.A., and L. Chaney. 2018. Climate-based seed transfer of a widespread shrub: Population shifts, restoration strategies, and the trailing edge. *Ecological Applications* 28: 2165–2174. https://doi.org/10.1002/eap.1804.

Rodman, K.C., T.T. Veblen, T.B. Chapman, et al. 2020. Limitations to recovery following wildfire in dry forests of southern Colorado and northern New Mexico, USA. *Ecological Applications* 30: 1–20. https://doi.org/10.1002/eap.2001.

Romme, W.H., M.L. Floyd, and D. Hanna. 2009. *Historical range of variability and current landscape condition analysis: South central highlands section, southwestern Colorado and northwestern New Mexico*. Fort Collins: Restoration Institute at Colorado State University and USDA Forest Service.

Roos, C.I., and C.H. Guiterman. 2021. Dating the origins of persistent oak shrubfields in northern New Mexico using soil charcoal and dendrochronology. *The Holocene* 31: 1212–1220. https://doi.org/10.1177/09596836211003255.

Roos, C.I., T.W. Swetnam, T.J. Ferguson, et al. 2021. Native American fire management at an ancient wildland-urban interface in the Southwest United States. *Proceedings National Academy Sciences of the United States America* 118: e2018733118. https://doi.org/10.1073/pnas.2018733118.

Rother, M.T., and T.T. Veblen. 2016. Limited conifer regeneration following wildfires in dry ponderosa pine forests of the Colorado front range. *Ecosphere* 7: e01594. https://doi.org/10.1002/ecs2.1594.

Rother, M.T., T.T. Veblen, and L.G. Furman. 2015. A field experiment informs expected patterns of conifer regeneration after disturbance under changing climate conditions. *Canadian Journal of Forest Research* 45: 16071616. https://doi.org/10.1139/cjfr-2015-0033.

Safford, H.D., and V.R. Vallejo. 2019. Ecosystem management and ecological restoration in the Anthropocene: Integrating global change, soils, and disturbance in boreal and Mediterranean forests. In *Global change and forest soils: Conservation of a finite natural resource*, ed. M. Busse, C.P. Giardina, D.M. Morris, and D.S. Page-Dumroese, 259–308. Elsevier.

Sagarin, R., and A. Pauchard. 2010. Observational approaches in ecology open new ground in a changing world. *Frontiers in Ecology and the Environment* 8: 379–386. https://doi.org/10.1890/090001.

Savage, M., and J.N. Mast. 2005. How resilient are southwestern ponderosa pine forests after crown fires? *Canadian Journal of Forest Research* 977: 967–977. https://doi.org/10.1139/X05-028.

Schuurman, G.W., C. Hawkins-Hoffman, D.N. Cole, et al. 2020. *Resist-accept-direct (RAD)—A framework for the 21st-century natural resource manager. Natural resource report. NPS/NRSS/CCRP/NRR-2020/2213*. Fort Collins: National Park Service. https://doi.org/10.36967/nrr-2283597.

Shive, K.L., H.K. Preisler, K.R. Welch, et al. 2018. From the stand scale to the landscape scale: Predicting the spatial patterns of forest regeneration after disturbance. *Ecological Applications* 28: 1626–1639. https://doi.org/10.1002/eap.1756.

Shriver, R.K., C.M. Andrews, D.S. Pilliod, et al. 2018. Adapting management to a changing world: Warm temperatures, dry soil, and interannual variability limit restoration success of a dominant woody shrub in temperate drylands. *Global Change Biology* 24: 4972–4982. https://doi.org/10.1111/gcb.14374.

Singleton, M., A. Thode, A. Sánchez Meador, and P. Iniguez. 2019. Increasing trends in high-severity fire in the southwestern USA from 1984-2015. *Forest Ecology and Management* 433: 709–719. https://doi.org/10.1016/j.foreco.2018.11.039.

Stephens, S.L., J.J. Moghaddas, C. Edminster, et al. 2009. Fire treatment effects on vegetation structure, fuels, and potential fire severity in western U.S. forests. *Ecological Applications* 19: 305–320. https://doi.org/10.1890/07-1755.1.

Stevens, J.T., C.M. Haffey, J.D. Coop, et al. 2021. Tamm review: Postfire landscape management in frequent-fire conifer forests of the southwestern United States. *Forest Ecology and Management* 502: 119678. https://doi.org/10.1016/j.foreco.2021.119678.

Stevens-Rumann, C.S., and P. Morgan. 2019. Tree regeneration following wildfires in the western US: A review. *Fire Ecology* 15: 1–17. https://doi.org/10.1186/s42408-019-0032-1.

Stewart, J.A.E., P.J. van Mantgem, D.J.N. Young, et al. 2020. Effects of postfire climate and seed availability on postfire conifer regeneration. *Ecological Applications*. https://doi.org/10.1002/eap.2280.

Stoddard, M.T., J.P. Roccaforte, A.J. Sánchez Meador, et al. 2021. Ecological restoration guided by historical reference conditions can increase resilience to climate change of southwestern U.S. ponderosa pine forests. *Forest Ecology and Management* 493: 119256. https://doi.org/10.1016/j.foreco.2021.119256.

Swetnam, T.W., J. Farella, C.I. Roos, et al. 2016. Multi-scale perspectives of fire, climate and humans in western North America and the Jemez Mountains, U.S.a. *Philosophical Trans Royal Society B* 371: 20150168. https://doi.org/10.1098/not.

Syphard, A.D., T.J. Brennan, and J.E. Keeley. 2019. Drivers of chaparral type conversion to herbaceous vegetation in coastal southern California. *Diversity Distributions* 25: 90–101. https://doi.org/10.1111/ddi.12827.

Tepley, A.J., J.R. Thompson, H.E. Epstein, and K.J. Anderson-Teixeira. 2017. Vulnerability to forest loss through altered postfire recovery dynamics in a warming climate in the Klamath Mountains. *Global Change Biology* 23: 4117–4132. https://doi.org/10.1111/gcb.13704.

Truitt, A.M., E.F. Granek, M.J. Duveneck, et al. 2015. What is novel about novel ecosystems: Managing change in an ever-changing world. *Environmental Management* 55: 1217–1226. https://doi.org/10.1007/s00267-015-0465-5.

USFWS. 2011. *Draft mount Graham red squirrel recovery plan, first revision (Tamiasciurus hudsonicus grahamensis)*. Southwest Region, Albuquerque, New Mexico: US Fish and Wildlife Service https://ecos.fws.gov/docs/recovery_plan/FR00000388%20Draft%20Mount%20Graham%20Red%20Squirrel%20Recovery%20Plan%20First%20Revision%20Final.pdf.

van Mantgem, E., P. van Mantgem, D. Falk, and J. Keeley. 2020. Linking diverse terminology to vegetation type-conversion, a complex emergent property. *California Fire Science Consortium*. https://www.cafiresci.org/s/VTCinResilienceFramework_F_122020.pdf.

Walker, R.B., J.D. Coop, S.A. Parks, and L. Trader. 2018. Fire regimes approaching historic norms reduce wildfire-facilitated conversion from forest to non-forest. *Ecospshere* 9: e02182. https://doi.org/10.1002/ecs2.2182.

Williams, A.P., C.D. Allen, A.K. Macalady, et al. 2013. Temperature as a potent driver of regional forest drought stress and tree mortality. *Nature Climate Change* 3: 292–297. https://doi.org/10.1038/nclimate1693.

Williams, A.P., E.R. Cook, J.E. Smerdon, et al. 2020. Large contribution from anthropogenic warming to an emerging North American megadrought. *Science* 368: 314–318. https://doi.org/10.1126/science.aaz9600.

Young, D.J.N., T.D. Blush, M. Landram, et al. 2020. Assisted gene flow in the context of large-scale forest management in California, USA. *Ecosphere* 11. https://doi.org/10.1002/ecs2.3001.

Young, D.J.N., C.M. Werner, K.R. Welch, et al. 2019. Post-fire forest regeneration shows limited climate tracking and potential for drought-induced type conversion. *Ecology* 100: e02571. https://doi.org/10.1002/ecy.2571.

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Received: 9 July 2021 | Revised: 26 January 2022 | Accepted: 2 February 2022

DOI: 10.1002/eap.2626

ARTICLE

ECOLOGICAL APPLICATIONS
ECOLOGICAL SOCIETY OF AMERICA

Fire-driven vegetation type conversion in Southern California

Alexandra D. Syphard[1,2] | **Teresa J. Brennan**[3] | **Heather Rustigian-Romsos**[1] | **Jon E. Keeley**[3,4]

[1]Conservation Biology Institute, Corvallis, Oregon, USA

[2]Department of Geography, San Diego State University, San Diego, California, USA

[3]USGS Western Ecological Research Center, Three Rivers, California, USA

[4]Department of Ecology & Evolutionary Biology, University of California, Los Angeles, California, USA

Correspondence
Alexandra D. Syphard
Email: asyphard@consbio.org

Handling Editor: Xiangming Xiao

Abstract

One consequence of global change causing widespread concern is the possibility of ecosystem conversions from one type to another. A classic example of this is vegetation type conversion (VTC) from native woody shrublands to invasive annual grasslands in the biodiversity hotspot of Southern California. Although the significance of this problem is well recognized, understanding where, how much, and why this change is occurring remains elusive owing to differences in results from studies conducted using different methods, spatial extents, and scales. Disagreement has arisen particularly over the relative importance of short-interval fires in driving these changes. Chronosequence approaches that use space for time to estimate changes have produced different results than studies of changes at a site over time. Here we calculated the percentage woody and herbaceous cover across Southern California using air photos from ~1950 to 2019. We assessed the extent of woody cover change and the relative importance of fire history, topography, soil moisture, and distance to human infrastructure in explaining change across a hierarchy of spatial extents and regions. We found substantial net decline in woody cover and expansion of herbaceous vegetation across all regions, but the most dramatic changes occurred in the northern interior and southern coastal areas. Variables related to frequent, short-interval fire were consistently top ranked as the explanation for shrub to grassland type conversion, but low soil moisture and topographic complexity were also strong correlates. Despite the consistent importance of fire, there was substantial geographical variation in the relative importance of drivers, and these differences resulted in different mapped predictions of VTC. This geographical variation is important to recognize for management decision-making and, in addition to differences in methodological design, may also partly explain differences in previous study results. The overwhelming importance of short-interval fire has management implications. It suggests that actions should be directed away from imposing fires to preventing fires. Prevention can be controlled through management actions that limit ignitions, fire spread, and the damage sustained in areas that do burn. This study also demonstrates significant potential for changing fire regimes to drive large-scale, abrupt ecological change.

© 2022 The Ecological Society of America.

KEYWORDS
aerial photograph, annual grass, chaparral, drought, fire regime, grass-fire cycle invasive species, human development, predictive mapping, VTC, wildfire

INTRODUCTION

Rapid global change, such as shifts in fire regimes, has the potential to greatly disrupt ecological functioning and cause dramatic transformations. For example, once-dominant vegetation types may transition to different types and lead to cascading ecological impacts. A classic example of this is vegetation type conversion (VTC) from native woody shrublands to invasive annual grasslands in Southern California, one of the five Mediterranean-climate ecosystems in the world (Underwood, Franklin, et al., 2018). Chaparral shrublands provide a wide range of ecosystem services, and their support of exceptional species richness in one of the world's biodiversity hotspots makes their decline an issue of global significance (Rundel, 2018; Underwood, Hollander, et al., 2018).

The vulnerability of chaparral to high fire frequency—specifically, short fire return intervals—has been recognized in the literature and observed in field studies for many decades (e.g., Cooper, 1922; Haidinger & Keeley, 1993; Jacobsen et al., 2004; Keeley & Brennan, 2012; Zedler et al., 1983). However, the role of short-interval fire in driving type conversion has also been questioned in some studies (Meng et al., 2014; Storey et al., 2021). Once chaparral has been replaced with invasive grass, its recovery becomes unlikely, at least on human time scales (Anderson & Keeley, 2018; Zedler, 1995). Thus, better understanding of the rate, drivers, and potential locations of vulnerability is critical for identifying the most efficient and effective ways to prevent further decline.

Until recent years, empirical documentation on landscape scales of where and to what extent chaparral is being locally extirpated and replaced with herbaceous vegetation has been lacking. The few landscape-scale studies that have been conducted have only covered parts of chaparral's range in Southern California and have used different methodologies (e.g., Lippitt et al., 2012; Lucero et al., 2021; Meng et al., 2014; Storey et al., 2021; Syphard, Brennan, & Keeley, 2019a & b). Complicating our understanding is that these studies have found variation in the relative importance of factors most strongly correlated with woody chaparral decline and conversion to grass, particularly the role of short-interval fire.

For example, Meng et al. (2014) found a weak association between fire history and a remotely sensed index of vegetation cover. More recently, Storey et al. (2021) also reported that little evidence existed on the role of short-interval fire in effecting VTC, concluding that earlier studies demonstrating VTC were not typical of what was occurring over broad portions of the landscape. Lucero et al. (2021) found dynamic but generally weak evidence for the effect of a single, short interval between two successive fires on VTC, but they acknowledged the potential for spatial and temporal variation. On the other hand, landscape-scale studies by Lippitt et al. (2012), Syphard, Brennan, and Keeley (2019a & b) demonstrated that short-interval fire was an important factor separating sites of woody decline and VTC from those that did not change. Several factors likely play a role in accounting for the different conclusions about the role of short-interval fires in producing VTC. These studies examined different chaparral associations, and it is clear from field studies that shrub species are markedly different in terms of resilience to short-interval fires (Keeley et al., 2008; Schumann et al., 2020). The only VTC studies where species composition was considered was in the aforementioned field studies that followed species changes before and after short-interval fires.

An equally important factor are the different methodologies in landscape-scale VTC studies. Landscape studies that have implicated fire interval in explaining VTC were time-series studies of vegetation changes following a sequence of fires on a particular site; Lippitt et al. (2012) used field observations and Syphard, Brennan, and Keeley (2019a & b) used a time-series approach incorporating airphoto imagery to demonstrate changes in woody cover at particular sites in response to short-interval fires. In contrast, Meng et al. (2014) failed to find a fire-interval connection using Landsat remote-sensing indicators of plant biomass and took a so-called space-for-time approach in which, instead of demonstrating VTC at a single plot over time, they inferred it based on comparisons of paired plots with different fire histories. Lucero et al. (2021) also used paired plots, but instead of using Landsat data, they used fine-scale aerial imagery. These space-for-time studies assume that the only important difference between sites is the fire history; they control for certain types of environmental variation but cannot discern species composition. This is important in chaparral remote-sensing studies because of the complex mosaic of different species dominants (Peterson & Stow, 2003; Roberts et al., 1998), fine-scale environmental heterogeneity, and species distributions (Keeley, 2004). This chronosequence approach is fraught with problems and is not recommended for phenomena that can be studied by following changes on a site over time (Walker et al., 2010).

Understanding landscape changes requires a multivariate approach that considers factors other than fire interval. For example, Meng et al. (2014) found a reduction in vegetation cover after a short interval between fires at low elevations, and this likely was due to changes in community composition (i.e., chaparral is replaced at lower elevations by the smaller-stature sage scrub), as revealed by Lucero et al. (2021) and Syphard et al. (2006) and by the fact that human ignitions are inversely correlated with elevation (Keeley & Syphard, 2018a). Additionally, given the association of elevation with different plant communities and a range of physiological factors associated with plant growth or postfire recovery (Franklin, 1996), there could be multiple reasons for this pattern. Lippitt et al. (2012) observed a similar topographic effect with low elevation. Syphard, Brennan, and Keeley (2019a & b) found that other variables most strongly associated with VTC were indicators of soil moisture, which is consistent with Park et al. (2018), who found that the spatial distribution of herbaceous cover in chaparral communities was most strongly correlated with low soil moisture.

There are several ways that soil moisture availability may facilitate vegetation change. For example, drought-related plant mortality may drive chaparral decline and lead to VTC because dead shrubs open the canopy and allow for the establishment of sage scrub or invasive grasses (Jacobsen & Pratt, 2018). Drought may limit postfire recovery of chaparral and shift the competitive balance in favor of invasive grasses (Park et al., 2019). Also, the interaction between soil moisture and short-interval fires may play a role because obligate-seeding shrubs are most sensitive to short-interval fire and are also strongly favored on more arid sites (Keeley & Syphard, 2018b). Soil nitrogen is another factor that could increase the competitive ability of invasive species (Fenn, Allen, & Weiss, 2010); however, previous studies found it not to be a significant factor in postfire VTC (Keeley et al., 2005; Syphard, Brennan, & Keeley, 2019b).

An additional consideration is geographical differences in factors driving VTC. Understanding such variation might identify the variables of most concern in different regions; additionally, identifying the subregions most vulnerable could facilitate setting priorities in terms of where to focus decision-making and management. In this study, we expanded the geographical extent of previous empirical studies conducted with aerial photography to document and explain the relative extent and drivers of woody shrubland decline and conversion across Southern California. Our approach was spatially hierarchical, with separate analyses conducted across the entire area, by northern and southern regions, and by four subregions. This extended and hierarchical analysis enabled us to answer the following questions:

1. How much VTC has occurred across the entire Southern California region, and are there geographical differences in the amount of woody decline and conversion that are occurring?
2. What are the most important drivers or correlates to woody decline and conversion, and how do they vary across regions?
3. Do the geographical differences among regions result in different predictive model output maps of woody decline and conversion?

METHODS

Study region

The coastal region of Southern California is a hotspot of biodiversity that has already lost more than half of its area of natural vegetation due to habitat loss and fragmentation from urban development (Underwood et al., 2009), which continues apace (Radeloff et al., 2018). The region has a Mediterranean climate with cool, wet winters and hot, dry summers, and the most extensive vegetation types include the largely summer-deciduous sage scrub and taller-stature evergreen chaparral shrublands. Throughout the region these shrublands form a mosaic with oak woodlands, grassland, and, at higher elevations, montane conifer forests. The region is environmentally diverse with strong climatic and topographical gradients that vary from the coast to the interior and from the south to the north (Keeley & Syphard, 2018b).

The natural fire regime in the region is one of periodic high-severity crown fires that tend to be most destructive when driven by strong, dry, offshore Santa Ana winds (Faivre et al., 2016). Humans are responsible for at least 95% of fire ignitions, with lightning fires primarily restricted to the highest elevations in the interior mountain ranges (Keeley & Syphard, 2018a). Given the exponential population growth in the last century, wildfires have become uncharacteristically frequent, with extensive areas of chaparral having experienced fire return intervals much shorter than those from presettlement fire regimes (Safford & Van de Water, 2014). Although the area has a semiarid climate, prolonged periods of extreme drought can result in substantial vegetative effects (Dong et al., 2019).

To delineate the full study area, we selected two ecoregion provinces, California Coastal Chaparral Forest and Shrub and California Coastal Range Open Woodland

(Cleland et al., 1997), and constrained them to fall within San Bernardino, Santa Barbara, Ventura, Los Angeles, Riverside, and Orange Counties. We then subdivided the study area into northern and southern regions and four subregions. First, we used the ecoregion province boundaries to separate coastal from interior plots. However, there were no clear ecoregional or other boundaries separating the region into north and south. The metropolitan area of Los Angeles, California, however, creates a large gap between the sample plots to the north and south; we used this gap as a general dividing line, with State Route 330 creating the separation in the narrow interior area, where the northern and southern plots are relatively close together.

Airphoto imagery and random sampling

We previously created vegetation plots to analyze the drivers of VTC in San Diego County (Syphard, Brennan & Keeley, 2019b) and the Santa Monica Mountains (Syphard, Brennan, & Keeley 2019a). For the latter subregion, estimates of the amount of vegetation change could potentially have been biased by the intentional selection of plots in which woody cover had declined. Therefore, to estimate vegetation change across the entire study region considered here, we started with plot data from San Diego County ($n = 656$) and, using the same methodology, added new plots across the rest of the region, including the Santa Monica Mountains.

To generate the new plots, we selected and georeferenced the earliest available historical aerial photos ($n = 195$) from the University of California Santa Barbara Map and Image Library (http://mil.library.ucsb.edu/ap_indexes/FrameFinder) to cover the entire region (except for San Diego County). The historical photos were at the scale of 1:20,000, with dates ranging from 1943 to 1959. We subsequently acquired georeferenced overlapping contemporary photos (year 2019) with a resolution of 60 cm from the National Agriculture Imagery Program (NAIP) (https://gis.apfo.usda.gov/arcgis/rest/services) to pair with the historical photos for change analysis. Thus, the number of years between photos ranged from 60 to 76.

Across the photo coverage footprints, we generated 3411 random points spaced a minimum of 90 m apart in areas mapped as shrub in a historical vegetation map (Kelly et al., 2005). After deleting points overlapping imagery that was too poor to interpret, we generated 30-m buffers around the remaining points to create 0.28-ha plots for interpretation and analysis.

For all plots on both historical and contemporary images, we manually interpreted and recorded in four equal-interval numeric classes from 1 to 4 (corresponding to 0%–25%, 26%–50%, 51%–75%, and 76%–100%) the percentage cover of woody chaparral vegetation, herbaceous vegetation, and human disturbance (e.g., urban, agriculture, road, trail, or fuel break). We additionally recorded whether there were pure stands of each class (95%–100% cover) or whether the cover type was absent (0%–5% cover). We documented the type of human disturbance present in the plots for a summary of types of vegetation change overall. Although woody cover is easily distinguished from herbaceous cover in the imagery, we could not discern the condition of the chaparral in terms of drought-related dieback. However, even had there been dieback, the skeletons remained visible and were recorded as woody cover until the next fire. To ensure that postfire recovery was not mistaken for VTC, we deleted any plots that had experienced a partial or complete burn within 5 years of either image date, which is sufficient time for chaparral biomass to recover (Guo, 2001).

For all plots in which there was no recent fire, we recorded both gain and loss of woody cover over the study duration to show summary statistics of overall vegetation change (Table 1a). For statistical analysis of woody vegetation decline and conversion, we deleted plots in which there was less than 75% cover of woody vegetation or human disturbance in the earliest image date. This ensured that all plots started in the same condition and that our analysis was appropriately focused on decline or conversion. Also, because the focus of the statistical analysis was conversion of woody cover to herbaceous cover, we removed all plots that had become disturbed by human land use during the contemporary period. This ensured that the changes analyzed were vegetative changes only. We created two binary dependent variables. Woody decline included any plot in which chaparral had experienced at least a 25% conversion to grass (i.e., a cover decline of at least one class). For *type conversion*, the plot must have experienced more than 50% decline (i.e., a decline of at least two classes) such that herbaceous cover occupied more than half of the plot.

Explanatory variables

To determine the relative importance of potential drivers and environmental correlates with woody vegetation decline and type conversion to herbaceous cover, we used a suite of variables similar to prior studies (Syphard, Brennan, & Keeley, 2019a & b) (Table 1b). Previous work identified soil characteristics and water balance as important correlates with VTC and herbaceous expansion (e.g., Park et al., 2018; Syphard, Brennan, & Keeley, 2019a & b), in part because

TABLE 1 Description and native scale of (a) dependent and (b) explanatory variables used in statistical analysis of vegetation type conversion in Southern California from ~1950 to 2019

	Description	Native scale and units
a) Vegetation change (dependent variables)		
Woody decline	Plot that was fully chaparral in historical period and experienced at least a 25% conversion to grass by contemporary period	30-m buffers around points (0.28 ha), binary
Woody conversion	Plot that was fully chaparral in historical period and converted to at least 75% grass by contemporary period	30-m buffers around points (0.28 ha), binary
b) Explanatory variables		
Soil and drought		
Actual evapotranspiration (AET)	Total annual water evaporated from surface and transpired by plants, assuming unlimited water, summed annually and averaged from 1981 to 2010	270-m raster, mm
Soil available water storage (SOIL_AWS)	Maximum amount of water available for plant use that soil can provide	30-m raster, mm
Nitrogen deposition	Annual deposition of reduced and oxidized nitrogen	Polygon converted to raster
Topography		
Elevation	US Geological Survey digital elevation model	30-m raster, m
Slope	Degree slope derived from elevation	30-m raster, degrees
Fire frequency		
Fire count	Total no. fires since 1878	Regions polygon converted to raster, count
Minimum fire return interval	Shortest no. years between any two fires on record or between contemporary image date (2019) and 1878, the first year in record	Regions polygon converted to raster, years
Fire departure	Estimated departure of contemporary fire return interval from median reference fire return interval of pre-Euroamerican settlement	Polygon converted to raster, percentage departure
Proximity to development or disturbance		
Distance to roads	Proximity to all TIGER line file roads, excluding 4WD and OHV roads. TIGER Roads 2015, US Department of Commerce, US Census Bureau	30-m raster, m
Distance to Wildland Urban Interface (WUI)	Euclidean distance to interface or intermix WUI in 2010	30-m raster, m
Terrestrial intactness	Relative natural condition of landscape as function of multiple types of human disturbance using input data from 2011 to 2015	Converted from polygon to raster, unitless (−1 to 1)

they mediate plant development and productivity. Therefore, we evaluated available soil water storage provided by the Natural Resources Conservation Service (https://www.arcgis.com/home/item.html?id=e66bffd8e4614cc9bf3c770fe6a4d4fc) and actual evapotranspiration (AET), calculated from topography, soil, precipitation, and temperature data produced by Flint and Flint (2012) using the California Basin Characterization Model (https://ca.water.usgs.gov/projects/reg_hydro/basin-characterization-model.html). Because nitrogen deposition can moderate soil fertility and enhance the growth rates of invasive grasses (Fenn, Allen,Weiss, Jovan, et al., 2010), we used a 2002 map representing total annual deposition of reduced and oxidized nitrogen (kilograms of nitrogen per hectare per year) at 4-km resolution (Tonnesen et al., 2007). Topographical variables also have the potential to regulate energy and

moisture balance (Franklin, 1995), in addition to mediating wildfire behavior directly, so we included elevation and slope as explanatory variables.

We considered two explanatory variables to capture the effect of fire frequency on vegetation change. For the first, minimum fire interval, we used the wildfire perimeter database from Cal Fire (https://gis.data.ca.gov/datasets/e3802d2abf8741a187e73a9db49d68fe_0), with overlapping fires mapped from 1878 to 2018. We overlaid all plots with the fire perimeters and calculated the minimum fire return interval as the shortest number of years between any two fires in the record that occurred before the contemporary image date (i.e., 2019). If no fire occurred in the record, we subtracted 1878 from the contemporary data year and used that as the minimum interval; if one fire occurred, we calculated the minimum interval to be the smaller of the interval in years been the fire date and either the beginning of the fire record or the contemporary data year. We considered, but ultimately did not use, the total count of fires as an explanatory variable because it was highly correlated with minimum interval. For the other variable, we used the USDA Forest Service fire return interval departure (FRID) map layer (https://www.fs.fed.us/r5/rsl/projects/gis/data/FRID/FRID_Metadata.html) to quantify the degree of difference between contemporary median fire return intervals at a site and the estimated fire return intervals that occurred in pre-Euroamerican settlement times. Although fires are burning less frequently than historical times in coniferous forests in California, the trend for much of the Southern California study area is for fires to be burning more frequently (Safford & Van de Water, 2014).

Because expansion of invasive grasses often results from their dispersal from disturbed areas (Fusco et al., 2021), we considered three metrics of human disturbance. Two of these, distance to roads (https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.2015.html) and Wildland Urban Interface (WUI) (http://silvis.forest.wisc.edu/data/wui-change/), were included in previous studies of type conversion in Southern California (Syphard, Brennan, & Keeley, 2019a & b) (Table 1). Here we also included a map that reflects the overall footprint of human disturbance on the landscape through a metric of terrestrial intactness (https://databasin.org/datasets/e3ee00e8d94a4de58082fdbc91248a65/).

We constrained the extent of all mapped variables to the study region and resampled all grids to the finest-resolution data at 30 m using the ArcMap (version 10.6.1) Resample tool with the Bilinear resampling technique (https://desktop.arcgis.com/en/arcmap/latest/tools/data-management-toolbox/resample.htm). We also converted all polygon layers to raster using the same extent and cell size. Around all plot points, we created a 30-m buffer, then extracted the mean value of all explanatory variables and assigned them to the plots. To simplify interpretation for evaluating variable importance, we charted results based on the variable with the highest percentage contribution to the model out of these groups: terrain (elevation and slope), disturbance (distance to roads and WUI and terrestrial intactness), soil (available soil water storage, AET, and nitrogen), and fire (minimum fire interval and fire departure).

Analysis

To quantify vegetation change, we summarized the number of plots in different woody and herbaceous cover classes for the historical and contemporary image dates. In addition to summarizing change across the entire study area, we also stratified the study region geographically to determine whether there were differences in the extent and drivers of vegetation change and whether those differences affected mapped predictions. Thus, we calculated these numbers and performed analyses separately for the northern and southern regions and for four subregions representing the combinations of north, south, coastal, and interior. Because sample sizes of full type conversion were small for the northern and southern coastal subregions ($n = 6$ and 9 respectively), we merged them with the interior regions in the north and south for inferential statistical analysis. For woody decline, however, we performed separate analyses for the four separate regions. For all explanatory variables, we quantified descriptive statistics, including minimum, maximum, average, and range of values for the explanatory variables for the four subregions (Phillips et al., 2006) of the study area to assess their relative environmental differences.

To quantify the relative importance of explanatory variables, we used two types of statistical analysis—one that estimated each variable's independent importance (hierarchical partitioning) using presence-absence data, and a presence-only multivariate analysis that accounted for variable interactions (MaxEnt, version 3.4.3, https://biodiversityinformatics.amnh.org/open_source/maxent/). Hierarchical partitioning is a statistical algorithm that calculates the isolated effect of each explanatory variable on the response, which in this case was binary, indicating either woody decline or woody conversion as presence and plots that did not change or decline as absence; for the MaxEnt modeling, we only used the presence data. The relative contribution of each variable is determined by running a hierarchical decomposition of a goodness-of-fit measure from regression models using all variable subsets (in this case a log-likelihood goodness-of-fit test

for logistic regressions) (MacNally & Walsh, 2004). We used the hier.part package version 1.0–6 in RStudio (R Core Team, 2020).

For mapping and comparison of variable importance within a multivariate framework, we used the MaxEnt statistical software program (Phillips & Dudık, 2008) that was originally developed for species distribution modeling but has recently been used for a range of other ecological applications (Elith et al., 2010) and for mapping fire or ignition probability (e.g., Syphard, Rustigian-Romsos et al., 2019). One of the benefits of MaxEnt is its known high performance for spatial mapping, which is why we used that method for the mapping part of our work. MaxEnt performs well with small sample sizes (Hernandez et al., 2006; Oppel et al., 2012; Wisz et al., 2008), has high predictive accuracy compared to other modeling methods (Elith et al., 2006; Guisan et al., 2007; Shabani et al., 2018), and allows versatile and flexible settings that can account for model interactions and nonlinear relationships (Elith et al., 2006; Merow et al., 2013).

MaxEnt is a presence-only machine-learning algorithm that iteratively compares the differences in explanatory variables between locations of the response variable (here, the plot location of either woody decline or conversion) and the locations of a randomly generated sample of 10,000 background plots, located at least 30 m apart. Through these iterative comparisons, the model estimates the best approximation of the response variable environmental distribution as the one with maximum entropy. The model outputs a raster map in which an exponential function is used to assign each cell a value between 0 and 1 representing relative suitability. The model also generates metrics of variable importance and performance accuracy from the area under the curve (AUC) of receiver operating characteristic curves (Fielding & Bell, 1997).

For the MaxEnt modeling, we used the same predictor variables as in the logistic regression models and evaluated differences in variable importance in the different regions and subregions. We initially ran the models with all variables included to record their relative importance. The MaxEnt program produces two alternatives (Phillips et al., 2006) for assessing variable importance in this multivariate framework. The percent contribution reflects each variable's influence as the algorithm is fitting the model, whereas the permutation importance reflects the importance of each variable within the final model—done by iteratively removing each variable from the model and quantifying the decrease in model accuracy that results from the omission of that variable. In the models run with all variables, we focused on percent contribution as the metric of relative importance and provide permutation importance in the Supporting Information Appendix S1. After running the variable selection process, described in what follows, we focus on the permutation importance for the variables retained because these represent the final selected models used for mapping. MaxEnt used with default parameterization has been shown to result in overly complex models (Anderson & Gonzalez Jr., 2011; Moreno-Amat et al., 2015; Warren et al., 2014). Therefore, it is recommended that MaxEnt settings be tuned to optimize model complexity and performance (Merow et al., 2013). We took the following steps to reduce potential model overfitting: limited potential model complexity by constraining the feature types to linear, quadratic, and product; excluded correlated predictors from entering the same models; utilized an iterative stepwise variable selection process to increase model parsimony; and optimized the regularization multiplier.

Because we wanted to capture the spatial signature of vegetation change and not urban development, we restricted the training extent of the maps to all vegetated areas except medium-intensity developed, high-intensity developed, and cultivated crops, using the National Land Cover Database from 2016 (https://www.mrlc.gov/). Before running the models, we used ENMTools (version 1.4.4) (Warren et al., 2010) to calculate correlation coefficients between pairs of all variables, and none were correlated $r >= 0.7$.

After recording variable importance in the full models, we proceeded to conduct an iterative stepwise process of variable selection. For each iteration, we removed the variable contributing the least information to the model fit (highest mean training gain without the variable) to decrease model complexity and increase performance (Warren et al., 2014) and ran the model again with the remaining predictors. This was repeated until only one variable remained. The model with the fewest variables having a mean training gain not significantly different than the full model was selected for each. Significance was defined as a lack of overlap between 95% confidence intervals for training gain means (R Core Team, 2020). After variable selection, we then altered the regularization multiplier from 0.5 to 5 at 0.5 increments and used the Model Selection function in ENMTools to calculate the Bayesian information criterion (BIC) for each of the models (run with no replication and raw output). The final model was the one with the regularization multiplier producing the lowest BIC score. Finally, we ran a fivefold cross validation of the final model to assess model performance.

After completing this MaxEnt modeling process for the full region using both woody decline and woody conversion as the response variables, we repeated the

process for the northern and southern regions. We also ran separate models for the four subregions, but only for woody decline due to the small sample size for full type conversion. Finally, we overlaid maps at these different spatial extents and then calculated and mapped the differences in predicted suitability for woody decline and conversion.

RESULTS

Extent of vegetation change

The total number of plots randomly sampled across the paired dates of air photos, including plots from the San Diego region (Syphard, Brennan, & Keeley 2019a), was 4067. From those we deleted 168 whose imagery was too poor to interpret, 326 that had had a fire within 5 years of either image date, and 833 plots that had had some type of human disturbance on either date. This resulted in a total of 2740 plots for which we analyzed vegetation change.

In terms of human disturbance, 741 out of 3899 (19%) plots were converted from vegetation to human land use over the study period. The reasons for natural vegetation conversion to human land use, from most to least common, included mechanical vegetation management (removal, thinning, and crushing of woody vegetation for linear fuel breaks) (31%), road development (26%), urban development (20%), trail construction (10%), miscellaneous agriculture (e.g., orchards, grazing, cropland) (8%), and undetermined (6%).

Most plots experienced no change in woody cover, and woody cover increased in some plots, particularly in the southern interior portion of the study area (Figure 1). Overall, there was a substantial net loss of

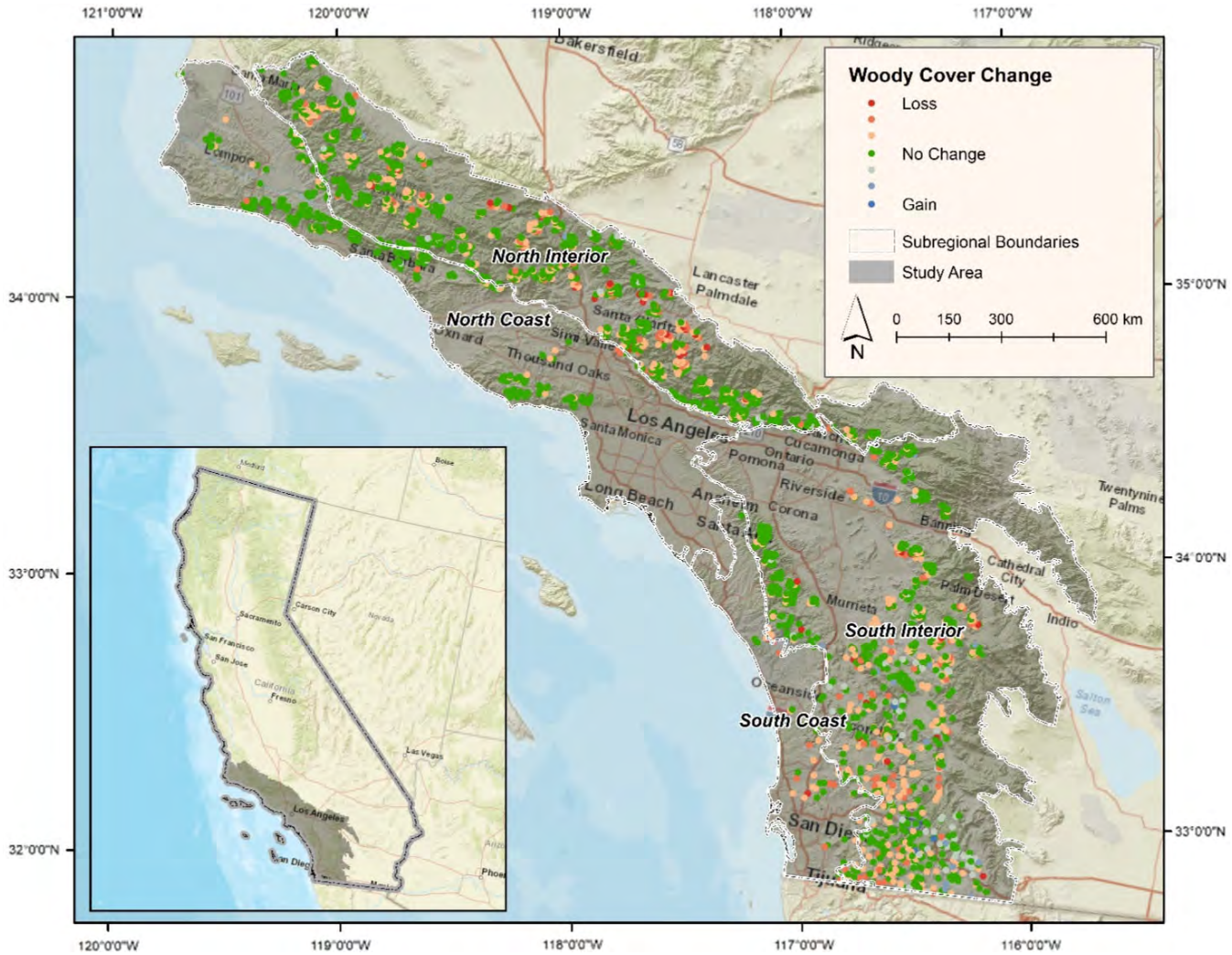


FIGURE 1 Study area map showing change in percentage woody cover from earliest to most recent image dates (~1950–2019) in Southern California. The middle value (green) indicates no change; the progressively warm colors display four classes of cover loss in 25% increments, with *woody decline* represented by all warm colors and *woody conversion* represented by the two darkest warm colors. The cool colors represent 25% increments of woody cover gain. The inset shows the study area location divided into four subregions.

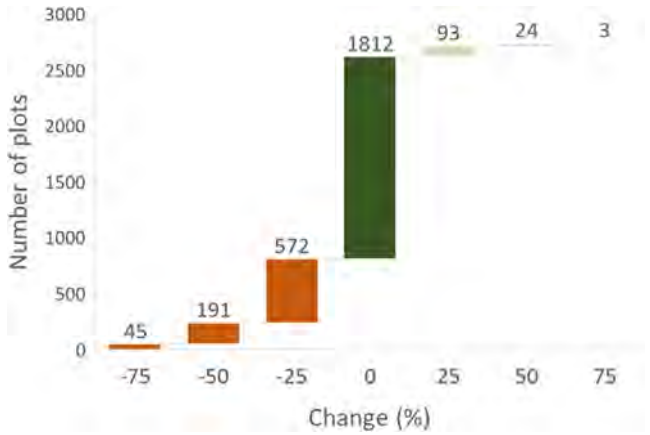


FIGURE 2 Net change in woody cover from earliest to most recent image dates (~1950–2019) in Southern California. Negative values indicate woody cover decline, and positive values indicate woody cover increase.

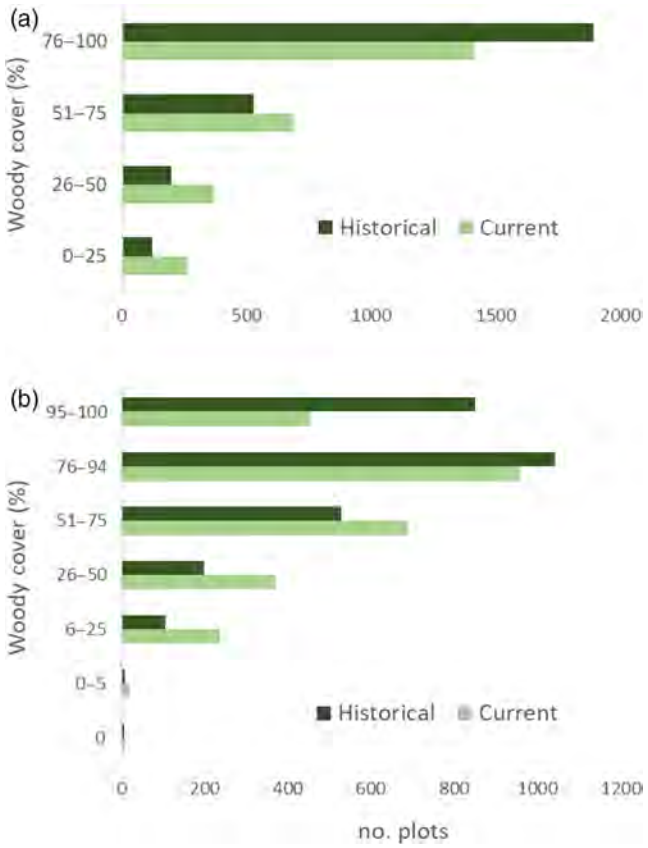


FIGURE 3 Number of vegetation plots distributed within woody cover classes in historical and current image dates show in (a) equal-interval classes of 25% cover and (b) equal-interval classes plus classes of pure woody (95–100%) and pure herbaceous (0–5%) vegetation

woody cover across the study region (Figures 1 and 2), along with herbaceous expansion (Appendix S1: Figure S1). The most dramatic decline was in the cover of originally pure stands of chaparral (i.e., 95%–100% woody cover) (Figure 3). When separated into subregions, both southern areas experienced the largest proportion of woody decline and conversion, most in the south coast (Figures 1 and 4), although the south coast had the smallest number of plots in the four regions. In the northern region, the interior experienced more woody vegetation decline and conversion than the coastal area (Figures 1 and 4).

Drivers of vegetation change

There were differences in the distribution of explanatory variables among the regions and subregions of the study area (Table 2, Appendix S1: Table S1). The coastal regions were less rugged and lower in elevation than the interior regions. The southern region showed the highest presence of human development, with shorter overall proximity to roads and the WUI, and both coastal regions were more highly disturbed than the interior regions. Available soil water storage and AET were generally higher in the north than the south, although soil water storage was lowest in the northern interior region. Nitrogen content in the soils was highest in the coastal regions. The shortest minimum fire interval was in the northern interior, but the largest departure in fire intervals was by far in the southern coastal area. In all areas, the average fire departure was negative, indicating that fires are overall more frequent than they have been historically.

Across the full region and in the north and south, fire was most frequently ranked as the most important variable (Figure 5, Appendix S1: Figures S2–S13) for woody decline and conversion. This was true both in terms of independent contribution through hierarchical partitioning and in terms of percent contribution in multivariate MaxEnt modeling. However, in the hierarchical partitioning models, the independent contribution of fire in the full region was less important than AET for both woody decline and conversion; and fire was also less important than slope for woody decline (Figure 5b, Appendix S1: Figure S2). In the MaxEnt models in which all variables were compared, both minimum fire interval or fire departure were the most important variables regionwide as well as in the north and south (Figure 5b, Appendix S1: Figures S2 and S3). Variable rankings among the other three classes of variables showed no clear trends and shifted slightly depending on whether the model was for woody decline or conversion or depending on the measure of variable importance.

In models fit with all explanatory variables in the subregions, fire again was ranked highest most frequently, but terrain and soil-related variables were more important compared to the models fit at larger extents (Figure 6a,b, Appendix S1: Figures S2–S13). In the hierarchical partitioning models, terrain (in this case slope [Appendix S1: Figure S1]) was ranked almost equally as fire for the coastal areas; and for the south interior, both slope and AET were more important than fire, albeit only slightly (Figure 6a, Appendix S1: Figure S2). In the multivariate MaxEnt models, soil (in this case nitrogen deposition [Appendix S1: Figure S3]) was nearly as important as fire interval in the north coast; and in the south coast, potential soil moisture in terms of available water storage and elevation were both slightly more important than fire (Figure 6b, Appendix S1: Figure S3). In the subregional models, human disturbance variables were generally less important than the other variable types (Figure 6a,b), although there was substantial variation among individual variables (Appendix S1: Figures S2 and S3).

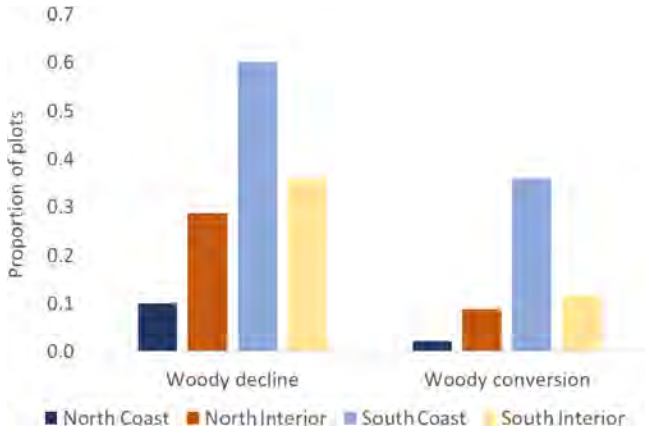


FIGURE 4 Proportion of plots experiencing woody decline and conversion from earliest to most recent image dates (~1950–2019) in four subregions of Southern California

After variable selection and model fitting, all multivariate MaxEnt models for woody decline and conversion and across all regions and subregions retained minimum fire return interval as the highest-ranking variable (Tables 3 and 4). For the full region, elevation and AET were both retained for both woody decline and conversion, and for woody decline, terrestrial intactness was the second-ranking variable in permutation importance. Terrestrial intactness was also the second-ranking variable for woody decline in the north and south but was only retained in the model for the northern region for woody conversion. For woody decline, distance to WUI was retained for the north and distance to roads was retained for the south. Distance to roads was also the third-ranking variable for woody conversion in the south.

For the subregional MaxEnt models of woody decline after variable selection, fire interval was the only variable retained in the best models for the two coastal regions. In the northern interior, elevation, terrestrial intactness, distance to WUI, and nitrogen were also retained. In the southern interior, terrestrial intactness, AET, distance to roads, and slope were retained.

The AUC for both training and test data sets ranged from 0.7 to 0.79 for all models except the model on test data for woody conversion in the south, which was 0.52, with the training AUC at 0.79 (Tables 3 and 4). The regularization multiplier that resulted in the lowest BIC score varied across the models from 0.5 to 4.5.

TABLE 2 Average values for predictor variables explaining woody decline and conversion in Southern California

	Unit	Full region	North	South	North coast	South coast	North interior	South interior
Elevation	m	726.6	693.6	758.7	230.0	166.8	1137.0	876.9
Slope	Degrees	13.5	14.9	12.2	9.1	8.7	20.4	12.9
Distance to roads	m	793.9	817.0	771.5	253.2	278.2	1356.4	870.1
Distance to Wildland Urban Interface (WUI)	m	3239.4	4294.7	2213.1	3412.4	1551.7	5138.8	2345.2
Terrestrial intactness	Metric, −1 to 1	0.1	0.1	0.1	−0.4	−0.4	0.5	0.2
Available soil water storage	mm	102.6	113.9	89.3	149.4	97.5	81.3	87.4
Actual evapotranspiration	mm	316.5	330.6	302.8	346.0	302.7	315.9	302.9
Nitrogen	kgN_ha_year	9.7	10.0	9.4	12.7	10.6	7.5	9.1
Fire count	Sum	1.1	1.2	1.0	0.8	1.0	1.7	1.0
Fire interval	Years	74.9	70.5	79.2	99.2	85.1	43.0	78.1
Fire departure	Percentage	−10.9	−11.6	−10.3	−13.0	−32.2	−11.0	−8.1

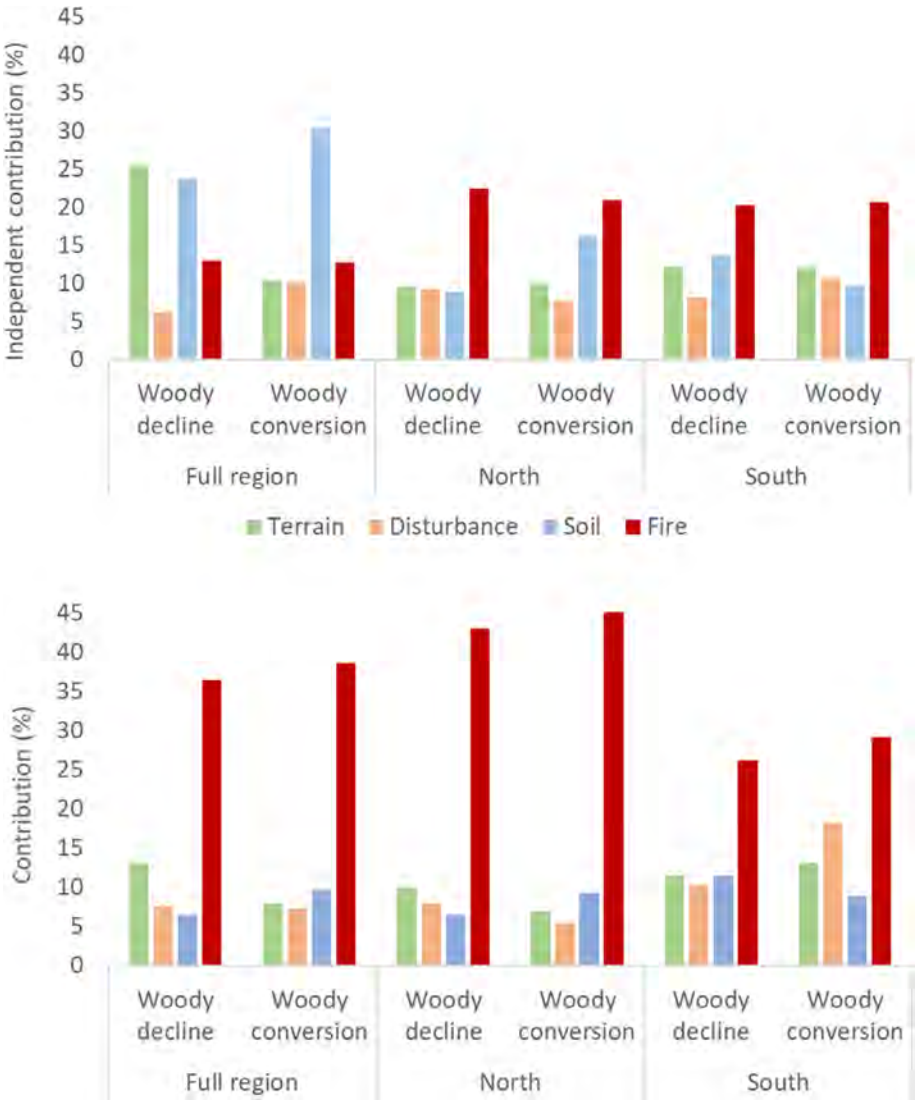


FIGURE 5 Relative importance of variable classes explaining woody decline and conversion in north, south, and full Southern California regions using (a) hierarchical partitioning and (b) MaxEnt models (for ungrouped variable results, see Appendix S1: Figure S1)

Distribution maps of suitable conditions for woody decline and conversion

Across the entire region, the areas mapped as having the highest potential for woody decline were similar to those with the highest potential for woody conversion. Areas of the highest likelihood of vegetation type change were distributed in the same general locations with slight discrepancies in probability (Figure 7).

When comparing maps from regionwide models to maps developed separately for the north and south, there was better correspondence with maps of woody decline (mean $r = 0.91$) than conversion (mean $r = 0.86$), and there was better correspondence with maps developed for the north ($r = 0.97$ for woody decline and $r = 0.91$ for woody conversion) than for the south and regionwide (0.85 for woody decline and 0.81 for woody conversion) (Figure 8a,b, Table 5). The differences in the maps of woody conversion were most extensive in the southern coastal part of the landscape, where the maps developed at smaller spatial extents predicted a higher probability of conversion than the regionwide map. For woody decline, the differences between maps showed no clear spatial trends, although the smaller-extent maps generally predicted higher probabilities near the coast and the regionwide map generally predicted higher probabilities in the interior (Figure 8a,b).

When maps developed for the four subregions were compared to maps developed regionwide (Figure 8c) or to maps developed for the north and south (Figure 8d), there was overall better agreement between subregional maps and the north and south maps than there was between subregional maps and the regionwide map (Figure 8c,d, Table 5). There was also a stronger

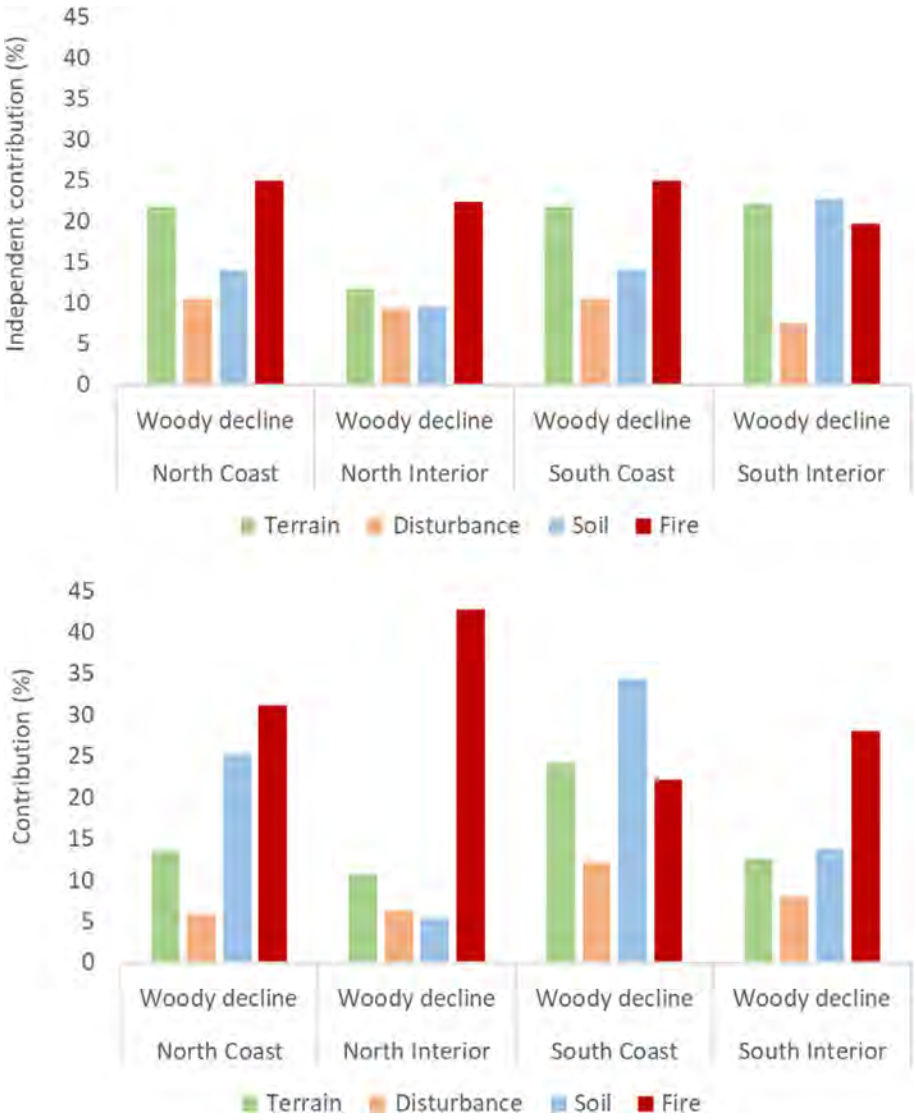


FIGURE 6 Relative importance of variable classes explaining woody decline and conversion in four Southern California subregions using (a) hierarchical partitioning and (b) MaxEnt models (for ungrouped variable results, see Appendix S1: Figures S2–S3)

correlation in the interior regions than in the coastal regions (Table 5), with coastal subregions tending to predict higher probabilities of vegetation change than interior regions (Figure 8c,d).

DISCUSSION

Widespread decline of woody chaparral shrubland vegetation and replacement with invasive grass has the potential to dramatically reduce ecological functioning and provision of ecosystem services in Southern California, with global implications in terms of rapid vegetation shifts in other fire-prone regions. Although previous work across shorter spatial or temporal extents has generated disagreement over the extent of this change and the reasons for it, our analysis across Southern California shows that decline of woody shrubs and conversion to grass has occurred extensively, with highest proportions of change in the northern interior and southern coast. Variables related to short-interval fire were most frequently ranked highest in predictive importance, but there was geographical variation across regions, as reflected in mapped output from distribution models.

We used several ways of quantifying variable importance in explaining woody decline and conversion, including independent contributions from binomial regressions and joint contributions from multivariate MaxEnt models—for seven different spatial extents and for both woody decline and conversion. For 16 out of the 20 different models comparing independent variable contributions (Figures 5 and 6), fire-related

TABLE 3 Explanatory variables giving their permutation importance and evaluation statistics for multivariate MaxEnt models of woody decline and conversion for regionwide models and models for north and south. The permutation values range from 0 to 100, with higher values representing greater importance in explaining vegetation change

	Woody decline			Woody conversion		
	Full region	North	South	Full region	North	South
Fire interval	58.1	60.7	41.8	73.6	87.2	58
Terrestrial intactness	23.7	19.1	25.1	...	4.2	...
Elevation	11.3	17.5	...	13.2	8.6	...
Actual evapotranspiration (AET)	6.8	...	20.5	13.2	...	22.8
Distance to Wildland Urban Interface (WUI)	...	2.7	...	...	...	...
Distance to roads	...	...	12.6	...	...	19.1
Sample size	539	295	244	173	89	84
Regularization multiplier	4.5	4	2	2.5	2.5	2
Mean test area under curve (AUC)	0.74	0.76	0.76	0.76	0.74	0.52
Mean train AUC	0.74	0.77	0.77	0.77	0.76	0.79

TABLE 4 Explanatory variables, permutation importance, and evaluation statistics for multivariate MaxEnt models of woody decline for subregional models in Southern California

	North coast	North interior	South coast	South interior
Fire interval	100	60.5	100	41.6
Elevation	...	17.9	...	...
Terrestrial intactness	...	8.5	...	20.8
Distance to WUI	...	6.7	...	...
Nitrogen	...	6.5	...	...
Actual evapotranspiration (AET)	...	...	...	19.9
Distance to roads	...	...	...	12.5
Slope	...	...	...	5.1
Sample size	28	267	15	230
Regional multiplier	0.5	4.5	0.5	1.5
Mean test area under curve (AUC)	0.72	0.7	0.74	0.76
Mean train AUC	0.72	0.71	0.74	0.78

variables were ranked as more important than other variables. The exceptions were the regression models performed regionwide for woody decline and conversion, where soil water storage (woody decline and conversion) and terrain (woody decline) were higher ranking; the regression model for woody decline in the southern interior, where soil water storage and terrain both ranked slightly higher; and for woody decline in the southern coast, where again soil water storage and terrain ranked slightly higher. In the multivariate models, not only was fire interval retained in all models after variable selection, but it was also the top-ranking variable in all models, with it being the only variable retained for the northern and southern coast models of woody decline.

Although both Meng et al. (2014) and Storey et al. (2021) have questioned the role of short-interval fire in explaining VTC in chaparral, and Lucero et al. (2021) found weak evidence for it, the results here overwhelmingly point to short-interval fire and the degree of departure from historical fire return intervals as most important—regardless of the modeling method used or spatial extent of analysis. It is noteworthy that we used here a variable that has not been explored in other work, including our own previous studies—the measure of fire interval departure (vs. minimum fire interval). Estimates of departure in this metric are mapped as a function of current fire return intervals compared to historical estimates for 28 different vegetation types (Safford & Van de

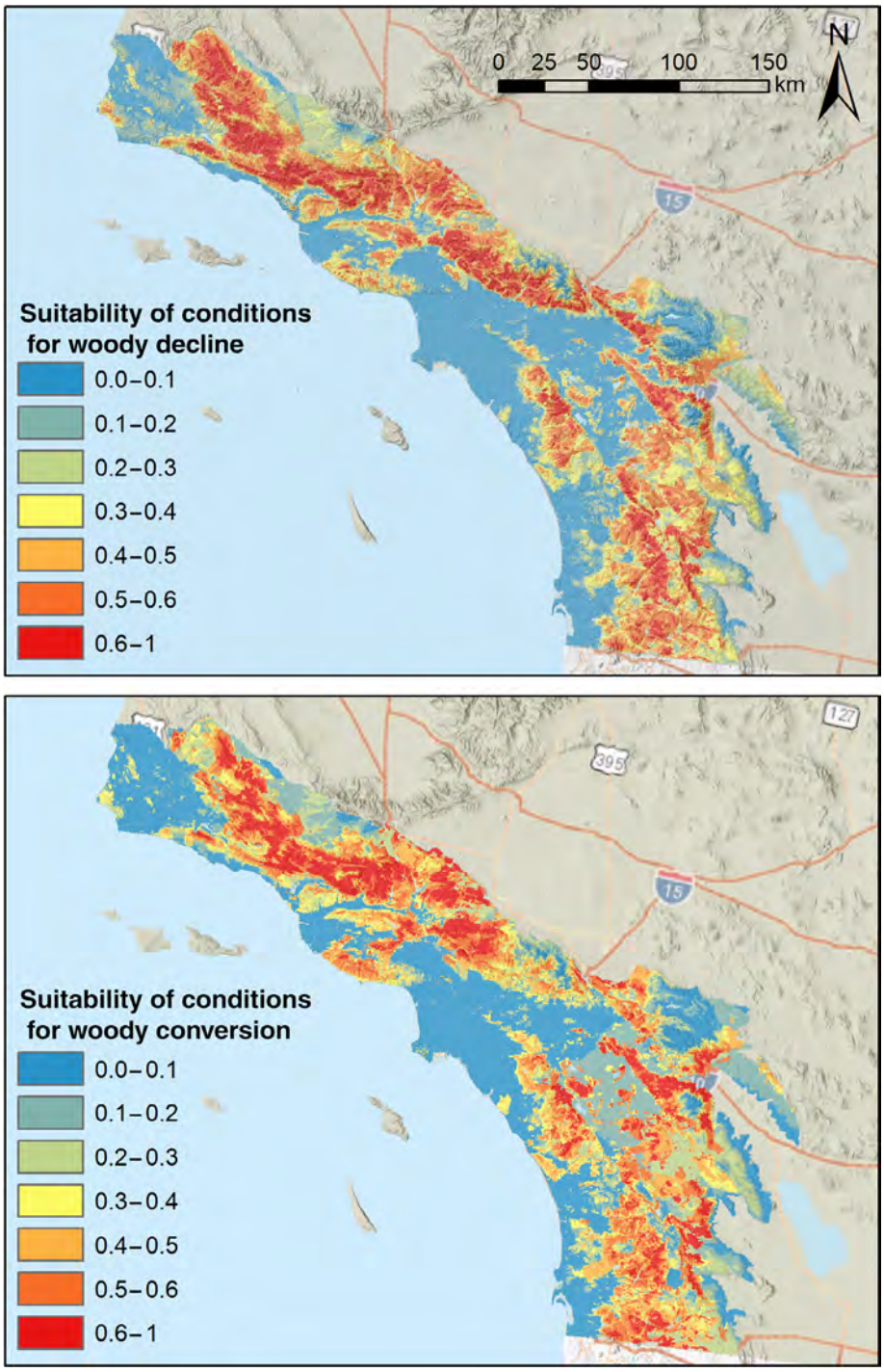


FIGURE 7 Distribution of areas with most potential for woody decline or conversion across Southern California

Water, 2014). This variable was frequently more important than minimum fire interval in the independent measures of variable importance (Appendix S1: Figures S1 and S2). Given its association with vegetation type, therefore, it is possible that in some cases it reflects species composition and picks up a stronger correlation with vegetation change than fire-related variables used in other studies. Species composition plays a large role in vulnerability to frequent fire owing to the nature of regeneration. For example, obligate seeding species, which depend on building a seed reserve in the soil that is sufficient to ensure postfire survival, pass through a prolonged growth period of up to 20 years in which seed production is minimal or zero. They are therefore vulnerable to short periods between fires, which can kill them before they have established a sufficient seed reserve (Haidinger & Keeley, 1993; Keeley, 1991; Keeley & Brennan, 2012).

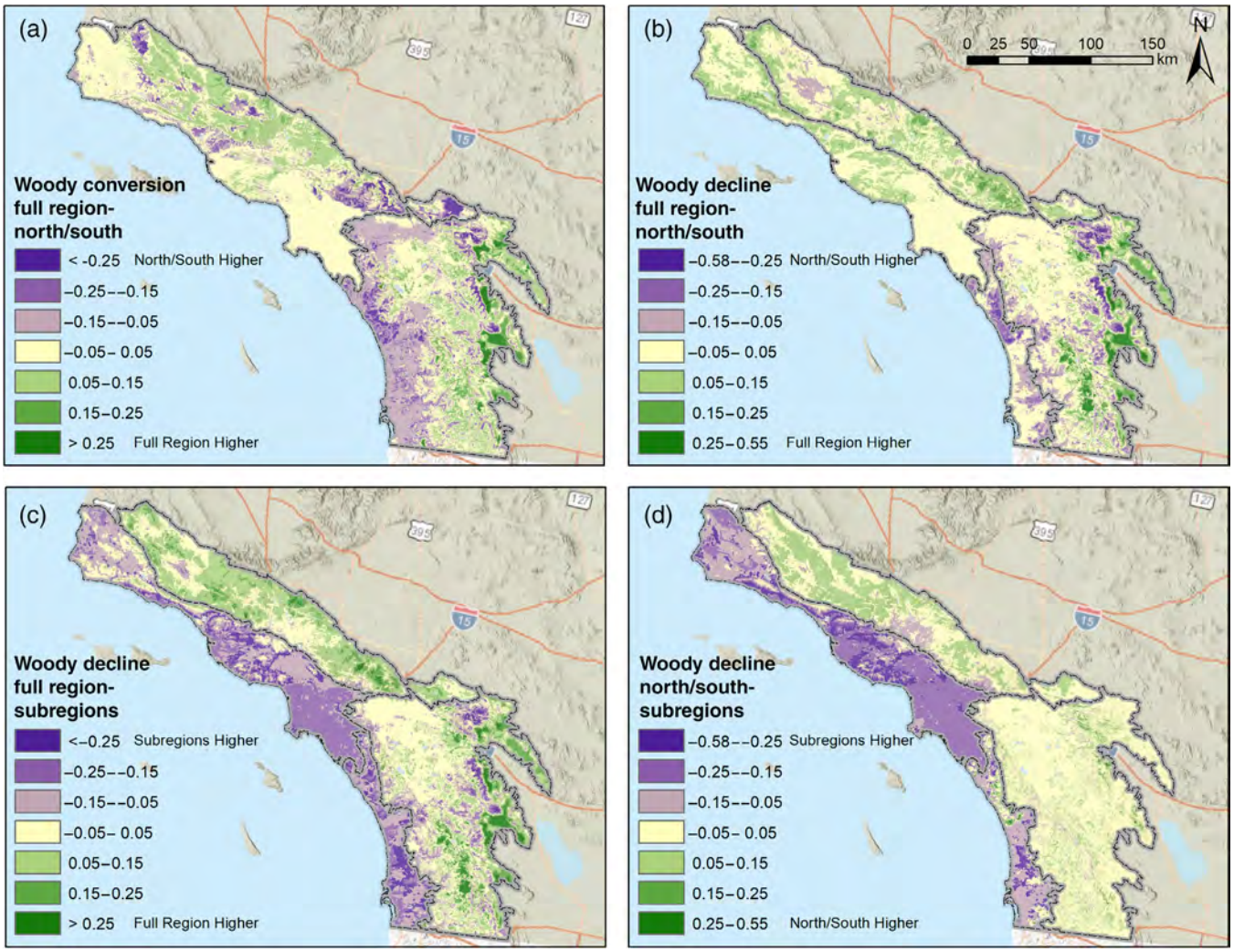


FIGURE 8 Differences in suitability for potential (a) woody conversion to herbaceous between MaxEnt models developed across full region versus models developed separately for northern and southern areas, (b) woody decline between MaxEnt models developed across full region versus models developed separately for northern and southern areas, (c) woody decline between MaxEnt models developed across full region versus models developed separately for four subregions, and (d) woody decline between MaxEnt models developed for northern and southern areas versus models developed separately for four subregions

TABLE 5 Correlation coefficients among maps produced from models of woody vegetation decline and conversion developed across different spatial extents in Southern California

	Woody decline			Woody conversion
	Regionwide	North	South	Regionwide
North	0.97	...	...	0.91
South	0.85	...	...	0.81
North coast	0.87	0.85	...	...
North interior	0.91	0.95	...	...
South coast	0.83	...	0.81	...
South interior	0.84	...	0.98	...

Another potential reason that other research found weaker relationships between fire and chaparral decline is that those studies isolated areas that had reburned a set number of times (i.e., once or twice) within a shorter temporal extent of analysis. In this study, fires could have burned frequently over a longer period across a larger geographical area, and that may be important in terms of the process of type conversion. Type conversion is a gradual, long-term process that often occurs as a function of multiple disturbance events over time in areas that are environmentally vulnerable to this change. That is, it may take more than one or two short fire-interval events for significant change to occur, and the number of events that trigger this change likely vary by region as a function of species composition and environmental context.

For type conversion to occur, several processes are involved. Initially, the aboveground portions of adult shrubs are killed, typically via wildfire, but potentially also because of drought. Subsequently, another fire may kill the seedlings or resprouts before they fully recover, which is why the immediate driver is often short intervals between fires. In addition to having sufficient time for regeneration, environmental context is important relative to successful recovery, and this is the most likely explanation for the strong correlation of woody decline and conversion with factors such as drought and topography–and for the geographical variation in relative variable importance. Soil aridity, which is perhaps best captured by AET, was a very significant factor in both woody cover decline and conversion to herbaceous vegetation (Appendix S1: Figures S1 and S2), although the relationship was nonlinear, with VTC most likely at intermediate to high levels of AET but then dropping at the highest AET values. This is likely operating in conjunction with fire because increased soil aridity in the immediate post-fire years is detrimental to shrub seedling survival and favors annual grasses, which can further deplete soil moisture (Davis & Mooney 1985). Soil aridity also favors obligate seeding shrubs (Davis & Mooney 1985), and this functional type is highly sensitive to short-interval fires; thus, the association of VTC with soil aridity may in reality be a result of frequent fires.

Another possible reason for the differences in results between our studies and those of Meng et al. (2014) and Lucero et al. (2021) is that our approach used a historical view of changes over time and theirs relied upon paired plots and a space-for-time substitution. That is, we directly tracked change at one site over time, whereas the other studies inferred change by comparing two sites with different fire histories and then attributed the change to the fire. Though the other studies attempted to control for environmental differences between plots, resource gradients and species composition are highly heterogeneous in many parts of Southern California, particularly in rugged areas where topoclimate variability may be as fine scale as <10 m (Ackerly et al., 2010). Given the strong influence of topoclimatic diversity on plant species' distribution and abundance (Franklin, 2010), this is an additional source of uncertainty in determining whether one plot in a pair can accurately substitute for another (Walker et al., 2010).

Geographical variation in factors that influence species distribution, composition, and abundance also potentially explains why it has been difficult to assess the extent and drivers of VTC in Southern California. Although the high ranking of fire interval was consistent across regions and spatial extents, its relative importance in combination with other environmental variables did vary, and these variations were reflected in the mapped predictions of potential VTC hotspots. In other words, maps created at smaller spatial extents reflect the unique geographical combination of factors best explaining the footprint of vulnerability in that region. When models are conditioned at larger geographical extents, they average the regional or subregional relationships, resulting in more generalized models.

Maps illustrating areas with the highest potential for vegetation change could be critical for determining management or restoration priorities; thus, mapped differences may have important consequences. The largest discrepancy in maps was in the southern part of the region, particularly along the coast. The maps developed in the northern coastal area also differed substantially from the maps conditioned at larger spatial extents. Overall, the southern part of the region experienced more decline and conversion than the north, which may partly explain the larger disagreement in mapped model output. On the other hand, the northern coast experienced the smallest vegetation change of the four subregions.

At least for the coastal areas, the most likely explanation for map differences is that the most accurate and simple subregional models only retained fire interval as the explanatory variable. Although our model selection approach is widely advocated for balancing goodness of fit with the potential for overfitting models, in this case the models may be underfit. In terms of decision-making, it may be desirable to have some balance between capturing regionally specific relationships (i.e., the subregions) with some of the generality reflected in maps at larger extents. The maps developed separately for the north and south may therefore serve most effectively for guiding decisions, although new maps could be developed for other geographies of interest, such as coastal or interior. While these maps illustrate the conditions that most closely approximate those where VTC has occurred, there is uncertainty inherent in where change may occur in the future. Also, the performance of the models was only slightly above average (AUCs mostly ranging from 0.7 to 0.8) (Fielding & Bell, 1997). Although fires do tend to recur within the same geographical areas (such as wind corridors) in Southern California, it is possible that short fire return intervals may occur in different types of areas in the future. Accounting for species composition is also critical for assessing VTC potential in Southern California, and these maps do not account for that.

Of the three general types of variables—fire, terrain, and proximity to human infrastructure—proximity to human infrastructure was never the top-ranking variable, despite its significance in many models. The spread of invasive grasses throughout the landscape often occurs unintentionally along roads, trails, powerlines, or other human land uses (Vila & Ibáñez, 2011). Thus, while these

anthropogenic variables would not directly contribute to chaparral decline or recovery, they could account for the proximal source for grass dispersal and establishment (Fusco et al., 2021). Contrary to this expectation, however, the relationships here were counterintuitive such that VTC was more likely to occur at longer distances to roads or the WUI and in areas that were relatively more intact. The likely reason for this is that, given the strong association with wildfire, VTC may be more likely to occur in remote or continuous vegetation because these places are where larger fires are able to spread. Other research has shown that, though ignition probability is highest adjacent to human infrastructure, area burned tends to have an inverse relationship and tends to be largest far from roads or populated places (e.g., Syphard, Rustigian-Romsos, et al., 2019). This suggests that the detrimental effect of short-interval fire on chaparral overrode the positive effect of human adjacency as a source of grass.

In conclusion, this study shows the overwhelming importance of changes in fire regimes in causing VTC from shrublands to grasslands. Abrupt changes in fire regimes have the potential to upset ecological structure and function across a wide range of ecosystems and are considered a major global problem (Pausas & Keeley, 2014). In fact, VTC among diverse vegetation types is occurring globally as a result of sudden fire regime shifts (e.g., Coop et al., 2020; Fernandes, 2013). In Southern California, where the primary issue is frequent fire, the management approach of prescribed fire could exacerbate this vegetation shift with little effect on subsequent burning (Price et al., 2012). On the other hand, given that the primary cause of short-interval fires is human ignitions (Keeley & Syphard, 2018a), fire prevention has the potential to be the most cost-effective management approach.

CONFLICT OF INTEREST

Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the US government.

DATA AVAILABILITY STATEMENT

Data are available in Data Basin at https://databasin.org/galleries/aea3ce47dd874848a69bec856400bba3/#expand=297919%2C297920.

ORCID

Alexandra D. Syphard https://orcid.org/0000-0003-3070-0596
Teresa J. Brennan https://orcid.org/0000-0002-0646-3298
Jon E. Keeley https://orcid.org/0000-0002-4564-6521

REFERENCES

Ackerly, D. D., S. R. Loarie, W. K. Cornwell, S. B. Weiss, H. Hamilton, R. Branciforte, and N. J. B. Kraft. 2010. "The Geography of Climate Change: Implications for Conservation Biogeography." *Diversity and Distributions* 16(3): 476–87.

Anderson, M. K., and J. E. Keeley. 2018. "Native Peoples' Relationship to the California Chaparral." In *Valuing Chaparral* 79–121. Cham, Switzerland: Springer.

Anderson, R. P., and I. G. Jr. 2011. "Species-Specific Tuning Increases Robustness to Sampling Bias in Models of Species Distributions: An Implementation with Maxent." *Ecological Modelling* 222(15): 2796–811.

Cleland, D. T., P. E. Avers, W. H. Avers, M. E. McNab, R. G. Jensen, T. K. Bailey, and W. E. Russell. 1997. "National Hierarchical Framework of Ecological Units." In *Ecosystem Management: Applications for Sustainable Forest and Wildlife Resources*, edited by M. S. Boyce and A. Haney, 181–200. New Haven & London: Yale University Press.

Coop, J. D., S. A. Parks, C. S. Stevens-Rumann, S. D. Crausbay, P. E. Higuera, M. D. Hurteau, A. Tepley, E. Whitman, T. Assal, and B. M. Collins. 2020. "Wildfire-Driven Forest Conversion in Western North American Landscapes." *Bioscience* 70(8): 659–73.

Cooper, W. S. 1922. *The Broad-Sclerophyll Vegetation of California. An Ecological Study of the Chaparral and its Related Communities*. Washington DC: Carnegie Institution of Washington.

Davis, S. D., and H. A. Mooney. 1985. "Comparative Water Relations of Adjacent California Shrub and Grassland Communities." *Oecologia* 66: 522–9.

Dong, C., G. M. MacDonald, K. Willis, T. W. Gillespie, G. S. Okin, and A. P. Williams. 2019. "Vegetation Responses to 2012–2016 Drought in Northern and Southern California." *Geophysical Research Letters* 46(7): 3810–21.

Elith, J., C. H. Graham, R. P. Anderson, M. Dudik, S. Ferrier, A. Guisan, R. J. Hijmans, et al. 2006. "Novel Methods Improve Prediction of Species' Distributions from Occurrence Data." *Ecography* 29(2): 129–51.

Elith, J., S. J. Phillips, T. Hastie, M. Dudik, Y. E. Chee, and C. J. Yates. 2010. "A Statistical Explanation of MaxEnt for Ecologists." *Diversity And Distributions.* 17: 43–57. https://doi.org/10.1111/j.1472-4642.2010.00725.x.

Faivre, N. R., Y. Jin, M. L. Goulden, and J. T. Randerson. 2016. "Spatial Patterns and Controls on Burned Area for Two Contrasting Fire Regimes in Southern California." *Ecosphere* 7(5): e01210.

Fenn, M. E., E. B. Allen, S. B. Weiss, S. Jovan, L. H. Geiser, G. S. Tonnesen, R. F. Johnson, et al. 2010. "Nitrogen Critical Loads and Management Alternatives for N-Impacted Ecosystems in California." *Journal of Environmental Management* 91(12): 2404–23. https://doi.org/10.1016/j.jenvman.2010.07.034.

Fenn, M. E., E. B. Allen, and S. B. Weiss. 2010. "Nitrogen Critical Loads and Management Alternatives for N-Impacted Ecosystems in California." *Journal of Environmental Management* 91: 2404–23. http://www.sciencedirect.com/science/article/pii/S0301479710002306.

Fernandes, P. M. 2013. "Fire-Smart Management of Forest Landscapes in the Mediterranean Basin under Global Change." *Landscape and Urban Planning* 110: 175–82.

Fielding, A., and J. Bell. 1997. "A Review of Methods for the Assessment of Prediction Errors in Conservation Presence/Absence Models." *Environmental Conservation* 24(1): 38–49.

Flint, A. L., and L. E. Flint. 2012. "Downscaling Future Climate Scenarios to Fine Scales for Hydrologic and Ecologic Modeling and Analysis." *Ecological Processes* 1(1): 2. https://doi.org/10.1186/2192-1709-1-2.

Franklin, J. 1995. "Predictive Vegetation Mapping: Geographic Modeling of Biospatial Patterns in Relation to Environmental Gradients." *Progress in Physical Geography* 19: 474–99.

Franklin, J. 1996. "*Predictive Mapping of Chaparral Vegetation in Southern California*." Cambridge: Cambridge University Press.

Franklin, J. 2010. *Mapping Species Distributions: Spatial Inference and Prediction*. New York: Cambridge University Press.

Fusco, E. J., J. K. Balch, A. L. Mahood, R. Chelsea Nagy, A. D. Syphard, and B. A. Bradley. 2021. "The Human–Grass–Fire Cycle: How People and Invasives co-Occur to Drive Fire Regimes." *Frontiers in Ecology and the Environment* 1–10: 117–26. https://doi.org/10.1002/fee.2432.

Guisan, A., N. E. Zimmermann, J. Elith, C. H. Graham, S. Phillips, and A. T. Peterson. 2007. "What Matters for Predicting the Occurrences of Trees: Techniques, Data, or Species' Characteristics?" *Ecological Monographs* 77: 615–30. https://doi.org/10.1890/06-1060.1.

Guo, Q. 2001. "Early Post-Fire Succession in California Chaparral: Changes in Diversity, Density, Cover and Biomass." *Ecological Research* 16(3): 471–85.

Haidinger, T. L., and J. E. Keeley. 1993. "Role of High Fire Frequency in Destruction of Mixed Chaparral." *Madroño* 40: 141–7.

Hernandez, P. A., C. H. Graham, L. L. Master, and D. L. Albert. 2006. "The Effect of Sample Size and Species Characteristics on Performance of Different Species Distribution Modeling Methods." *Ecography* 29(5): 773–85.

Jacobsen, A. L., S. D. Davis, and S. L. Fabritius. 2004. *Fire Frequency Impacts Non-Sprouting Chaparral Shrubs in the Santa Monica Mountains of Southern California*. Ecology, Conservation and Management of Mediterranean Climate Ecosystems: Millpress, Rotterdam, Netherlands.

Jacobsen, A. L., and R. B. Pratt. 2018. "Extensive Drought-Associated Plant Mortality as an Agent of Type-Conversion in Chaparral Shrublands." *New Phytologist* 219(2): 498–504.

Keeley, J. E. 1991. "Seed Germination and Life History Syndromes in the California Chaparral." *The Botanical Review* 57: 81–116.

Keeley, J. E., M. Baer-Keeley, and C. J. Fotheringham. 2005. "Alien Plant Dynamics Following Fire in Mediterranean-Climate California Shrublands." *Ecological Applications* 15(6): 2109–25.

Keeley, J. E., and A. D. Syphard. 2018a. "Historical Patterns of Wildfire Ignition Sources in California Ecosystems." *International Journal of Wildland Fire.* 27: 781–99. https://doi.org/10.1071/WF18026.

Keeley, J. E., and A. D. Syphard. 2018b. "South Coast Bioregion." In *Fire in California's Ecosystems*, Second ed., edited by J. W. van Wagtendonk, N. G. Sugihara, S. L. Stephens, A. E. Thode, K. E. Shaffer, and A. Fites-Kaufman, 319–51. Davis, CA: University of California Press. https://doi.org/10.1525/california/9780520246058.003.0015.

Keeley, J. E. 2004. "VTM Plots as Evidence of Historical Change: Goldmine or Landmine?" *Madroño* 51(4): 372–8.

Keeley, J. E., and T. J. Brennan. 2012. "Fire-Driven Alien Invasion in a Fire-Adapted Ecosystem." *Oecologia* 169(4): 1043–52. https://doi.org/10.1007/s00442-012-2253-8.

Keeley, J. E., T. Brennan, and A. H. Pfaff. 2008. "Fire Severity and Ecosytem Responses Following Crown Fires in California Shrublands." *Ecological Applications* 18(6): 1530–46.

Keeley, J. E., and A. D. Syphard. 2018c. "Historical Patterns of Wildfire Ignition Sources in California Ecosystems." *International Journal of Wildland Fire* 27: 781–99.

Kelly, M., B. Allen-Diaz, and N. Kobzina. 2005. "Digitization of a Historic Dataset: The Wieslander California Vegetation Type Mapping Project." *Madroño* 52(3): 191–201.

Lippitt, C. L., D. A. Stow, J. F. O'Leary, and J. Franklin. 2012. "Influence of Short-Interval Fire Occurrence on Post-Fire Recovery of Fire-Prone Shrublands in California, USA." *International Journal of Wildland Fire* 22(2): 184–93. https://doi.org/10.1071/WF10099.

Lucero, S. M., N. Emery, and C. M. D'Antonio. 2021. "Short-Interval Fires and Vegetation Change in Southern California." *bioRxiv*.

MacNally, R., and C. J. Walsh. 2004. "Hierarchical Partitioning Public-Domain Software." *Biodiversity and Conservation* 13(3): 659–60.

Meng, R., P. E. Dennison, C. M. D'Antonio, and M. A. Moritz. 2014. "Remote Sensing Analysis of Vegetation Recovery Following Short-Interval Fires in Southern California Shrublands." *PLoS One* 9(10): e110637. https://doi.org/10.1371/journal.pone.0110637.

Merow, C., M. J. Smith, and J. A. Silander Jr. 2013. "A Practical Guide to MaxEnt for Modeling Species' Distributions: What it Does, and why Inputs and Settings Matter." *Ecography* 36(10): 1058–69.

Moreno-Amat, E., R. G. Mateo, D. Nieto-Lugilde, N. Morueta-Holme, J.-C. Svenning, and I. García-Amorena. 2015. "Impact of Model Complexity on Cross-Temporal Transferability in Maxent Species Distribution Models: An Assessment Using Paleobotanical Data." *Ecological Modelling* 312: 308–17.

Oppel, S., A. Meirinho, I. Ramírez, B. Gardner, A. F. O'Connell, P. I. Miller, and M. Louzao. 2012. "Comparison of Five Modelling Techniques to Predict the Spatial Distribution and Abundance of Seabirds." *Biological Conservation* 156: 94–104.

Park, I. W., J. Hooper, J. M. Flegal, and G. Darrel Jenerette. 2018. "Impacts of Climate, Disturbance and Topography on Distribution of Herbaceous Cover in Southern California Chaparral: Insights from a Remote-Sensing Method." *Diversity and Distributions* 24(4): 497–508. https://doi.org/10.1111/ddi.12693.

Park, I. W., and G. D. Jenerette. 2019. "Causes and Feedbacks to Widespread Grass Invasion into Chaparral Shrub Dominated Landscapes." *Landscape Ecology* 34(3): 459–71.

Pausas, J. G., and J. E. Keeley. 2014. "Abrupt Climate-Independent Fire Regime Changes." *Ecosystems* 17(6): 1109–20.

Peterson, S. H., and D. A. Stow. 2003. "Using Multiple Image Endmember Spectral Mixture Analysis to Study Chaparral Regrowth in Southern California." *International Journal of Remote Sensing* 24(22): 4481–504.

Phillips, S. J., R. P. Anderson, and R. E. Schapire. 2006. "Maximum Entropy Modeling of Species Geographic Distributions." *Ecological Modelling* 190(3–4): 231–59.

Phillips, S. J., and M. Dudık. 2008. "Modeling of Species Distributions with Maxent: New Extensions and a Comprehensive Evaluation." *Ecography* 31(2): 161–75. https://doi.org/10.1111/j.2007.0906-7590.05203.x.

Price, O. F., R. A. Bradstock, J. E. Keeley, and A. D. Syphard. 2012. "The Impact of Antecedent Fire Area on Burned Area in Southern California Coastal Ecosystems." *Journal of Environmental Management* 113: 301–7. https://doi.org/10.1016/j.jenvman.2012.08.042.

Radeloff, V. C., D. P. Helmers, H. Anu Kramer, M. H. Mockrin, P. M. Alexandre, A. Bar-Massada, V. Butsic, et al. 2018. "Rapid Growth of the US Wildland-Urban Interface Raises Wildfire Risk." *Proceedings of the National Academy of Sciences of the United States of America* 115(13): 3314–9. https://doi.org/10.1073/pnas.1718850115.

Roberts, D. A., M. Gardner, R. Church, S. Ustin, G. Scheer, and R. O. Green. 1998. "Mapping Chaparral in the Santa Monica Mountains Using Multiple Endmember Spectral Mixture Models." *Remote Sensing of Environment* 65: 267–79.

Rundel, P. W. 2018. "California Chaparral and its Global Significance." In *Valuing Chaparral*, edited by E. C. Underwood, H. D. Safford, N. A. Molinari, and J. E. Keeley, 1–27. Cham, Switzerland: Springer.

Safford, H. D., and K. M. Van de Water. 2014. "Using Fire Return Interval Departure (FRID) Analysis to Map Spatial and Temporal Changes in Fire Frequency on National Forest Lands in California." Research Paper PSW-RP-266. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. 59 p.

Schumann, R. L., M. Mockrin, A. D. Syphard, J. Whittaker, O. Price, C. J. Gaither, C. T. Emrich, and V. Butsic. 2020. "Wildfire Recovery as a 'Hot Moment' for Creating Fire-Adapted Communities." *International Journal of Disaster Risk Reduction* 42: 101354. https://doi.org/10.1016/j.ijdrr.2019.101354.

Shabani, F., L. Kumar, and M. Ahmadi. 2018. "Assessing Accuracy Methods of Species Distribution Models: AUC, Specificity, Sensitivity and the True Skill Statistic." *Global Journal of Human Social Science: B* 18(1): 7–18.

Storey, E. A., D. A. Stow, J. F. O'Leary, F. W. Davis, and D. A. Roberts. 2021. "Does Short-Interval Fire Inhibit Postfire Recovery of Chaparral across Southern California?" *Science of the Total Environment* 751: 142271. https://doi.org/10.1016/j.scitotenv.2020.142271.

Syphard, A. D., J. Franklin, and J. E. Keeley. 2006. "Simulating the Effects of Frequent Fire on Southern California Coastal Shrublands." *Ecological Applications* 16(5): 1744–56.

Syphard, A. D., T. J. Brennan, and J. E. Keeley. 2019a. "Drivers of Chaparral Type Conversion to Herbaceous Vegetation in Coastal Southern California." *Diversity and Distributions* 25: 90–101. https://doi.org/10.1111/ddi.12827.

Syphard, A. D., T. J. Brennan, and J. E. Keeley. 2019b. "Extent and Drivers of Vegetation Type Conversion in Southern California Chaparral." *Ecosphere* 10: e02796. https://doi.org/10.1002/ecs2.2796.

Syphard, A. D., H. Rustigian-Romsos, M. Mann, E. Conlisk, M. A. Moritz, and D. Ackerly. 2019. "The Relative Influence of Climate and Housing Development on Current and Projected Future Fire Patterns and Structure Loss across Three California Landscapes." *Global Environmental Change* 56: 41–55. https://doi.org/10.1016/j.gloenvcha.2019.03.007.

Team RStudio. 2020. *RStudio: Integrated Development for R*. Boston, MA: RStudio, PBC. http://www.rstudio.com.

Tonnesen, G., Z. Wang, M. Omary, and C. J. Chien. 2007. "Assessment of Nitrogen Deposition: Modeling and Habitat Assessment. Sacramento, CA: California Energy Commission, PIER Energy-Related." https://scholar.google.com/scholar?q=Assessment+of+Nitrogen+Deposition%253A+Modeling+and+Habitat+Assessment.&btnG=&hl=en&as_sdt=0%252C5#1.

Underwood, E. C., J. H. Viers, K. R. Klausmeyer, R. L. Cox, and M. R. Shaw. 2009. "Threats and Biodiversity in the Mediterranean Biome." *Diversity and Distributions* 15(2): 188–97.

Underwood, E. C., J. Franklin, N. A. Molinari, and H. D. Safford. 2018. "Global Change and the Vulnerability of Chaparral Ecosystems." *The Bulletin of the Ecological Society of America* 99(4): e01460. https://doi.org/10.1002/bes2.1460.

Underwood, E. C., A. D. Hollander, P. R. Huber, and C. Schrader-Patton. 2018. "Mapping the Value of National Forest Landscapes for Ecosystem Service Provision." In *Valuing Chaparral*, edited by E. C. Underwood, H. D. Safford, N. A. Molinari, and J. E. Keeley, 245–70. Sham, Switzerland: Springer.

Vila, M., and I. Ibáñez. 2011. "Plant Invasions in the Landscape." *Landscape Ecology* 26(4): 461–72.

Walker, L. R., D. A. Wardle, R. D. Bardgett, and B. D. Clarkson. 2010. "The Use of Chronosequences in Studies of Ecological Succession and Soil Development." *Journal of Ecology* 98(4): 725–36.

Warren, D. L., R. E. Glor, and M. Turelli. 2010. "ENMTools: A Toolbox for Comparative Studies of Environmental Niche Models." *Ecography* 33(3): 607–11.

Warren, D. L., A. N. Wright, S. N. Seifert, and H. B. Shaffer. 2014. "Incorporating Model Complexity and Spatial Sampling Bias into Ecological Niche Models of Climate Change Risks Faced by 90 California Vertebrate Species of Concern." *Diversity and Distributions* 20(3): 334–43.

Wisz, M. S., R. J. Hijmans, J. Li, A. T. Peterson, C. H. Graham, and A. Guisan. 2008. "Effect of Sample Size on the Performance of Species Distribution Models." *Diversity and Distributions* 14: 763–73.

Zedler, P. H. 1995. "Fire Frequency in Southern California Shrublands: Biological Effects and Management Options." In *Brushfires in California Wildlands: Ecology and Resource Management*, edited by J. E. Keeley and T. Scott, 101–12. Fairfield, WA: International Association of Wildland Fire.

Zedler, P. H., R. Gautier Clayton, and G. S. McMaster. 1983. "Vegetation Change in Response to Extreme Events: The Effect of a Short Interval between Fires in California Chaparral and Coastal Scrub." *Ecology* 64(4): 809–18.

SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

How to cite this article: Syphard, Alexandra D., Teresa J. Brennan, Heather Rustigian-Romsos, and Jon E. Keeley. 2022. "Fire-Driven Vegetation Type Conversion in Southern California." *Ecological Applications* e2626. https://doi.org/10.1002/eap.2626

ATTACHMENT F

September 26, 2022

Via Email Only

Mr. Brian Oh
Comprehensive Planning Manager
Permit Sonoma County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403
Brian.Oh@sonoma-county.org

Subject: Review of Draft Environmental Impact Report (DEIR) (SCH# 2022020222)
Sonoma Developmental Center Specific Plan, Sonoma County, California

Dear Mr. Oh:

I am a hydrologist with over thirty years of technical and consulting experience in the fields of hydrology, geology, and hydrogeology. I have been providing professional hydrology and geomorphology services in California since 1989 and routinely manage projects in the areas of surface- and groundwater hydrology, water supply, water quality assessments, water resources management, and geomorphology. Most of my work has been in the Coast Range watersheds of California. My areas of expertise include: characterizing and modeling watershed-scale hydrologic and geomorphic processes; evaluating surface- and ground-water resources/quality and their interaction; assessing hydrologic, geomorphic, and water quality responses to land-use changes in watersheds and causes of stream channel instability; assisting and leading in the development of CEQA environmental compliance documents and project environmental permits; and designing and implementing field investigations characterizing surface and subsurface hydrologic and water quality conditions. I earned a Master of Science degree in Geology, specializing in sedimentology and hydrogeology as well as an A.B. in Geology from Miami University, Oxford, Ohio. I am a Certified Hydrogeologist (CHG #360) and a registered Professional Geologist (PG #5737) in the state of California. A copy of my resume is attached.

I have reviewed the Draft Environmental Impact Report (DEIR) for the Sonoma Developmental Center Specific Plan in Sonoma County, California, and evaluated if the project may impact surrounding properties and the environment. Specifically, I have reviewed the DEIR and technical appendices. Based

on my review of these materials, it is my professional opinion that the DEIR is inadequate in evaluating the potential significant impacts of project actions on hydrology, water quality and biological resources. The rationale for this opinion is based on multiple findings presented below.

1. There are several local and state regulations applicable to the SDC Specific Plan that are not included in the Hydrology/Water Quality Regulatory Setting section (3.9.1 on pg. 270) of the DEIR. These include the following.

B11-270

   a. Sonoma County General Plan 2020 Policy C-WR-2f, which states, "*Discretionary projects in Urban Service Areas, where the density of development thus extent of impervious surface area is greater than in Rural Communities, shall be required to maintain the site's pre-development recharge of groundwater to the maximum extent practicable/feasible. Develop voluntary guidelines for development in Rural Communities that would accomplish the same purpose. (GP2020 Revised)*".
   b. Sonoma County General Plan 2020 Policy C-WR-4b, which states, "*Use water effectively and reduce water demand by developing programs to: (1) Increase water conserving design and equipment in new construction, including the use of design and technologies based on green building principles; (2) Educate water users on water conserving landscaping and other conservation measures; (3) Encourage retrofitting with water conserving devices; (4) Design wastewater collection systems to minimize inflow and infiltration; and (5) Reduce impervious surfaces to minimize runoff and increase groundwater recharge. (GP2020)*".
   c. Sonoma County General Plan 2020 Policy C-WR-4f, which states, "*To minimize generation of wastewater and encourage conservation of Coastal water resources, require use of water saving devices as prescribed by the local water provider in all new developments. (New)*".
   d. California statutes and regulations (e.g., California Code, Division 3. Dams and Reservoirs) related to dam safety.

   As elaborated below, the missing County policies and state regulations are directly relevant to the water supply and flood hazard assessments for the project as elaborated below.

2. The DEIR Project Description is not detailed enough to evaluate potential impacts on hydrology and the environment. The DEIR does not contain a project plan with sufficient detail about land use change to complete the necessary hydrologic and water quality assessments to determine impacts from the project. Due to the lack of an adequate Project Description, I don't agree with the DEIR determinations that potential hydrologic and water quality impacts are less than significant and that no mitigation measures will be required for the following reasons.

B11-271

a. Impact 3.9-1 - The DEIR states that potential impacts to federal, state, and local water quality standards are less than significant. However, the DEIR has not analyzed how changes in site runoff and associated erosion potential will change. Based on my experience, this analysis would require detailed hydrologic and hydraulic modeling that incorporates all changes in land use (esp. impervious surfaces) and runoff estimates to determine where and by how much flow rates (and erosion potential) may impact receiving waterways both on- and off-site. BMPs and other measures would then be designed correctly to mitigate these impacts. This is the primary way the DEIR can address the significance of the impact before and after mitigation.

b. Impact 3.9-2 - The DEIR states that the project will not interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin and associated potential impacts are less than significant. However, the DEIR does not contain any detailed technical analysis of how the project development will alter groundwater recharge. The DEIR has an obligation to describe any potential changes in recharge. Simply stating that BMPs that support groundwater recharge will be integrated into the Project does not demonstrate that they will be sufficient to mitigate potential impacts.

c. Impact 3.9-3 - The DEIR states that Project development would not substantially alter the existing drainage patterns or result in substantial erosion and flooding on- or off-site or contribute runoff that would exceed the capacity of existing or planned storm drain systems. Thus, the DEIR concludes that associated impacts are less than significant. These conclusions are not substantiated as the DEIR does not present results from any hydrologic on hydraulic analyses to demonstrate to what degree the project may increase runoff rates and erosion potential from new or improved development. The assumption that adhering to County mandated BMPs will reduce flooding and erosion impact to below significant has not been demonstrated. Instead, the DEIR defers analysis and mitigations for hydrologic and water quality impacts.

d. Impact 3.9-4 – The DEIR states that the potential to expose people and structures to significant risk or loss, injury or death involving flooding from dam failure is less than significant. However, this is completely contrary to the California Division of Safety of Dams (DSOD) conclusions about Project dam safety presented in Section 3.9.2.5 (Flooding – Flooding from Dam Failure, pg. 286-287) of the DEIR. Page 286 of the DEIR states, "The DSOD has classified the downstream hazard of a failure at Fern Lake as high". On page 287, the DEIR states, "*The DSOD has classified the downstream hazard of a failure at Suttonfield Lake as extremely high*." These statements alone suggest this potential impact is not "less than significant". The DEIR does present inundation maps associated with these failures but provides no further analysis on how these potential impacts will be mitigated apart from the statement (pg. 287) "*Specific geotechnical investigations of the dams at Fern and Suttonfield Lakes would need to be conducted to determine their potential for failure*." However, this is a deferred analysis, which does

not support the findings of "less than significant" impacts and "not applicable" mitigations.

e. Impact 3.9-5 - The DEIR states that implementation of the Project would not conflict or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Thus, the DEIR concludes that associated impacts are less than significant. However, for the same reasons presented above (items 2a. – 2c.), the DEIR does not present any technical justification for this determination and should be considered inadequate and incomplete.

3. An important analysis of the SDC project is the determination if there are sufficient water supplies to meet proposed project water demands. Appendix D of the DEIR presents the results of this analysis. Based on my review of Appendix D, I've identified several mistakes and other issues that suggest the DEIR does not demonstrate there is sufficient water supply to meet future (2045 full buildout) demands.

B11-272

Table 2 (pg. 14) of Appendix D indicates that estimated Project annual water demands by the year 2045 will be 342 acre-feet per year (AFY). Table 9 (pg. 31) of Appendix D indicates that available annual supply that will be 100% reliable for the period 2030-2045 is 356 AFY. Comparison of available and reliable water supply (356 AFY) to full buildout demands (342 AFY) suggest there is very little margin for error in terms of future water supply management. The DEIR supply estimate is also concerning to me in that the historic (1969-2007) water use (demands) for the SDC averaged 622 AFY and peaked at 1,143 AFY in 1986 (pg. 12, Appendix D). I'm suspect that the historic SDC water use is nearly twice the volume of estimated future full buildout (2045) Project water demands, especially when the Project proposes to build an additional 1000 residential units and hotel and reoccupy and/or expand the commercial and industrial uses (see Table 1, pg. 13 of Appendix D). Even with conservation measures, I would expect that Project water demands would be similar to if not larger than historic use. The next paragraphs elucidate this opinion.

In reviewing and cross-checking the data and information presented in Tables 1 and 2 of Appendix D, I identified several questionable results that suggest the DEIR water demands are significantly underestimated. These findings are as follows.

a. Table 2 (pg. 16 of Appendix D) only provides employee water use estimates for the proposed hotel. Water use by guests staying in the 100,000 square foot hotel is not accounted for in the annual water demand estimate. Incorporating guest water use into the demand estimate could easily result in total annual project demands greater than reliable supply.

b. To better evaluate the DEIR demand estimates, I created Table A (below), which merges data from Tables 1 and 2 in DEIR Appendix D. In doing this exercise, I identified a significant math error in the DEIR demand estimates for General Commercial, Office, Public/Industrial, and Research & Development land uses presented in Table 2 of

Appendix D. When independently calculating water demands using the 2045 land use areas and Water Use Factors provided in Appendix D, the respective 2045 water demands for the General Commercial, Office, Public/Industrial, and Research & Development land uses result in values that are two orders of magnitude higher than those reported, which results in an increased annual Project water demand of 9846 AFY (see Table A).

c. The Permit Sonoma website[1] provides guidelines (8-2-1 Water Supply, Use and Conservation Assessment Guidelines) for the preparation of Water Supply Assessments. The purpose of this policy is to provide guidance to applicants and their representatives on how to prepare a Water Supply, Use, and Conservation Assessment (henceforth, the "Assessment"). The Assessment may be a standalone document, or supplemental to a hydrogeologic study, Zero Net Use report, or other water supply related report. These guidelines are intended for discretionary and ministerial projects. Discretionary projects that are dependent on groundwater or surface water will typically require an Assessment with the use permit application. The Assessment will inform the environmental review process and conditions of approval. The authority of the Assessment falls under Sonoma County General Plan, Water Resource Element Goals WR-2 and WR-4, Objective WR-4.1, WR-4.2, and WR-4.3, and Policies[2] WR-2c, WR-2d, WR-2e, WR-4b, and WR-4f. Therefore, the DEIR Water Supply Assessment (Appendix D) should adhere to County Guidelines. Appendix A to the County's Guidelines has water use estimates for residential, landscape, agricultural, and Commercial and Industrial uses that are greater than those factors presented in Table 2 of Appendix D (see Table B). Applying the Sonoma County water use estimates to Project water demand estimates results in higher residential and irrigated area water demands than presented in the DEIR (see Table B below).

In summary, correcting math errors and applying the Sonoma County guidelines water use estimates to the DEIR demand estimate tables results in a total annual Project water demand of 10,231 AFY, a values three times higher than reported reliable supply (356 AFY). This annual total demand will be even higher when hotel guest water use is considered.

[1] https://permitsonoma.org/policiesandprocedures/8-2-1watersupplyuseandconservationassessmentguidelines

[2] Note: these policies are not included in Hydrology/Water Quality Regulatory Setting section (3.9.1 on pg. 270) of the DEIR. See Comment 1 above.

TABLE A: Corrected DEIR Water Demand Estimates

Land Use	Total Land Use	Land Use Units	Water Use Factor	Water Use Factor Units	DEIR Est. Water Use (AFY) - 2045	Corrected DEIR Est. Water Use (AFY) - 2045
Single Family Residential	250	du	244	gpd/du	68	68
Multi-Family Residential	500	du	100	gpd/du	56	56
"Missing Middle" Residential	250	du	172	gpd/du	48	48
Hotel	100,000	sf	0.16	AFY/employee	28.0	26.7
General Commercial	40,000	sf	1.79	AFY/100 sf	7.2	716.0
Office	127,500	sf	1.79	AFY/100 sf	23	2282
Public/Institutional	155,000	sf	1.79	AFY/100 sf	28	2775
Research & Development	127,500	sf	2.35	AFY/100 sf	30	2996
Total Open Space	3,116,000	sf				
Irrigated Park Area	488,000	sf			21	21
Other Irrigated Common Space Areas (e.g., landscaped medians)	148,000	sf			2.9	2.9
System Water Losses			9.5%		30	854
				Total	**342**	**9846**

TABLE B: Corrected DEIR Water Demand Estimates using selected Sonoma County Water Use Factors

Land Use	Total Land Use	Land Use Units	Water Use Source	Water Use Factor	Water Use Factor Units	Estimated Water Use (AFY) - 2045	DEIR Est. Water Use (AFY) - 2045
Single Family Residential	250	du	Sonoma County	0.5	AFY/du	125	68
Multi-Family Residential	500	du	Sonoma County	0.5	AFY/du	250	56
"Missing Middle" Residential	250	du	Sonoma County	0.5	AFY/du	125	48
Hotel	100,000	sf	Original EIR	0.16	AFY/employee	28	28
General Commercial	40,000	sf	Original EIR	1.79	AFY/100 sf	716	7.2
Office	127,500	sf	Original EIR	1.79	AFY/100 sf	2282	23
Public/Institutional	155,000	sf	Original EIR	1.79	AFY/100 sf	2775	28
Research & Development	127,500	sf	Original EIR	2.35	AFY/100 sf	2996	30
Total Open Space	3,116,000	sf	Original EIR	-	-	-	-
Irrigated Park Area	11	acres	Sonoma County	3.6	AFY/acre	40	21
Other Irrigated Common Space Areas (e.g., landscaped medians)	3	acres	Sonoma County	1.8	AFY/acre	6.1	2.9
System Water Losses	-	-	Original EIR	9.5%	-	888	30
					Initial Sum	9343	312
					Total	**10,231**	**342**

Please feel free to contact me with any questions regarding the material and conclusions contained in this letter.

Sincerely,

Greg Kamman, PG, CHG
Senior Ecohydrologist



Hydrology | Hydraulics | Geomorphology | Design | Field Services

Greg Kamman, PG, CHG
Senior Ecohydrologist



Education

MS, 1989, Geology, Sedimentology and Hydrogeology, Miami University, Oxford, OH

BA, 1985, Geology, Miami University, Oxford, OH

Professional Registration

1993, Professional Geologist, California, #5737

1995, Certified Hydrogeologist, California, #360

Professional Experience

cbec, inc., eco-engineering, West Sacramento, CA, Senior Ecohydrologist, 2020-present

Kamman Hydrology & Engineering, Inc., San Rafael, CA, Principal Hydrologist/Vice President, 1997-2020

Balance Hydrologics, Inc., Berkeley, CA , Sr. Hydrologist/ Vice President, 1994-1997

Geomatrix Consultants, Inc., San Francisco, CA, Project Geologist/Hydrogeologist, 1991-1994

Environ International Corporation, Princeton, NJ, Sr. Staff Geologist/Hydrogeologist, 1989-1991

Miami University, Oxford, OH, Field Camp Instructor and Research Assistant, 1986-1989

Greg Kamman is a professional geologist and certified hydrogeologist with over 30 years of technical and consulting experience in the fields of geology, hydrology, and hydrogeology. He specializes in directing and managing projects in the areas of surface and groundwater hydrology, stream and tidal wetland habitat restoration, water supply and water quality assessments, water resources management, and geomorphology. Mr. Kamman has worked extensively throughout California's coastal watersheds and estuaries, and on multiple projects in Oregon and Hawaii.

Mr. Kamman's experience and expertise includes evaluating surface and groundwater resources and their interaction, stream and wetland habitat restoration assessments and design, characterizing and modeling basin-scale hydrologic and geologic processes, assessing watershed hydraulic and geomorphic responses to land-use change , and designing and conducting field investigations characterizing surface and subsurface hydrologic and water quality conditions. Greg commonly works on projects that revolve around sensitive fishery, wetland, wildlife, and/or riparian habitat enhancement within urban and rural environments. Mr. Kamman performs many of these projects in response to local, state (CEQA) and federal statutes (NEPA, ESA), and other regulatory frameworks. Mr. Kamman frequently applies this knowledge to the review and expert testimony on state and federal water operation plan EIR/EIS reports, Groundwater Sustainability Plans, Habitat Conservation Plans, and biological assessments.

Mr. Kamman is accustomed to working multi-objective projects as part of an interdisciplinary team including biologists, engineers, planners, architects, lawyers, and resource and regulatory agency staff. Mr. Kamman is a prime or contributing author to over 360 technical publications and reports in the discipline of hydrology, the majority pertaining to the protection and enhancement of aquatic resources. Mr. Kamman has taught the following courses: stream restoration through U.C. Berkeley Extension (2001-2008); wetland hydrology through San Francisco State University's Romberg Tiburon Center (2007 and 2012-2014); and presented webinars (2020) to California Water Boards staff on hydrologic and hydraulic modeling. He has devoted his career to the protection, enhancement and sustainable management of water resources and associated ecosystems.

SELECTED EXPERIENCE

Floodplain Management Projects

Flood Reduction, Mitigation Planning, and Design on Yreka Creek, Siskiyou County, CA
City of Yreka as subcontractor to WRA, Inc., 2008-2010

Mr. Kamman completed a series of field and hydraulic model investigations for restoration planning and design along Yreka Creek to reduce flood hazards and potential damage to the City's water treatment plant and disposal field infrastructure. This work also addresses and satisfies dike repair mitigation conditions stipulated by state resource agencies. While achieving these goals, Mr. Kamman tailored analyses and study objectives to assist the City in: enhancing the ecological floodplain restoration along Yreka Creek; providing opportunities for expanded public access and trail planning consistent with the goals of the Yreka Creek Greenway Project; and improving the water quality of Yreka Creek.

Key elements of this work included: review and synthesize existing information; identify and analyze the feasibility for three conceptual alternatives; and conceptual design and report preparation. Funding for implementation of restoration work over such a large area was a significant concern to the City. Therefore, designs identify and define phasing in a fashion that gives the City flexibility in implementation.

SELECTED EXPERIENCE *(CONTINUED)*

West Creek Drainage Improvement Assessment, Marin County, CA
Marin County Flood Control, 2006-2008

Mr. Kamman prepared a study focused on characterizing existing flood conditions and developing and evaluating flood reduction measures along West Creek in Tiburon. The work was completed through the implementation of hydrologic and hydraulic feasibility and design assessments. The conceptual design and analysis of potential flood reduction strategies (alternatives) was completed through the development of a HEC-RAS hydraulic model that simulates historic, existing and proposed project flood conditions. It was intended that the conceptual design developed under this scope of work would be of sufficient detail and quality to initiate project permitting and the environmental compliance process and documentation. Opportunities for riparian corridor and aquatic habitat enhancement were also considered and integrated into the conceptual design. Mr. Kamman also developed and assessed six alternative flood hazard reduction measures. The hydraulic model results for each alternative were compared against baseline conditions in order to evaluate their ability to alleviate flood hazards.

Gallinas Creek Restoration Feasibility Assessment, Marin County, CA
San Francisco Bay Institute, 2003-2005

Mr. Kamman completed a feasibility assessment for restoration of Gallinas Creek in northern San Rafael. Restoration will require removal of a concrete trapezoidal flood control channel and replacement with an earthen channel and floodplain in a "green belt" type corridor. Work included the collection of field data and development of a HEC-RAS hydraulic model to evaluate and compare existing and proposed project conditions. Designs must continue to provide adequate flood protection to the surrounding community. The study also includes and evaluation of existing habitat values, potential habitat values, and restoration opportunities and constraints.

Hydrologic and Hydraulic Evaluation for Trinity County Bridge Replacement, Trinity County, CA
Trinity County Planning Department, 2002

Mr. Kamman completed technical peer review of peak flow estimates and hydraulic design parameters associated with the replacement of 4 bridges across the upper Trinity River in Trinity County, California. A primary study component was accurately predicting the magnitude and frequency of flood releases from Trinity Dam. Numerous flood frequency analytical approaches were evaluated and used throughout this study.

Restoration of Lower Redwood Creek Floodway and Estuary, Humboldt County, CA
California State Coastal Conservancy and Humboldt County DPW, 2002-2003

Mr. Kamman provided technical review for the development of a hydraulic model to evaluate river and estuary restoration alternatives along the lower portions of Redwood Creek between Orrick (Highway 1) and the Pacific Ocean. This work was completed to evaluate the feasibility for creek/estuary restoration alternatives developed by the County, and effects on flood hazards along this flood-prone reach.

In order to better address and evaluate the current flood hazards along the entire floodway and identify potential flood hazard reduction measures, Mr. Kamman was retained to update HEC-2 models previously prepared by the Army Corps, and to evaluate the impacts of vegetation encroachment (increased roughness) and sediment deposition on floodway conveyance. Mr. Kamman expanded the Corps hydraulic model with newly completed channel surveys and channel roughness observations. The impetus for this work was to assist the County in identifying mutually beneficial strategies for ecosystem restoration and flood hazard reduction. Technical work was completed under close coordination and communication with county engineers. Study results and findings were presented at public meetings of local area landowners and stakeholders.

Tembladero Slough Small Community Flood Assessment, Monterey County, CA
Phillip Williams & Associates, Ltd., 1997

Mr. Kamman completed a flood information study of Tembladero Slough near Castroville on behalf of the San Francisco District Corps of Engineers. The purpose of this work was to identify and document local flood risks existing in the community and propose potential floodplain management solutions as part of the Corps 1995/1997-flood recovery process. Work centered on conducting a field reconnaissance, reviewing available historical data, and conducting discussions/interviews with local landowners and agency personnel.

Fluvial Projects

Muir Woods National Monument Bank Stabilization Plan for Conlon Creek, Marin County, CA
Golden Gate National Parks Conservancy (GGNPC), 2018-present

Mr. Kamman developed a grading and drainage plan for the Conlon Avenue Parking Lot, located adjacent to Redwood Creek and sensitive Coho salmon habitat. More recently, he has assisted GGNPC and the NPS in assessing the planning and design for creek bank stabilization and ecological enhancement at a failed culvert on a tributary channel at the project site. This work includes constructing a HEC-RAS model to evaluate: culvert removal and channel design; fish passage; and water quality impacts. Work is currently in development of 50% engineering design.

Hydrology and Hydraulic Assessments for Design of Butte Sink Mitigation Bank Project, Colusa County, CA
WRA, Inc., 2017-2018

Mr. Kamman was retained to provide hydrology and hydraulic modeling support in the development of design and Draft Prospectus for the Butte Sink Mitigation Bank (Bank). This work entailed developing the necessary hydrology information, hydraulic model and documentation to support further design, environmental compliance and agency approvals/permitting of the Bank. The main objective of work was to develop a design that provides the necessary ecological conditions and functions for successful establishment and operation of the Bank.

Lagunitas Creek Salmonid Winter Habitat Enhancement Project, Marin County, CA
Marin Municipal Water District, 2013-2018

Mr. Kamman designed and led a study to evaluate opportunities to enhance winter habitat for coho and other salmonids in Lagunitas Creek and its largest tributary - Olema Creek. This work was done as a two-phase assessment and design effort. The first phase (completed in 2013) included a winter habitat assessment to evaluate existing juvenile salmonid winter habitat in Lagunitas Creek and lower Olema Creek. The results of this assessment were used to prioritize winter habitat needs, and identify opportunities for winter habitat enhancement to increase

SELECTED EXPERIENCE *(CONTINUED)*

the winter carrying capacity of coho salmon and steelhead. The second phase (completed in 2017) consisted of a designing winter habitat enhancements. These enhancements focused on restoring floodplain and in-channel habitat structures. Winter habitat enhancement work also needed to consider potential impacts to or benefits for California freshwater shrimp (Syncaris pacifica), a federally endangered species.

This work included field reconnaissance, topographic surveys and the preparation of final design drawings at nine different project sites. An overall self-maintaining design approach was developed to guide individual project plan, with minimal earthwork and disturbance to existing riparian and wetland habitat. Self-sustained, natural evolution of a multi-thread channel within a more active floodplain is a desired outcome of project actions. Design elements and structures are intended to enhance or restore natural hydrologic processes to promote geomorphic evolution of more active high flow (side) channels and floodplain. Design elements include construction of 24 individual log structures.

Lower Miller Creek Management and Channel Maintenance, Marin County, CA
Las Gallinas Valley Sanitary District, 2013-2015

Mr. Kamman was commissioned to formulate and implement a plan for sediment removal and improved flood flow conveyance in the Lower Miller Creek channel. The need for improved flood and sediment conveyance is driven by the following factors. Progressive accumulation of course sediment in the project reach had reduced area wide discharge efficiencies along Miller Creek and at District outfalls. The District had an immediate need to dredge Lower Miller Creek to protect existing operations and facilities. Miller Creek supports a population of federally listed Steelhead, and adjacent wetland areas potentially support other state and federally listed special status species. Therefore, permitting requirements and cost efficiency required minimizing the extent and frequency of channel excavation/maintenance that may adversely impact habitats in the wetland and riparian corridor.

The design objective of the project was to define and optimize an integrated channel maintenance, flood, and sediment management plan, that protects existing facilities from stream and coastal flood hazards. The plan's objective was to minimize costs and ecological impacts of future anticipated and designed maintenance activities required under District operations. Working with District Staff, Mr. Kamman developed a suite of potential project alternatives and identified a preferred approach. Mr. Kamman completed all CEQA compliance (IS/MND) and permitting. Mr. Kamman also managed and directed development of engineered drawings and assisted in bid document preparation.

Mr. Kamman provided site assessment, long term management planning and channel maintenance support to the Sanitary District to maintain flood conveyance, manage sediment aggrading at District outfalls, and improve ecological values in the intertidal Bayland reaches of Miller Creek. The creek supports multiple federal and state listed endangered species. Initial work included completing hydraulic and geomorphic assessments to characterize causes of channel aggradation, and quantify sediment yields. Assessments included evaluation of climate change impacts on habitat and flood hazards, and water quality modeling of District outfalls to quantify tidal exchange and dilution. Based on this analysis and supporting biological resource assessments, Mr. Kamman identified alternatives for channel maintenance, performed a cost benefit assessment of dredging alternatives, and is assisted the District in developing short and long term management objectives. Mr.Kamman also led a multidisciplinary design team in the preparation of engineering plans and specifications as well as permits and environmental compliance documents.

Vineyard Creek Channel Enhancement Project, Marin County, CA
Marin County Department of Public Works, 2007-2013

Mr. Kamman managed the preparation of designs and specifications for a flood conveyance and fish habitat and passage improvement project on Vineyard Creek. Creek corridor modifications included replacing the box culvert at the Center Road crossing with a free span bridge or bottomless arch culvert (civil and structural design by others), providing modifications to the bed and bank to eliminate erosion risks to adjacent properties and improve water quality, promoting active channel conveyance of both water and sediment, and providing improved low and highflow fish passage, improved low flow channel form and enhanced in-stream habitat, repairing eroding banks, and expanding/enhancing adjacent channel floodplains. The riparian corridor was replanted to provide a low-density native understory, "soft" bank erosion protection, and increased tree canopy along the tops of banks. Mr. Kamman prepared the JARPA for the project and conducted permit compliance and negotiations with all participating resource agencies. Designs and permitting also address the known presence of Native American artifacts. This work was contracted under an expedited design schedule and phased construction was initiated the summer of 2008 and continued the summer of 2009.

Bear Valley Creek Watershed and Fish Passage Enhancement Project, Marin County, CA
The National Park Service and Point Reyes National Seashore Association, 2005-2013

Working on behalf of the NPS and PRNSA, Mr. Kamman completed a watershed assessment and fish passage inventory and assessment for Bear Valley Creek. Work included a geomorphic watershed assessment and completing field surveys and hydraulic modeling (including flood simulations) of ten road/trail crossings to identify and prioritize creek and watershed restoration efforts while considering and addressing current flooding problems at Park Headquarters – a major constraint to channel restoration efforts that would likely exacerbate flooding. Mr. Kamman also completed a suite of conceptual restoration designs (Phase 1) including: the replacement of two county road culvert crossings with bridges; channel creation through a ponded freshwater marsh (former tidal marsh); and replacement of 4 trail culverts with prefabricated bridges; and associated in-channel grade control and fishway structures. Engineered drawings and specifications were also developed for some of these sites to assist PORE with emergency culvert replacements after damages sustained during the New Year's Eve flood of 2005. Mr. Kamman also directed geotechnical, structural and civil design of project components.

Two projects were completed in 2006 on emergency repair basis resulting from flood damages suffered during the New Year's Eve storm of 2005. The two most recent projects were constructed in 2013, consisting of a large bank repair and adjacent to main access road/trail and culvert replacement further upstream on same road. The bank repair utilized bioengineering approaches including engineered log revetments and log diversion vanes.

SELECTED EXPERIENCE *(CONTINUED)*

Kellogg Creek Restoration Project, Contra Costa County, CA
Olberding Environmental on behalf of the Contra Costa County Water District, 2012-2013

Mr. Kamman led the development of PS&E to restore 3,000 linear feet of riparian and associated creek corridor habitat. Project was designed as compensatory mitigation for direct and indirect impacts to jurisdictional waters from the Los Vaqueros Reservoir Expansion Project that Contra Costa Water District. Work included field investigations and data analysis to characterize hydrologic/geomorphic conditions and numerical modeling to optimize desired inundation and hydroperiods. Work was completed under subcontract to.

Miller Creek Sanitary Sewer Easement Restoration, Marin County, CA
Las Gallinas Valley Sanitary District, 2010

Working on behalf of the District, Mr. Kamman completed field surveys and technical feasibility studies to develop engineering plans and specifications for a stream bank restoration project to protect an exposed sanitary sewer pipeline, stabilize incised banks, and promote an ecologically healthy stream corridor along an approximately 50 linear foot damaged reach of Miller Creek. The design includes backfill and materials to accommodate construction of a vegetated stabilized slope. The eroded bank repair included design of a 1:1 Envirolok vegetated slope with geogrid reinforced soil lifts extending eight to ten feet back from the slope face. One-quarter-ton rock will be placed in front of the Envirolok wall at the toe of the reconstructed bank to provide added scour protection. In order to perform the work, the project site will be dewatered. An existing felled tree perpendicular to the creek flow will be relocated and secured into the right creek bank with root wad remaining in active channel. All work on the bank and within the creek bed must be completed pursuant to project permits due to presence of steelhead trout.

California Coastal Trail Planning and Design at Fitzgerald Marine Reserve, San Mateo County, CA
WRA, Inc., 2008-2009

Mr. Kamman provided hydrology and hydraulics expertise in the planning and design for the 0.25-mile segment of the California Coastal Trail at the Fitzgerald Marine Reserve. The project was overseen by the San Mateo County Parks Department. This segment of Coastal Trail provides improved access from the trailhead to the beach as well as a free span bride over Vicente Creek. Greg completed the field surveys and hydraulic modeling to assist an interdisciplinary team to design the project. Understanding the hydrology of Vicente Creek and quantifying flood conditions was critical to successfully designing and constructing the free span bridge. He also evaluated how creek hydrology and coastal wave processes interact at the beach outfall in order to identify opportunities and constraints to beach access improvements (which will include crossing the creek on the beach) during both wet and dry season conditions in order to evaluate both permanent and seasonal crossing design alternatives.

Hydrologic Assessment and Conceptual Design for Conservation and Wetland Mitigation Bank Project, Stanislaus County, CA
WRA, Inc., 2009

Working as a subcontractor to WRA, Inc., Mr. Kamman provided hydrology, geomorphology and engineering support for the planning and design for a Conservation and Wetland Mitigation Bank on the San Joaquin River, in the Central Valley near Newman, California. The property is currently owned by the Borba Dairy Farms. The primary objective of the study was to characterize the hydrologic and geomorphic controls on the spatial distribution of habitat types. To meet this objective, Mr. Kamman's assessment included: (1) collecting and synthesizing hydrologic data to characterize existing and historic streamflow, geomorphic and shallow groundwater conditions; (2) filling a data gap by collecting topographic data of hydrologic features; (3) developing a hydraulic model capable of predicting water surface profiles for a range of design flows; and (4) quantifying the linkage between surface water/groundwater conditions and specific vegetation communities and habitat types through implementation of reference site assessments. Mr. Kamman also provided conceptual design and permitting support in evaluating habitat enhancement and creation opportunities on the site.

Redwood Creek Floodplain and Salmonid Habitat Restoration, Marin County, CA
Golden Gate National Recreation Area and Golden Gate Parks Conservancy, 2005-2008

Mr. Kamman lead development of a preferred project alternative and final project design drawings and specifications for a floodplain and creek restoration and riparian corridor enhancement effort on lower Redwood Creek above Muir Beach at the Banducci Site. A primary objectives of the project was to: improve salmonid passage/rearing/refugia habitat; riparian corridor development to host breeding by migratory song birds; and wetland/pond construction to host endangered red-legged frog. The preferred design includes: excavation along the creek banks to create an incised flood terrace; engineered log deflector vanes; removing and setting back (constructing) approximately 400-feet of levee; creating in- and off-channel salmonid rearing and refugia habitat; reconnecting tributary channels to the floodplain; and creating California red-legged frog breeding ponds. Designs were completed in 2007 and the project constructed in the summer of 2007.

Considerable hydraulic modeling was completed to evaluate and develop means to help reduce chronic flood hazards to surrounding roadways and properties. Alternatives that included set-back levees and road raising were developed and evaluated. Detailed and careful hydraulic (force-balance) analyses and computations were completed as part of engineered log deflector designs. These were unique and custom designed structures, building on past project efforts and in consultation with other design professionals.

This project demonstrates Mr. Kamman's ability to work closely with the project stakeholders to develop a preferred restoration alternative in a focused, cost-effective and expedited fashion. This was achieved through close coordination with the NPS and the effective and timely use of design charrette-type meetings to reach consensus with participating stakeholders. Conceptual through full PS&E were completed on-time and on-budget in 2007 and was project constructed in the fall of 2007. Mr. Kamman worked closely with NPS staff to "field fit" the project, by modifying grading plans to protect existing riparian habitat. Mr. Kamman also provided construction management and oversight to floodplain grading and installation of engineered log structures. Based on field observations, the project is performing and functioning as desired.

Pilarcitos Creek Bank Stabilization Project, San Mateo County, CA
TRC Essex, 2006-2007

Mr. Kamman directed field surveys and technical modeling analyses to develop restoration design alternatives for a Bank Stabilization Project on Pilarcitos Creek

SELECTED EXPERIENCE *(CONTINUED)*

in unincorporated San Mateo County, California. This work included hydrology and hydraulic design and preparation of plan sheets and technical specifications as well as a revegetation plan. Due to the importance of protecting an existing gas mainline, the design package will be completed in close coordination with TRC Essex geotechnical staff and revegetation subcontractor and PG&E civil staff. Design feasibility analyses focused on developing hydraulic design criteria for the project, including: estimates of design flood flow magnitudes (2-, 5-, 10-, 25-, 50- and 100-year floods); water surface elevation estimates for a suite of design floods; associated average channel velocities and shear stresses; and estimates for riprap sizing for channel bank toe protection. Plan sheets, technical specifications and cost estimates were provided for review and approval.

Watershed Assessments

Evaluation of Project Impacts on Oregon Spotted Frog, Klamath County, OR
Oregon Water Watch and Earthjustice, 2016-2019

Mr. Kamman designed a suite of hydrologic, hydraulic and geomorphic studies to evaluate proposed change operations of the Crane Prairie, Wickiup and Crescent Lake dams and reservoirs as related to harm to Oregon spotted frogs. Work began with analyzing impacts associated with proposed water delivery operations and developing a proposed alternative prioritizing protection and enhancement of frog habitat. This work followed with a technical review and critique of the USFWS's Biological Assessment. Work included preparation of four declarations for the clients.

Tennessee Hollow Creek Riparian Corridor Restoration, San Francisco County, CA
Presidio Trust, 2001-present

Mr. Kamman has been leading and assisting the Trust and Golden Gate National Recreation Area (GGNRA) in the planning and design on over a dozen multi-objective riparian corridor restoration and watershed management projects in the Tennessee Hollow/Crissy Marsh watershed since 2001. Specific project objectives include: daylighting creeks; riparian corridor restoration; expanding Crissy Marsh; enhancing recreation, education, archeological, and cultural resource opportunities; improving water quality discharges to San Francisco Bay; and remediation of numerous landfills within the watershed. Typical initial phases of work focus on characterizing surface and groundwater conditions within each project area and identifying opportunities and constraints to restoration of natural wetlands and creek/riparian corridors. Notable challenges of this work include restoring heavily disturbed natural resources in an urban setting while integrating designs with recreation, archeology/cultural resources, education and remediation programs. Mr. Kamman has acted as lead hydrologist and designer on eight separate reaches in the 271-acre Tennessee Hollow Creek watershed and several other projects within and in the vicinity of Mountain Lake.

All task authorizations under these on-call and individual design contracts and included hydrology and water quality assessments and conceptual restoration planning and design. The project areas overlapped both the Presidio Trust and NPS-GGNRA management areas. Preliminary construction cost estimates for project alternatives within the Tennessee Hollow watershed range from $10- to $20- million. Several restoration projects are also tied to providing mitigation for the current San Francisco Airport expansion and Doyle Drive Seismic Improvement projects. Several projects have been constructed since 2012 (Thompson's Reach, El Polin Loop), two projects (East Arm Mtn. Lake and YMCA Reach) were constructed in 2014, and MacArthur Meadow restoration in 2016.

This work illustrates the Mr. Kamman's ability to complete a broad variety of hydrologic analyses, including: multiple years of rigorous and thorough surface water and groundwater hydrologic and water quality monitoring throughout the entire watershed to characterize and quantify existing hydrologic conditions; development of a detailed watershed-scale water budget for existing and proposed land-used conditions (capturing existing and proposed vegetation cover types and land use activities) to calculate groundwater recharge estimates input into the numerical watershed model; preparation of EA sections on water resources and water quality (NEPA compliance) regarding Environmental Conditions, proposed Impacts, and Proposed Mitigations associated with the project; preparing detailed alternative plans; and coordination and preparation of engineered plans/specifications for construction. All work was completed on budget and in a timely fashion.

Mountain Lake Water Budget, San Francisco County, CA
Presidio Trust, 2012-2017

Mr. Kamman was retained to develop a water balance model for Mountain Lake in the Presidio of San Francisco. Through development of a water balance model, the Trust seeks to understand: the major source(s) of inflow to both Mountain Lake; anticipated seasonal (monthly) changes in water level relative to various outflow assumptions; and the relationship of surface and groundwater interaction. This information gained from this study will be used to: 1) better understand and manage lake levels for ecological habitats; 2) identify flood storage capacity of Mountain Lake and fluctuations in lake level under various storm conditions; 3) better understand and maintain wetland habitat in the east arm; and 4) complete mass balance calculations to assess water quality in and feeding into the lake.

To implement this study, Mr. Kamman developed a water budget model to identify and quantify the primary water inputs and outputs to the lake and determine major controls over water storage. Primary water budget variables analyzed includes: precipitation; evaporation/evapotranspiration; groundwater exchange; and surface runoff. This study also included a long-term field investigation completed between 2012 and 2016 to: identify all point source inputs such as culverts and drainage outlets; identify diffused surface runoff inputs from surrounding lands, including a golf course; better characterizing the function and performance of the primary lake outfall structure; monitor groundwater levels surrounding the lake; and continuously monitor lake water level and storage over a mult9i-year period. These data were used to quantify water budget variables used to build the water budget model. Precipitation and barometric pressure data used in the model was provided by the Trust maintained weather station. Model daily evaporation estimates came from a variety of local area gauges maintained by state agencies.

The water budget model developed for this study is successful in accurately simulating historic water level conditions. The model using a daily time-step appears more accurate than model using a weekly time-step, but both provide reasonable agreement with observed conditions. The model is highly sensitive to groundwater exchange with the lake. The water budget is also a proven useful tool for the design and analysis of improvements to the lake outfall structure and establishing flood storage needs to protect the adjacent highway.

SELECTED EXPERIENCE *(CONTINUED)*

Cordilleras Creek Hydrologic Assessment, San Mateo County, CA
City of Redwood City, 2002-2003

Mr. Kamman assisted the Cordilleras Creek Watershed Coordinator in planning, seeking funding, and implementing a hydrologic and biologic assessment of the Cordilleras Creek watershed. Work completed included completing a full creek reconnaissance and channel stability assessment, preparation of a watershed assessment work plan, presentations at public meetings, and study/review of flooding issues in the watershed. Challenges faced in this predominantly privately owned watershed include removal of numerous fish passage barriers and educating/coordinating property owners.

Capay Valley Hydrologic and Geomorphic Watershed Assessment, Yolo County, CA
Yolo County RCD, 2008-2010

Mr. Kamman designed and supervised a hydrologic, geomorphic watershed assessment, and conceptual restoration design for the Capay Valley segment of Lower Cache Creek . Funding for the project was from a CALFED Watershed Program grant. The Capay Valley reach of Cache Creek experiences considerable stream bank erosion, which contributes to downstream sedimentation. The channel instability also threatens adjacent homes and can negatively impact the riparian habitat along the creek that functions as an important wildlife corridor from the Western Coastal Range to the Yolo Bypass. Additionally, a significant proportion of methylmercury transported into the Bay-Delta originates from the Cache Creek watershed. The main goal of this proposed study is to address both the causes and the aforementioned consequences of bank erosion.

The assessment was designed to evaluate and quantify changes in hydrologic and geomorphic conditions in response to historical changes in land-use and water development (e.g., diversions, reservoir construction, groundwater pumping, etc.). This assessment also evaluated how historic human induced changes in hydrologic and geomorphic conditions affect riparian ecology in terms of the lost or altered floodplain area, character, and inundation frequency. A key product of this assessment was to distinguish between “natural” and “accelerated” bank erosion, and to identify the underlying causes (both natural and anthropogenic) so that appropriate solutions can be developed. Desired outcomes of the study included: reduce bank erosion by developing restoration designs for typical trouble sites; produce a ranking system to prioritize sites for stabilization and restoration; contribute to community education through watershed science education and the Yolo STREAM Project outreach program; improve water quality through reduction in accelerated erosion; and contribute to riparian corridor restoration and support the RCD’s Wildlife Conservation Board funded efforts to remove non-native tamarisk and around from the creek corridor. Work was completed through a broad spectrum of field and analytical investigations that received close review by the RCD, stakeholders, and a Technical Advisory Committee.

Ventura River Unimpaired Flow and Habitat Assessment, Ventura County, CA
City of Buenaventura and Nautilus Environmental, 2006-2007

Mr. Kamman completed a hydrology feasibility assessments as part of evaluating the reuse of Ojai Valley Sanitary District (OVSD) effluent for other beneficial uses. Currently, OVSD discharges treatment plant effluent to the lower Ventura River. The City and OVSD recognize that the reduction in the discharge of treated effluent to the Ventura River could have an environmental effect on sensitive and endangered species. In light of these concerns, this study was conducted to determine if a reuse project is feasible without significant environmental harm.

The assessment included hydrologic and geomorphic field and analytical assessments of past (unimpaired), current and proposed surface and groundwater flow conditions over a wide range of dry- through wet water year-types. The main objective if these analyses was to determine the linkage to water quality and aquatic habitat conditions including: flow durations; extent of gaining vs. losing reaches; low flow inundation/wetted area; and influence on barrier beach dynamics. Mr. Kamman collaborated with a team of other professionals to prepare a facility plan documenting the analyses and conclusions of respective water recycling investigations.

Hydrologic Analysis of FERC Minimum Flows on Conway Ranch Water Rights, Mono County, CA
Law Office of Donald Mooney, 2001-2002

Mr. Kamman completed a hydrologic analysis to evaluate if FERC’s proposed Minimum Flow Plan for Mill Creek would interfere with the exercise of the Conway Ranch’s water rights from Mill Creek. The approach to this analysis was to quantify the duration of time the Conway Water right was met under historic gaged and simulated proposed Minimum Flow Plan conditions. The primary objective of the analysis was to evaluate impacts during the winter period when flows are typically limited due to water storage as snow pack. Minimum Flow Plan conditions were simulated by developing a spreadsheet model that redistributes actual (historic) Lundy Lake releases in a fashion that maintains a minimum flow of 4 cfs to Mill Creek to accommodate the downstream Southern California Edison’s (SCE) power plant. The analysis period for both historic and simulated Minimum Flow Plan conditions consisted of water years (WY) 1990 through 1998 to capture an exceptionally diverse range of wet and dry year-types.

The primary method used to quantify changes in flow between historical and simulated Minimum Flow Plan conditions was to prepare and compare flow duration curves for each condition during both the winter and summer periods during a variety of water year types. Model results were tabulated for each conditions to determine the differences in the percentage of time target flows were equaled or exceeded. Based on these findings, Greg was contracted to complete more in-depth monthly modeling.

Groundwater Management Projects

Assessments of Groundwater-Surface Water Interaction, Stanislaus County, CA
The Law Offices of Thomas N. Lippe, APC and California Sportfishing Protection Alliance, 2015-present

Since 2015, Mr. Kamman has been assessing groundwater conditions within Stanislaus County and evaluating potential impacts of groundwater pumping on surface water flow and aquatic habitat of the Stanislaus, Tuolumne and San Joaquin Rivers. Mr. Kamman completed a comprehensive review and synthesis report of available groundwater and interconnected surface water (ISW) reports and data. Using available soils, geology and hydrology information, Mr. Kamman also delineated and mapped subterranean streams and Potential Stream Depletion Areas (PSDAs) to identify stream corridors susceptible to adverse impacts from groundwater pumping. This information is intended to help Groundwater Sustainability Agencies identify potential impacts to ISW.

SELECTED EXPERIENCE *(CONTINUED)*

Most recently, Mr. Kamman has been retained to review and comment on 7 Groundwater Sustainability Plans (GSPs) for critically overdraft groundwater subbasins within or adjacent to Stanislaus County. This review focused on how GSPs address Groundwater Dependent Ecosystems (GDE) and ISW. Comments included recommendations on monitoring and study plans to identify and quantify impacts of groundwater pumping on stream flow rates and associated ecological habitats.

Assessment of Surface Water-Groundwater Interaction, Humboldt County, CA
Friends of the Eel River (FOER), 2020-present

Mr. Kamman is currently providing technical assistance in understanding surface water-groundwater interactions in the Lower Eel River Valley. Work includes reviewing and synthesizing available reports and hydrologic data and providing a science-based opinion on the role groundwater plays in supporting stream flow and aquatic habitats. This analysis addresses conditions and changes associated with seasonal and long-term wet-dry cycles. Data gaps will be identified and documented during the analysis.

This work is being completed to support FOER efforts at protecting aquatic resources within the framework of current water management practices and the public trust doctrine under California law. Additionally, this work includes providing hydrologic and hydrogeologic review, comment and recommendations during development of the basin's Groundwater Sustainability Plan (GSP) under the California Sustainable Groundwater Management Act (SGMA).

Scott Valley Subbasin Technical Hydrogeologist Assistance, Siskiyou County, CA
Klamath Tribal Water Quality Consortium and Quartz Valley Indian Reservation, 2019-present

Mr. Kamman is providing technical review and comment on the groundwater models and associated studies in the Scott Valley groundwater subbasin under the Sustainable Groundwater Management Act (SGMA) process. Work includes: review of groundwater models; synthesis and review of available groundwater quality data; assisting to identify constituents of concern; and review of the planning and technical studies being used to develop a basin Groundwater Sustainability Plan (GSP).

Middle Russian River Valley Shallow Groundwater Storage Enhancement Study, Sonoma County, CA
Friends of the Eel River, 2016

Working on behalf of Friends of the Eel River, Mr. Kamman completed a study to identify and quantify the volume of recoverable aquifer storage along two independent 6-mile reaches within the alluvial fill valley of the Russian River. The approach to this study was to quantify how channel incision has reduced shallow groundwater levels and quantify how much aquifer storage can be increased if channel bed elevations are restored to historic levels. The goal of this investigation was to identify feasible approaches to increase groundwater storage that would off-set losses associated with the termination of out-of-basin diversions from the Eel River. This work was completed through: intensive review and mapping of available groundwater level data; quantification of aquifer hydraulic properties; and calculating the shallow aquifer storage volume. In total, reclaiming the shallow aquifers within these two areas yield a total added storage volume of over 20,000 AF.

Green Gulch Farm (GGF)/Zen Center Water Resources Investigation, Marin County, CA
Green Gulch Farm, 1998-2019

Mr. Kamman completed a multi-phase study to evaluate the short- and long-term water uses and resources at GGF. Work was initiated by developing comprehensive water usage/consumption estimates and assessing available water resources, including spring, surface water, and ground water sources. Water demand estimates included quantifying potable and agricultural water usage/demands. Once reliable water supplies were identified and water usage/demand figures calculated, Mr. Kamman provided recommendation for improvements to water storage and distribution systems, land-use practices, conservation measures, treatment methods, waste disposal, and stream and habitat restoration. The initial phase of work included: in-depth review of available reports and data; review of geology maps and aerial photography; review of water rights and historic land use records; field reconnaissance including year-round spring flow monitoring; mapping and quantifying existing runoff storage ponds; and surface water peak- and base-flow estimates.

The second phase of work included identification of possible groundwater sources and siting and installation of production wells. This included sighting three drilling locations, obtaining County and State well drilling permits for a domestic water supply; coordination and oversight of driller; and directing final well construction. Upon completion of a well, Mr. Kamman directed a well pumping yield test and the collection and analysis of water quality samples (including Title 22) for small water supply system use. The final phase of work included assisting GGF with water treatment system options at the well head and integration of the groundwater supply into an existing ultra-violet light treatment system servicing spring water sources. Work was completed in 2000 with a budget of approximately $25,000, including all driller and laboratory subcontracting fees.

Stanford Groundwater Assessments, Santa Clara County, CA
Stanford University Real Estate Division, 2012-2016

Mr. Kamman provided technical hydrogeologic services to evaluate groundwater conditions and drainage requirements associated with the construction of several new facilities on or near Page Mill Road. The main objective of this study is to determine the seasonal depth to groundwater beneath the project site under existing and potential future conditions and provide an opinion on if the project is required to comply with the City of Palo Alto, Public Works Engineering Basement Exterior Drainage Policy (effective October 1, 2006). This work included obtaining and reviewing available technical reports, maps and literature pertaining to groundwater conditions in the project vicinity. Based on this review, we have prepared a letter report of findings and recommendations.

Bodega Bay Wetland Water Supply, Sonoma County, CA
Friends of Bodega Bay, 2007

Mr. Kamman Conducted an evaluation of the groundwater underflow feeding a large coastal wetland in Bodega Bay and recommended mitigation measures for potential losses in supply associated with proposed residential development in recharge areas. Work included: long-term monitoring of ground water quality and supply; monitoring surface water and spring flow and water quality; assessing and characterizing the interaction between surface and subsurface water sources during different seasons and water year-types; developing a detailed water budget for the site to assess impacts to recharge areas; and developing a number of physical solutions to mitigate for recharge losses.

SELECTED EXPERIENCE *(CONTINUED)*

L.A. Department of Water and Power, Groundwater Recharge Facility Operation Study, Los Angeles County, CA
ICF Consulting, 2006

Working as a subcontractor to ICF Consulting of Laguna Niguel, California, Mr. Kamman provided technical assistance in the hydraulic modeling of sediment accumulation in selected spreading ground facilities owned and operated by the Los Angeles Department of Public Works. The object of this work is to evaluate changes in infiltration and groundwater recharge rates over time within the spreading grounds in association with sediment accumulation from turbid waters.

Corde Valle Golf Club Surface-Groundwater Interaction Study, Santa Clara County, CA
LSA Associates, 2004

On behalf of LSA Associates of Pt. Richmond, CA, Mr. Kamman completed a 3rd party independent review of available reports and data sets (boring logs, well water levels, groundwater quality, aquifer pump-test, and surface water monitoring) to evaluate if pumping of the Corde Valle irrigation well is adversely impacting flow in West Llagas Creek. This investigation was implemented in response to a concern expressed by California Department of Fish and Game staff regarding the potential for differential drying of the West Branch of Llagas Creek along Highland Avenue. The analysis was also complicated by the likely effects of pumping from surrounding off-site wells.

Aquifer Testing for Tennessee Hollow Watershed Project, San Francisco County, CA
Presidio Trust, 2002

The Mr. Kamman assisted in the design and implementation of an aquifer test at the Presidio of San Francisco. We prepared an aquifer test work plan and conducted step-drawdown and constant-rate aquifer tests at the site using both manual and electronic data collection methods. This work included interpretation of the aquifer test results using software-based solution methods and prepared a written summary of methods and findings. In addition, Mr. Kamman located, coordinated and managed a drilling effort for the logging and installation of several groundwater monitoring wells in the project area to address identified data gaps.

San Joaquin River Riparian Corridor Restoration Project, San Joaquin Valley, CA
McBain-Trush, 2002

Mr. Kamman completed an assessment of historic and existing shallow groundwater conditions beneath and adjacent to the San Joaquin River between Friant Dam and the Merced River. This work focused on reviewing available reports and flow/groundwater- level data to characterize surface water and groundwater interaction and implications for riparian vegetation, water quality and fishery habitat restoration. Hydrologic analyses were performed to identify the location and seasonal evolution of losing and gaining reaches an implication on future restoration planning and design efforts. The main deliverable for this analysis was a report section focused on describing the historical changes in regional and local groundwater conditions in the San Joaquin Valley and evolution of anthropogenic activities (e.g., groundwater withdrawals, irrigation drainage systems and return flows, development of diversion structures, changes in land-use; and introduction of CVP/State Water Project deliveries) and associated impacts on deep/shallow groundwater levels, surface water flows, and surface and groundwater quality.

Tidal, Estuarine & Coastal Projects

Quartermaster Reach Wetland Restoration Project, San Francisco County, CA
Presidio Trust, 2006-present

Mr. Kamman was retained in 2006 as part of a multi-disciplinary team to develop restoration alternative designs for a 10-acre filled and paved site marking the historic confluence of Tennessee Hollow Creek and Crissy Marsh adjacent to San Francisco Bay. The Trust's planning documents define the main objectives for Tennessee Hollow restoration as: a) "Restoration [of Tennessee Hollow] will expand riparian habitat and allow for an integrated system of freshwater streams and freshwater, brackish, and tidal marsh, re-establishing a connection to Crissy Marsh" and b) "Restore and protect Tennessee Hollow as a vibrant ecological corridor". The project is located within the setting of a National Park and a National Historic Landmark District. Thus, another goal for the project is to protect the area's historic buildings and sensitive cultural and archeological resources to the extent possible, to enhance visitor experience to the area, and to integrate creek restoration with other urban land uses.

Mr. Kamman provided H&H technical input and consultation to the design team to develop a restoration project consisting of a creek-brackish marsh-salt marsh interface and associated upland habitats. His work included evaluating surface water, groundwater and tidal sources. In addition, the development of a hydrodynamic model has informed and guided a preferred project design, including evaluation of storm surge, road crossing and Tsunami impacts to the project. A technical challenge addressed with the use of the model included predicting and quantifying salt/brackish marsh habitat zones within the restored wetland in response to periodically but prolonged closed-inlet conditions to Crissy Marsh - a water body that serves as the downstream connection to the proposed project.

Another unique challenge to this project includes integrating restoration planning and design efforts with the replacement and retrofit of Doyle Drive, the main on/off-ramp for the Golden Gate Bridge, being replaced along the entire northern boundary of the Presidio. Mr. Kamman is providing long-term technical review of this project to the Trust with respect to impacts to water resources and associated existing ecological habitats. The Quartermaster project also falls within the managerial jurisdiction of both the Presidio Trust and NPS-GGNRA, requiring work in close cooperation with both Presidio Trust and National Park Service (NPS) staff.

Salt River Ecosystem Restoration Project, Humboldt County, CA
Humboldt County RCD, 2005-2019

Mr. Kamman provided hydrology, engineering and environmental compliance services towards the planning and design of river and tidal wetland restoration on the Salt River (Eel River Delta plain) near Ferndale, California, in Humboldt County. The purpose of the Salt River Ecosystem Restoration Project (SRERP) is to restore historic processes and functions to the Salt River watershed. These processes and functions are necessary for re-establishing a functioning riverine, riparian, wetland and estuarine ecosystem as part of a land use, flood alleviation, and watershed management program. The Salt River Project has three components: 1) dredging the lower Salt River and lower Francis Creek from near the Wastewater Treatment Plant downstream for 2.5 miles; 2) restoring 247 acres of wetland estuary habitat in the lower Salt River within the 440-acre former

SELECTED EXPERIENCE *(CONTINUED)*

dairy; and 3) reducing sediment inputs from tributary watersheds. The Salt River Project was designed using an "ecosystem approach" to address hydrology, sedimentation, and fish and wildlife habitat.

As part of project feasibility assessment, Mr. Kamman completed a hydrologic and water quality monitoring program, and developed a MIKE11 hydrodynamic model of the lower Salt River and Eel River estuary in Humboldt County, for the Humboldt County RCD. The purpose of this work was to complete a hydrologic, geomorphic, and hydraulic modeling assessments of the character and dominant physical processes controlling flow of water and sediment through the lower Salt River. Land use changes in the area have caused significant aggradation and infilling of the Salt River, significantly reducing tidal exchange, fish passage, and exacerbating flooding in upland areas. A primary goal of this study is to evaluate the feasibility of proposed restoration elements intended to increase tidal prism and exchange and in-channel sediment scour and transport. The desired outcome is a sustained increase in river conveyance capacity to improve drainage of surrounding flood-prone lands and improve aquatic, wetland, and riparian habitat.

As part of project development and feasibility assessment, Mr. Kamman completed a hydrologic and water quality monitoring program and MIKE11 hydrodynamic model development of the lower Salt River and Eel River estuary in Humboldt County for the Humboldt County RCD. The purpose of this work is to complete a hydrologic, geomorphic, and hydraulic modeling assessments of the character and dominant physical processes controlling flow of water and sediment through the lower Salt River. Land use changes in the area have caused significant aggradation and infilling of the Salt River, significantly reducing tidal exchange, fish passage, and exacerbating flooding in upland areas. A primary goal of this study is to evaluate the feasibility of proposed restoration elements intended to increase tidal prism and exchange and in-channel sediment scour and transport. The desired outcome is a sustained increase in river conveyance capacity to improve drainage of surrounding flood-prone lands and improve aquatic, wetland and riparian habitat.

Western Stege Marsh Restoration Project, Contra Costa County, CA
Tetra Tech, 2008-2010

Mr. Kamman provided technical hydrology and wetland hydraulics support to post-project monitoring of the Western Stege Marsh Restoration Project. His involvement began by providing an independent technical review of previous year's hydrologic monitoring results to evaluate the proposed monitoring success criteria and the rationale used to develop these criteria. This work entailed reviewing historic monitoring data and available natural slough channel geometry data-sets for San Francisco Bay area marshes. Mr. Kamman's study approach was to independently develop desired and sustainable channel geometry relationships for natural, healthy San Francisco Bay salt-marshes and compare them to the published success criteria. Greg was also retained to implement the Year 4 post-project hydrologic monitoring, with modifications to aid in better linking hydrologic processes to ecological conditions and function within the restored marsh. This work consisted of completing more targeted water level monitoring and channel geometry surveys in reference marsh areas containing desired physical and ecological attributes. These data were used to develop geomorphic success criteria (target channel geometry) more tailored to the project marsh and augment the criteria provided in available literature. Working closely with the project team of scientists, Mr. Kamman compared these hydrologic monitoring results to available vegetation surveys to better assess the overall success and evolutionary trend of the marsh.

Giacomini Wetland Restoration Project, Marin County, CA
The National Park Service and Point Reyes National Seashore Association, 2003-2012

Mr. Kamman managed a multi-year project for the NPS in the design and feasibility analysis of a tidal wetland, riparian, and freshwater marsh complex, on the 500-acre Giacomini Dairy Ranch, at the south end of Tomales Bay. The project began in 2003 and included hydraulic, hydrologic, and geomorphic assessments to characterize existing physical conditions, developing restoration alternatives, and completing hydrologic feasibility analyses. Restoration alternatives evaluated creation of a mosaic of subtidal through upland wetland and riparian habitat zones, as well as improvements to salmonid passage, red-legged frog habitat, tidewater goby habitat, and clapper-rail habitat. Emphasis was placed on completing detailed studies to quantify project-induced changes in flood frequency, magnitude and duration, impacts on water quality to local groundwater supply wells, and changes in sediment and water quality conditions in Tomales Bay.

Beginning in 2006, Mr. Kamman managed and assisted design engineers, preparing plans, specification, and cost estimates for a three phased construction schedule, that was completed in the summer of 2008. This project illustrates Mr. Kamman's ability to complete a broad variety of hydrologic feasibility analyses, including flood frequency analyses for contributing watersheds, reproducing historic flood events through numerical modeling, flow duration analysis and evaluation of environmental flow regimes, development of a water budget for created freshwater marsh and frog breeding ponds, sediment yield estimates, completing field monitoring (flow, water level, groundwater level, sediment, and water quality monitoring) to characterize existing site hydrologic and geomorphic conditions (fluvial and tidal), wind-wave setup and run-up for levee stability determination and construction design, coordinating and performing topographic and hydrographic surveys, performing hydrodynamic and water quality modeling of existing and alternative conditions, developing detailed construction cost estimates preparation of technical reports and design drawings and specifications in support of NEPA/CEQA environmental compliance, and public meeting presentation and participation. In addition, Mr. Kamman managed staff in the generation of DEM and TIN models of the existing site and all action alternatives. All work was completed on budget and in a timely fashion, despite repeated expansions to the project boundary and last minute changes driven by endangered species issues.

Critical Dune Habitat Restoration to Protect Threatened and Endangered Species, Marin County, CA
The National Park Service, 2009-2010

Mr. Kamman provided and managed engineering, design, and implementation planning support for the restoration of 300 acres of critical dune habitat at Abbots Lagoon within the NPS Point Reyes National Seashore. He developed engineered drawings, technical specifications and engineer's cost estimates, and assisted NPS in defining a range of methodologies suitable to local conditions and sensitive flora and fauna. This area of the park supports the best remaining intact dune habitat, including some of the largest remaining expanses of two rare native plant communities: American dune grass (Leymus mollis) foredunes, and beach pea (Lathyrus littoralis). European beach grass and iceplant were removed from

SELECTED EXPERIENCE *(CONTINUED)*

the project site using mechanical removal and hand removal techniques. The project goal was to remove these invasive species from approximately 135 acres of prime dune habitat in the 300-acre project site, while not impacting sensitive species and habitats. The intended result was to remobilize this historic dune field and restore their natural form and migratory processes.

This project illustrates Mr. Kamman's ability to work closely with NPS staff to balance habitat protection and restoration across the landscape. As part of project design, he developed grading plans, and specified work flow, equipment movement and access routes which minimize impacts to special status species. Extensive fencing and exclusions zone planning was required to protect existing native habitats, and minimize tracking of plant stock to or through restored sties. In addition work elements had to be structured and prioritized to maximize ground work subject to budgetary constraints and work flow uncertainties. All work has been completed on budget and in a timely fashion, even with repeated expansions to the project boundary and affected area and last minute changes driven by endangered species issues.

Lower Gualala River and Estuary Assessment and Management Plan, Mendocino County, CA

California State Coastal Conservancy and Gualala River Watershed Council, and Sotoyome RCD, 2002-2005

Mr. Kamman worked with fisheries biologists to evaluate the hydrologic and water quality conditions in the lower Gualala River and estuary and identify and evaluate potential impacts to summer rearing habitat for salmonids and other aquatic organisms. This work included: assessing how the impacts of upstream land use (logging and water diversions) have altered water delivery and water quality to the Lower River and estuary over time; characterizing the physical coastal and riverine processes controlling opening and closure of the estuary inlet and lagoon morphology; monitoring and characterizing real-time and seasonal changes in lagoon water level and water quality; and evaluating the sediment transport capacity and geomorphic condition of the lower river and estuary. Mr. Kamman took the lead in developing and editing a management plan for the lagoon, prescribing actions to preserve, protect and enhance ecological habitats (with emphasis on salmonids) within the lagoon and lower Gualala River.

This project was completed on-time and on-budget and demonstrates Mr. Kamman's ability to integrate physical, water quality and biological data and information into a coherent and understandable description of the interrelated processes controlling the aquatic ecology of a lagoon system. A big challenge on this project was completing a high-quality and defensible field monitoring program on a "shoe-string" budget. The outcome of this study provides important understanding on how and why steelhead are surviving in a heavily logged (95% private ownership) watershed. The management plan prescribes recommendations to preserve and protect the lagoon as primary rearing habitat for steelhead.

Suisun Bay Tidal Wetland Restoration Design, Contra Costa County, CA

East Bay Regional Park District and LSA Associates, 1999-2005

Mr. Kamman provided hydrologic design services to the restoration of a 55-acre tidal wetland on Suisun Bay. The design will maximize habitat for special status fish species, and (to the extent possible) habitat for other special status animal and plant species. Working with a multi-disciplinary design team, Mr. Kamman assisted in developing a design based on analysis of habitat needs, tidal hydrodynamic and geomorphic processes, sedimentation rates and soil characteristics. Project tasks included: a site analysis defining existing ecological and hydrologic conditions; a hydrologic and biological restoration opportunities and constraints analysis to define restoration and management objectives; and hydrodynamic and sedimentation modeling to evaluate design alternatives. The final restoration and management plan included a grading plan, landscape revegetation plan and monitoring and maintenance plans. This work again illustrates his capabilities in the characterization of physical site conditions, development and feasibility analysis of project alternatives, and preparation of preliminary designs of sufficient detail to allow for environmental compliance through the CEQA/NEPA process.

Santa Clara River Estuary and Lower River Assessment, Ventura County, CA

Nautilus Environmental on behalf of the City of Ventura, Public Works Department, 2003-2004

Mr. Kamman directed a hydrologic and geomorphic assessment of the lower Santa Clara River and estuary. This work was completed for prime contractor in an effort to assist with re-permitting of treated effluent discharges to the estuary. The proposed study entailed characterizing existing and historic hydrologic and physiographic conditions and an assessment of historic changes in inflow to the estuary. This task included a comprehensive review and evaluation of available hydrologic reports and flow data within the watershed to characterize changes in flow associated with development of numerous water projects within the Santa Clara River basin. The main deliverable from this analysis was the development of a historic unimpaired flow record to the estuary based on regional regression analyses and water operations modeling. Within the estuary, Mr. Kamman designed and conducted a multi-year monitoring program of water levels, water quality (temperature, dissolved oxygen, salinity, and pH), and sand-spit morphology in order to evaluate inlet opening/closure frequency and associated changes in aquatic habitat (esp. tidewater goby) and other ecologic communities. A considerable portion of this subtask included detailed coastal process analysis (including wave power analyses and littoral sand transport), which, considered with the inflow analysis, provides a basis to evaluate the seasonal cycle of barrier beach buildup and destruction.

This project illustrates Mr. Kamman's ability to complete a broad variety of hydrologic and coastal process analyses under strict regulatory oversight. A premier study completed on this project was the development of a detailed water and salinity budget model for the estuary to evaluate the impacts of a wide variety of proposed and modified estuary inflow regimes to determine potential future water level and salinity conditions in the lagoon and impact on frequency of inlet breaching. In addition to coordinating and implementing a variety field monitoring and surveys, Mr. Kamman also provided real-time information and input to informational and negotiation meetings with state resource and regulatory agencies.

Eden Landing Ecological Reserve Restoration, Alameda County, CA

East Bay Regional Park District, 2000-2003

Mr. Kamman developed and completed hydraulic and hydrodynamic modeling assessments for the design of an approximately 1000-acre tidal marsh restoration in former Cargil salt manufacturing ponds, located a mile inland of San Francisco Bay. The restoration goals required balancing the desires to restore tidal marsh conditions to the site, while maintaining and enhancing the open water and salt

SELECTED EXPERIENCE *(CONTINUED)*

panne habitats preferred by resident and migratory shorebirds. The restoration plan also needed to incorporate restoration objectives with remediation of high soil salinities resulting from past salt production, subsided ground elevations, dredging of new channels to the bay, existing infrastructure constraints, public access for the San Francisco Bay Trail, and preservation of several important cultural and historical sites. Hydraulic design objectives include maximizing both interior circulation and tidal exchange between the restoration parcel and the bay. A series of one-dimensional unsteady hydrodynamic models (MIKE11) were used to design the channel network, identify high velocity areas requiring erosion protection, and characterize expected habitat conditions. An important component of this design and feasibility assessment was to translate desired ecological habitat conditions identified in the EIR into specific hydrologic design criteria, considering channel velocities, scour, sediment transport, tidal water inundation frequencies and seasonality of ponding. Mr. Kamman worked closely with EBRPD civil engineers, assisting with the translation of hydraulic design criteria into final engineered drawings and specifications.

Wetland & Pond Projects

Design of California Red-Legged Frog Breeding Ponds, San Francisco Bay Area (various), CA
The National Park Service and Golden Gate National Parks Conservancy, 1997-present

Mr. Kamman has lead or provided hydrologic and engineering design assistance to the sighting and design of nearly two dozen breeding ponds for California red-legged frog throughout the San Francisco Bay Area. Work has been completed in Marin, Sonoma, Solano, Contra Costa, Alameda, and Santa Clara Counties under the auspices of numerous federal, state, and local county/city agencies. A common study approach consists of an initial site reconnaissance of watershed conditions and identification of potential sites. The reconnaissance is followed by a surface water hydrologic sufficiency analysis using available meteorologic and stream flow information. An important variable sought during pond sighting is the presence of migration corridors between known breeding areas and/or perennial water sources. Based on in-depth research and post-project monitoring, Mr. Kamman has refined or developed site-specific evapotranspiration estimates, which commonly do not match standard applied values. Accurate evapotranspiration rates are necessary if ponds are intended to periodically dry-down as a means to preclude undesired species such as bullfrog or mosquito fish. In many instances, a seasonal groundwater-monitoring program is implemented in order to better investigate and quantify potential and seasonal groundwater contributions. Other design challenges we commonly experience include: design of impermeable liners for ponds located in upland areas or highly permeable soils; hydraulic analyses and design of outfalls/spillways; sedimentation management/maintenance approaches; and requirements of inoculum and water used to line and fill the pond, respectively.

Hydrologic Feasibility Assessment for Mana Plain Wetland Restoration Project, Kauai, HI
State of Hawaii Department of Land and Natural Resources, 2010-2019

Working on behalf of the Mana Plain Wetland Restoration Partnership, Mr. Kamman completed a hydrologic feasibility assessment for the Mana Plain Wetland Restoration Project proposed by the State of Hawaii Department of Land and Natural Resources (DLNR), Division of Forestry and Wildlife (DOFAW) on the island of Kauai. The Mana Plain Wetland Restoration Project site is approximately 105 acres of low-lying abandoned sugarcane fields immediately north of the Kawaiele Waterbird Sanctuary and east of the Pacific Missile Range Facility. The purpose of the Mana Plain Wetland Restoration Project is to maximize the area of constructed wetlands within the restoration site. Palustrine emergent wetlands within the project will create habitat for four species of endangered Hawaiian waterbirds and other sensitive species, including: Hawaiian stilts; Hawaiian ducks; Hawaiian coots; Hawaiian moorhen; migratory waterfowl; and migratory shorebirds. The Mana Plain is of vital importance for the recovery of endangered waterbirds species. This restoration project will be designed to provide important breeding and feeding wetland habitats on an island where; 1) wetlands have been severely degraded, and 2) mongoose, an introduced predator, have not been established.

Mr. Kamman's work on this project included technical assessments and development of proposed restoration alternatives. Analyses completed included: a synthesis of the physical site setting (topography, geology, hydrogeology and soil); reviewing available data to characterize site meteorology, surface water drainage, water quality, and groundwater conditions; preparing a detailed water budget to describe the characteristics and processes of surface water and groundwater movement into and through the project area; evaluating project feasibility, water supply alternatives and costs; and completing a flood hazard impact assessment to evaluate potential project benefits and impacts to local area flooding. Working with the project partners, Mr. Kamman developed a preferred project alternative and supported in preparation of the project Environmental Assessment document. Mr. Kamman's firm was also retained by the State of Hawaii to develop engineering designs of the project.

MacArthur Meadow Wetland Restoration, San Francisco County, CA
Presidio Trust, 2013-2016

Mr. Kamman has been working on over a dozen independent wetland and creek restoration planning and design efforts within the Presidio of San Francisco since 2001. Most recently (2016), he developed a wetland restoration grading plan for the MacArthur Meadow Wetland Restoration Project in the central portion of the Tennessee Hollow watershed. As part of the site assessment, Greg characterized and modeled surface and groundwater interactions and identified a unique opportunity to restore 4 acres of mixed meadow, natural wetlands and creek/riparian corridor. This was possible due to the discovery of shallow groundwater conditions beneath this historically disturbed landscape. Various design components were integrated into the grading plan in order to enhance groundwater recharge and storage in the Meadow, while retarding runoff and drainage out of the wetland, including: daylighting storm drain runoff into the Meadow; reconfiguring internal channel alignments to enhance channel habitat and groundwater recharge; creation of wetland depressions to retain and recharge surface water; and removal of fill material to decrease the depth to the water table. Notable challenges of this work include restoring heavily disturbed natural resources in an urban setting while integrating designs with archeology/cultural resources, education and remediation programs.

Dragonfly Creek Restoration Project, San Francisco County, CA
Presidio Trust, 2007-2011

Mr. Kamman designed and managed hydrologic monitoring and analysis studies in support of planning and design for riparian and wetland habitat restoration along approximately 500-linear feet of the Dragonfly Creek corridor near Fort Scott of the Presidio of San Francisco. Work has included completing subsurface

SELECTED EXPERIENCE *(CONTINUED)*

investigations including the installation of shallow wells and a sharp-crested weir with recorder to gauge creek flows. Mr. Kamman assisted in the development and selection of a preferred project alternative, considering on-site cultural resource protection, education and resource management issues (including flood control). Mr. Kamman prepared permit applications. Major components of the project included removal of significant fill and building foundations and installation of a new creek road crossing that will maintain the historical alignment, function and architectural character of a culturally significant roadway. Mr. Kamman oversaw development of PS&E for this project, which will create mitigation wetlands for a highway earthquake retrofit project that passes through the Park.

This project illustrates Mr. Kamman's ability to complete a broad variety of hydrologic analyses, including: surface water and groundwater hydrologic monitoring to characterize and quantify existing hydrologic conditions; rainfall-runoff modeling; hydraulic modeling of flood and scour conditions (including road crossing); preservation of existing wetland habitat and vegetation communities; integration with other Presidio Trust programs; and contracting flexibility to assist in conceptual planning and environmental compliance without increasing project design costs.

Mori Point Sensitive Species Habitat Enhancement Project, San Mateo County, CA
Golden Gate National Recreation Area and Golden Gate National Parks Conservancy, 2005-2011

Mr. Kamman provided hydrologic analyses, sighting and engineering design (PS&E) for three California red-legged frog breading ponds within the 105-acre Mori Point area. These efforts were completed in association and collaboration with a larger Coastal Trail improvement and ecosystem restoration effort. Quarrying and off-road vehicle use have left this site heavily scarred. The focus of restoration work was to protect the endangered San Francisco garter snake and the threatened red-legged frog. Most of this work will be focused on invasive species removal and enhancing endangered species habitat. As part of species habitat improvement, Mr. Kamman worked with project ecologists to design the ponds to optimize breeding habitat for California red-legged frog.

Work started with an initial site reconnaissance and study of watershed conditions and identification of potential sites. The reconnaissance was followed by a surface water hydrologic sufficiency analysis using available meteorological and stream flow information and installation and monitoring of shallow piezometers to quantify the proximity and seasonal variability in depth to water table. An important variable sought during pond sighting was the presence of migration corridors between known breeding areas and/or perennial water sources. Based on in-depth research and post-project monitoring for other ponds they created in the San Francisco Bay area, Mr. Kamman refined site-specific evapotranspiration estimates. Accurate evapotranspiration rates are necessary if ponds are intended to periodically dry-down as a means to preclude undesired species such as bullfrog or mosquito fish.

Other design challenges experienced included: design of impermeable liners for ponds located in upland areas or highly permeable soils; hydraulic analysis and design of outfalls/spillways; sedimentation management/maintenance approaches; and requirements of inoculum and water used to line and fill the pond, respectively. Mr. Kamman has designed numerous ponds for the NPS and affiliates within the Bay Area, including Mori Point (constructed 2007), Banducci (constructed 2007) and Giacomini (Phase I and Phase II constructed in 2007 and 2008) project sites.

Hydrologic Assessment and Restoration Feasibility Study for Shadow Cliffs Regional Recreation Area, Alameda County, CA
East Bay Regional Park District, 2009-2010

Mr. Kamman developed and implemented an assessment to identify groundwater levels and supplemental water supplies that will sustain seasonal wetland restoration areas and riparian habitats under an altered future hydrologic regime. This work will inform a forthcoming Land Use Plan Amendment for park occupying a series of former gravel quarry pits. Work included: obtaining and synthesizing available surface water and groundwater data to characterize existing hydrologic and water supply conditions and seasonal variability; quantifying the likely changes in groundwater conditions and quarry pit lake levels in association with changes in regional water transmission and groundwater recharge operations; and identifying, developing and evaluating a suite of ecosystem restoration alternatives. Other important project objectives include: improving habitat for waterfowl and wildlife; broadening recreational use; enhancing visitor education and wildlife interpretation; improve park aesthetics. Mr. Kamman evaluated a preferred park and ecosystem enhancement alternative that involves diverting high winter flows from an adjacent arroyo. This project demonstrates Greg's ability to characterize hydrologic conditions and quantify the relationship between groundwater, surface water and wetland habitat conditions, both under existing conditions and in predicting future hydrologic and ecologic conditions under an altered hydrologic regime (i.e., lower groundwater table).

Laguna Salada Marsh and Horse Stable Pond Restoration Project, San Mateo County, CA
Tetra Tech, 2007-2009

Mr. Kamman provided technical hydrology and hydraulics support to the planning and conceptual restoration design of Laguna Salada marsh and Horse Stable Pond, located adjacent to Sharp Park Golf Course in the town of Pacifica, California. The primary objectives of the project are: to reduce flood impacts within the project vicinity; improve sustainable ecological habitat for the endangered San Francisco garter snake and the threatened California red-legged frog; better understand and characterize the hydrologic and water quality conditions/processes affecting flood and ecological habitat conditions within the project vicinity; provide an effective pumping operation plan to meet ecological objectives; and develop appropriate hydrologic analytical approaches and models to assist Tetra Tech and the San Francisco Recreation and Park Department in the planning and design for marsh, pond, and creek restoration. The project is also a unique opportunity to connect this resource with the California Coastal Trail, the Bay Area Ridge Trail, and the surrounding GGNRA lands.

Mr. Kamman's work included completing a comprehensive review of available hydrologic and site information and implementing selected field investigations to develop and calibrate an integrated hydrology-flood routing-pond water operations model that will quantify the volume and depth of water moving through the project system. The investigation will also further characterize shallow groundwater conditions and water quality with respect to effects on Laguna Salada and Horse Stable Pond. Analytical and numerical modeling tools are being used to better characterize existing hydrologic and water quality conditions and to assist in identifying project opportunities and constraints as well as evaluate potential restoration design components - all necessary to inform a sustainable

SELECTED EXPERIENCE *(CONTINUED)*

and successful restoration design.

Tolay Lake Restoration Feasibility Assessment, Sonoma County, CA
Sonoma County Agricultural Preservation and Open Space District, 2003

Mr. Kamman completed a detailed hydrologic feasibility analysis to evaluate a suite of potential freshwater lake and wetland restoration alternatives. Sites were evaluated under existing watershed land-use practices and under existing and forecasted water demands (in the form of existing water rights/applications). Analysis consisted of developing a detailed water budget model to simulate alternative restored lake inundation areas and depths under median and dry year conditions, as well as a 50-year historic period (1947-1997) displaying highly variable rainfall and runoff supplies. Three lake restoration alternatives were evaluated based on existing topography and likely historic lake configurations. The restoration alternatives include lakes with storage volumes equivalent to 136-, 1100-, and 2550-acre feet.

Haypress Pond Decommissioning and Riparian and Channel Restoration, Marin County, CA
Golden Gate National Recreation Area (GGNRA), 2001-2002

This project restored 170 meters of historic creek and riparian habitat through removal of Haypress Pond dam in Tennessee Valley within GGNRA. The goals of the project were to alleviate long-term maintenance needs and eliminate non-native bullfrog habitat threatening native California red-legged frog habitat in adjacent watersheds.

Working with the Park biologist, Mr. Kamman developed designs to decommission the dam and restore natural riparian and meadow habitat. This work included: characterization of existing topographic conditions; design of a channel profile through the proposed restoration project reach; preparation of a grading plan for the restoration project; and hydrologic and hydraulic analyses to evaluate the performance of the creek channel and flood plain below the former dam during a variety of flows. Challenges of this work included integrating sediment reuse into plans and construction phasing.

Damon Slough Site Seasonal Wetland Design, Alameda County, CA
Port of Oakland, 1999-2001

Working on behalf of the Port of Oakland, Mr. Kamman completed extensive surface and groundwater monitoring and data analyses to develop a detailed water budget to assist in the evaluation and design of a 7.5 acre seasonal freshwater wetland. Primary project objectives included a design that would provide shorebird/waterfowl roosting habitat, minimize impacts to existing seasonal wetland areas, and lengthen the duration of ponding through the end of April to promote use by migratory birds. In addition to developing hydrologic design criteria, responsibilities included development of grading plans to accommodate a local extension of the Bay Trail and wetland outlet works.

Water Quality Projects

Chicken Ranch Beach Soil and Groundwater Quality Investigation and Restoration Planning, Marin County, CA
Tomales Bay Watershed Council, 2007-present

Mr. Kamman is leading scientific and engineering efforts for a wetland and riparian corridor restoration project on Third Valley Creek and Chicken Ranch Beach in Inverness, California. The main project goals are to create a self-sustaining riparian and wetland system (requiring minimal operation and maintenance) and eliminate public exposure to high levels of bacteria that exist in a site drainage ditch discharging to the beach. The design will likely include establishing a blend of habitats, including: riparian stream corridor, seasonal/perennial freshwater marsh, and tidal/saltwater marsh.

Current efforts have included the development and implementation of a soil and groundwater quality investigation to delineate the source of elevated bacteria levels. This work includes: the collection and testing of depth-discrete soil samples; groundwater well installation, sampling and testing; and surface water sampling and testing; analysis of laboratory results; and reporting, including recommendations for further/expanded investigations. Mr. Kamman coordinated this time-sensitive sampling and analysis (six hour hold times) with Brulje and Race Laboratories in Santa Rosa.

Lower Miller Creek Channel Maintenance and Material Reuse Sampling Analysis Plan, Marin County, CA
Las Gallinas Valley Sanitary District, 2015

Mr. Kamman was commissioned to formulate and implement a plan for sediment removal and improved flood flow conveyance in the Lower Miller Creek channel. Accumulation of course sediment in the project reach had reduced discharge efficiencies at District outfalls. Miller Creek supports a population of federally listed Steelhead and adjacent wetland/marsh areas potentially support other state and federally listed special status species. Working with District Staff, Greg developed a suite of potential project alternatives and identified a preferred approach. Mr. Kamman completed all CEQA compliance (IS/MND), permitting and oversaw development of engineered plans and specifications.

In order to evaluate if reuse of excavated material from 2,655 feet of creek corridor in upland areas was feasible, Mr. Kamman developed and implemented a Sampling Analysis Plan (SAP) pursuant to U.S. Army Corps Guidance for Dredging Projects within the San Francisco District. Sample collection, sample handling, and analysis were performed in accordance with the SAP. Results for analytes were compared to a variety of screening criteria to determine the material's suitability for reuse in aquatic environments. A full suite of chemical and physical analyses were performed on soil samples collected from 16 locations, including: metals, PAHs, PCBs, pesticides, TOC, specific conductance, pH, sulfides, percent moisture and grain-size. Mr. Kamman managed all aspects of this effort including reporting and presentations/negotiations at multi-agency meetings through the Corps Dredge Materials Management Office (DMMO).

Lower Pitkin Marsh Hydrologic and Water Quality Monitoring, Sonoma County, CA
Sonoma Land Trust, 2008-2010

Mr. Kamman was retained to develop and implement a hydrologic and water quality monitoring program at Lower Pitkin Marsh outside of Forestville, California. The Pitkin Marsh area is one of the most valuable complexes of mixed riparian woodland and thicket, freshwater marsh, wet meadow, oak woodland and grassland in Sonoma County. The complex interaction of surface water, ground water, and scattered seeps and springs on the site creates unusual hydrologic conditions that promote a rare assemblage of plant species which includes several endemics. The primary objective of the hydrologic monitoring program was to understand the annual and season sources of both surface and ground water supplying wetlands. Hydrologic and water quality monitoring was

SELECTED EXPERIENCE *(CONTINUED)*

initiated during the winter wet season of 2008/09 and will be conducted for a 12-month period through the ensuing summer dry-down and into the following wet season. Understanding how groundwater levels, spring flow and creek flow rates recede from winter wet to summer dry conditions will provide an important understanding and quantification of the seasonal variability in water supplies feeding selected wetland types. General water quality parameters (temperature, pH, specific conductance, and ORP) are measured at all monitoring locations during each visit. Nutrients (N and P) are measured in selected surface water and groundwater samples collected during at least three monitoring events, including a winter high flow, spring high base flow and summer low baseflow.

Pescadero Lagoon Restoration and Enhancement, San Mateo County, CA
California State Coastal Conservancy, 2005-2006

Mr. Kamman was retained to support restoration and water quality enhancement planning efforts in Pescadero Lagoon. In 2005-2006, he completed a synthesis of available hydrologic and water quality information in responding to requests for development of a hydrodynamic and water quality model of the lagoon. This model was considered as a means to identify causes for repeated fish-kills in the lagoon that occurred during initial breaching of the inlet. Mr. Kamman assisted in preparing a synthesis and model development feasibility report from this effort.

Water Temperature Simulations for Trinity River Fish and Wildlife Restoration Project, Trinity County, CA
Trinity County Planning Department, 1994-2004

For over a decade, Mr. Kamman completed a number of hydrology and water quality investigations in support of alternative feasibility studies on the Trinity River Fish and Wildlife Restoration Project in direct support of the Trinity River Restoration EIR/EIS. Studies involve assessing the effects of proposed flow alternatives on water temperature within and downstream of Lewiston Reservoir. Mr. Kamman was responsible for data collection, processing, and flow/temperature modeling of Lewiston Reservoir as part of a coordinated evaluation including other Trinity River system models. Another study included evaluating how project operations could be implemented or modified to optimize Lewiston Lake release temperatures to meet downstream temperature criteria and compensate for increased warming of the river associated with side channel and feather edge restoration activities. Mr. Kamman continues to evaluate how more recent water projects (raising Shasta Dam, Sites Reservoir, and the Waterfix tunnels) consider and integrate with the Trinity Restoration Project.

Upper Eel River Unimpaired Flow and Water Temperature Assessments, Humboldt County, CA
CalTrout, 1997-1999

Mr. Kamman evaluated changes in the natural flow regime of the upper Eel River, and developed an Upper Eel River proposed release schedule to enhance downstream Chinook and Steelhead spawning and rearing habitat. This work was triggered by proposals set forth by PG&E as part of their Potter Valley Project FERC relicensing process. Work consisted of two main investigations. The first included reviewing results of a ten year PG&E study and development of multivariate regression and stream reach (SSTEMP) temperature models to assess the effects proposed flow alternatives would have on downstream temperatures. The second investigation consisted of characterizing unimpaired flow conditions and developing a daily unimpaired flow record for use in project operation models.

Selected Litigation Support Projects

Kamman, G.R., 2019, Review of Deschutes Basin Habitat Conservation Plan (DBHCP) and Associated Draft Environmental Impact Statement (DEIS). Prepared for: Water Watch of Oregon, Center for Biological Diversity and Associates for the West, November 22, 55p.

Kamman, G.R., 2019, Review of Draft PEIR, California Vegetation Treatment Program (CalVTP). Prepared for: Shute, Mihaly & Weinberger LLP, August 2, 8p.

Kamman, G.R., 2019, Oral Testimony of Greg Kamman for Agricultural Order 4.0 requirements discussion, Public meeting before the Central Coast (Region 3) California Water Board, Watsonville City Council Chambers, Watsonville, CA, March 21.

Chartrand, A.B., and Kamman, G.R., 2019, Comments to Central Coast Regional Water Quality Control Board Ag. Order 4.0 regulatory requirement options and proposed Requirement Options Tables. Prepared for: The Otter Project and Monterey Coastkeeper, January 22, (8p.), 5 tables and Monitoring Reporting Plan (MRP; 26p.).

Kamman, G.R., 2019, Review of Draft Environmental Impact Report/Statement, Sites Reservoir Project. Prepared for: Pacific Coast Federation of Fisherman's Association (PCFFA) and Save California Salmon, January 21, 45p.

Kamman, G.R., 2018, Review of Amendments to the Sonoma County Cannabis Ordinance, California. Prepared for: Shute, Mihaly & Weinberger LLP, August 3, 10p.

Kamman, G.R., 2018, Written Testimony of Greg Kamman for Part 2 of the California Waterfix Change of Diversion Hearing before the State Water Resources Control Board, November 28, 10p.

Kamman, G.R., 2018, Oral Testimony of Greg Kamman for Part 2 of the California Waterfix Change of Diversion Hearing before the State Water Resources Control Board at Joe Serna Jr.-CalEPA Building, Sacramento, CA, April 16.

Kamman, G.R., 2017, Review Comments: PAD and SD1, FERC Relicensing of Potter Valley Project (PVP). Professional declaration prepared for: Friends of Eel River, July 31, 8p.

Kamman, G.R., 2017, Review Comments, Draft Environmental Impact Report, Fish Habitat Flow and Water Rights Project. Professional declaration prepared for: Friends of Eel River, March 8, 18p.

Kamman, G.R., 2016, Review of Draft General Waste Discharge Requirements for Vineyard Dischargers in the Napa River and Sonoma Creek Watersheds. Prepared for: Law Offices of Thomas N. Lippe APC, December 12, 4p.

Kamman, G.R., 2016, Review of Middle Green Valley Specific Plan Project, Second Revised Recirculated Draft Environmental Impact Report, Solano County, CA, Sch# 2009062048. Professional Declaration Prepared for: Law Offices of Amber Kemble, October 25, 3p.

SELECTED EXPERIENCE *(CONTINUED)*

Kamman, G.R., 2016, Review of Draft EIR for General Waste Discharge Requirements for Vineyard Dischargers in the Napa River and Sonoma Creek Watersheds. Prepared for: Law Offices of Thomas N. Lippe APC, September 14, 81p.

Kamman, G.R., 2016, Second Declaration of Greg Kamman Plaintiff's Joint Motion for Preliminary Injunction, Prepared for Center for Biological Diversity (Plaintiff) v. U.S. Bureau of Reclamation, Case No. 6:16-cv-00035-TC (Recovery for Oregon Spotted Frog, Upper Deschutes Basin, Oregon) , March 11, 11p.

Kamman, G.R., 2016, Declaration of Greg Kamman Plaintiff's Joint Motion for Preliminary Injunction, Prepared for Center for Biological Diversity (Plaintiff) v. U.S. Bureau of Reclamation, Case No. 6:16-cv-00035-TC (Recovery for Oregon Spotted Frog, Upper Deschutes Basin, Oregon) , February 4, 8p.

Kamman, G.R., 2015, Sharp Park Project Impacts to Laguna Salada. Prepared for National Parks Conservation Association and Wild Equity Institute, April 14, 1p.

Kamman, G.R., 2014, Review of Middle Green Valley Specific Plan Project, Revised Recirculated Draft Environmental Impact Report, Solano County, CA, Sch# 2009062048. Professional Declaration Prepared for: Law Offices of Amber Kemble, August 11, 11p.

Kamman, G.R., 2012, Deposition of Gregory Richard Kamman, R.G., C.H.G., Schaefer vs. City of Larkspur, CA, Superior Court of the State on California, County of Marin. August 23, 2012.

Kamman, G.R., 2012, Technical review comments to Biological Assessment, Sharp Park Safety, Infrastructure Improvement and Habitat Enhancement Project. Prepared for Wild Equity Institute, August 3, 11p.

Kamman, G.R., 2012, Proposed Hardy-based Environmental Water Allocation (EWA) Input for WRIMS Model Simulation, Klamath River Basin. Prepared for: Yurok Tribe, July 20, 5p.

Kamman, G.R., 2012, Review of groundwater conditions and modeling report by S.S. Papadopulos & Associates, Inc., Scott Valley, California. Prepared for: Yurok Tribe, 4p.

Kamman, G.R., 2011, Supplemental Declaration of Greg Kamman regarding Laguna Salada, Wild Equity Institute v. City and County of San Francisco, et al., Case No.: 3:11-CV-00958 SI, United States District Court, Northern District of California, San Francisco Division. Prepared for Wild Equity Institute, November 4, 50p.

Kamman, G.R., 2011, Declaration of Greg Kamman regarding Laguna Salada, Wild Equity Institute v. City and County of San Francisco, et al., Case No.: 3:11-CV-00958 SI, United States District Court, Northern District of California, San Francisco Division. Prepared for Wild Equity Institute, September 23, 7p.

Kamman, G.R., 2010, Review of Sonoma County Water Agency NOP (issued 9/29/10) Fish Habitat Flow and Water Rights Project. Professional declaration prepared for: Friends of Eel River, November 8, 7p.

Kamman, G.R., 2007, Independent Model Review for Klamath Settlement Negotiations, Klamath Independent Review Project (KIRP). Prepared for Northcoast Environmental Center, November 9, 19p.

Kamman, G.R., 2007, Review of Negative Declaration for File No. UPE04-0040, Gualala Instream Flow. Professional declaration prepared for Friends of the Gualala River, October 21, 2p.

Kamman, G.R., 2003, Evaluation of potential hydrologic effects, Negative Declaration for THP/Vineyard Conversion, No. 1-01-171 SON, Artesa Vineyards, Annapolis, CA. Professional declaration prepared for Friends of the Gualala River, May 19, 9p.

Kamman, G.R., 1999, Review of Final Supplemental Environmental Assessment, Cirby-Linda-Dry Creek Flood Control Project. Professional declaration prepared for: Monty Hornbeck, Sunrise Office Park Owners Association; Bill Kopper/John Gabrielli, Attorneys at Law; and Sharon Cavello/Cathie Tritel, Placer Group Sierra Club, May 24, 10p.

Kamman, G.R., 1995, Variable Water Resources Available in the Area of Salinas, California. Declaration prepared for Price, Postal, and Parma, Santa Barbara, California, May, 6p.

Conference Presentations

Kamman, G.R., 2018, Water is Life! A hydrologist's eye on the Gualala River. Presented to: Friends of the Gualala River and public, Gualala Arts Center, Gualala, CA, May 3.

Kamman, G.R. and Kamman, R.Z., 2015, Landscape Scale Urban Creek Restoration in Marin County, CA - Urban Creek Restoration: Interfacing with the Community. 33rd Annual Salmonid Restoration Conference, March 11-14, Santa Rosa, CA.

Kamman, G.R., 2015, Enhancing Channel and Floodplain Connectivity: Improving Salmonid Winter Habitat on Lagunitas Creek, Marin County, CA - Beyond the Thin Blue Line: Floodplain Processes, Habitat, and Importance to Salmonids. 33rd Annual Salmonid Restoration Conference, March 11-14, Santa Rosa, CA.

Kamman, G.R., 2012, The role of physical sciences in restoring ecosystems. November 7, Marin Science Seminar, San Rafael, CA.

King, N. and Kamman, G.R., 2012, Preferred Alternative for the Chicken Ranch Beach/Third Valley Creek Restoration Project. State of the Bay Conference 2012, Building Local Collaboration & Stewardship of the Tomales Bay Watershed. October 26, Presented by: Tomales Bay Watershed Council, Inverness Yacht Club, Inverness, CA.

King, N. and Kamman, G.R., 2010, Chicken Ranch Beach Restoration Planning by TBWC. State of the Bay Conference 2010, A Conference about Tomales Bay ant its Watershed. October 23, Presented by: Tomales Bay Watershed Council, Inverness Yacht Club, Inverness, CA.

SELECTED EXPERIENCE *(CONTINUED)*

Higgins, S. and Kamman, G.R., 2009, Historical changes in Creek, Capay Valley, CA. Poster presented at American Geophysical Union Fall Meeting 2009, Presentation No. EP21B-0602, December.

Kamman, G.R. and Higgins, S., 2009, Use of water-salinity budget models to estimate groundwater fluxes and assess future ecological conditions in hydrologically altered coastal lagoons. Coastal and Estuarine Research Federation 20th Biennial Conference, 1-5 November, Portland, OR

Bowen, M., Kamman, G.R., Kaye, R. and Keegan, T., 2007, Gualala River Estuary assessment and enhancement plan. Estuarine Research Federation, California Estuarine Research Society (CAERS) 2007 Annual Meeting, 18-20 March, Bodega Marine Lab (UC Davis), Bodega Bay, CA

Bowen, M. and Kamman, G.R., M., 2007, Salt River Estuary enhancement: enhancing the Eel River Estuary by restoring habitat and hydraulic connectivity to the Salt River. Salmonid Restoration Federation's 25th Salmonid Restoration Conference, 7-10 March, Santa Rosa, CA.

Magier, S., Baily, H., Kamman, G., and Pfeifer, D, 2005, Evaluation of ecological and hydrological conditions in the Santa Clara River Estuary with respect to discharge of treated effluent. In: Abstracts with Programs, The Society of Environmental Toxicology and Chemistry North America 26th Annual Meeting, 13-17 November, Baltimore Convention Center, Baltimore, Maryland.

Baily, H., Magier, S., Kamman, G., and Pfeifer, D, 2005, Evaluation of impacts and benefits associated with discharge of treated effluent to the Santa Clara River Estuary. In: Abstracts with Programs, The Society of Environmental Toxicology and Chemistry North America 26th Annual Meeting, 13-17 November, Baltimore Convention Center, Baltimore, Maryland.

Kamman, G.R., Kamman, R.Z., and Parsons, L., 2005, Hydrologic and Hydraulic Feasibility Assessments for Ecological Restoration: The Giacomini Wetland Restoration Project, Point Reyes National Seashore, CA. In: Abstracts with Programs, The Geological Society of America, 101st Annual Cordilleran Section Meeting, Vol.37, No. 4, p. 104, Fairmont Hotel, April 29-May1, 2005, San Jose, CA.

Kamman, G.R., 2001. Modeling and its Role in the Klamath Basin – Lewiston Reservoir Modeling. Klamath Basin Fish & Water Management Symposium, Humboldt State University, Arcata, CA, May 22-25.

Kamman, G.R., 1998, Surface and ground water hydrology of the Salmon Creek watershed, Sonoma County, CA. Salmon Creek Watershed Day, May 30, Occidental, CA.

Kamman, G.R., 1998. The Use of Temperature Models in the Evaluation and Refinement of Proposed Trinity River Restoration Act Flow Alternatives. ASCE Wetlands Engineering and River Restoration Conference Proceedings, Denver, Colorado (March 22-23, 1998).

Hecht, B., and Kamman, G.R., 1997, Historical Changes in Seasonal Flows of the Klamath River Affecting Anadromous Fish Habitat. In: Abstracts with Programs Klamath Basin Restoration and Management Conference, March 1997, Yreka, California.

Hanson, K.L, Coppersmith, K.J., Angell, M., Crampton, T.A., Wood, T.F., Kamman, G., Badwan, F., Peregoy, W., and McVicar,T., 1995, Evaluation of the capability of inferred faults in the vicinity of Building 371, Rocky Flats Environmental Technology Site, Colorado, in Proceedings of the 5th DOE Phenomena Hazards Mitigation Conference, p. 185-194, 1995.

Kamman, G.R. and Mertz, K.A., 1989, Clay Diagenesis of the Monterey Formation: Point Arena and Salinas Basins, California. In: Abstracts with Programs, The Geological Society of America, 85th Annual Cordilleran Section Meeting, Spokane Convention Center, May 1989, Spokane, Washington, pp.99-100.

From:	amanda zangara
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov
Subject:	Draft EIR Comments: SDC Specific Plan
Date:	Friday, August 19, 2022 12:09:33 PM

EXTERNAL

Dear Brian,

I am writing to express my concern for the recently released Draft and Environmental Impact Report and Draft Specific Plan for the Sonoma Developmental Center. The drafts' proposal for 1,000 residential units along with commercial development brings about great concern for the environmental impacts in an area where wildfire and drought continue to be of great concern. These issues rise to the forefront of concern due to their potential effects on human well being; for me, the impact on wildlife is also of great concern, though unfortunately in our current human-centric existence, the flora and fauna that are so important within the larger ecosystem seem to gain less of our attention. Overall, the loss of biodiversity, one of the greatest gifts of living in Northern California, will ultimately impact us all. This should be given great weight when determining land use and planning. C1-1

I am urging the county to engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022. Furthermore, I am calling for a re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide. C1-2

I have dedicated myself to working with young children in the outdoors in efforts to cultivate their connection to nature and hopefully inspire them to act as individuals who seek to preserve it. I hope that you will consider the existence of the future generations and consider the impact such a project could have on the environment they will one day live. C1-3

Thank you for your time and consideration.

Sincerely,

Amanda Zangara

Please join Sonoma Land Trust in urging Sonoma County to engage in a meaningful planning process for the Sonoma Developmental Center (SDC).

On August 10, 2022, the County released its Draft Environmental Impact Report (EIR) and Draft Specific Plan for SDC. Despite the Board of Supervisor's direction to pursue a specific plan with fewer than 1,000 homes, the Drafts propose 1,000 residential units with extensive commercial development.

This disconnect highlights the inadequacy and inefficiency of our current approach to planning and development. The draft specific plan fails to respond to the challenges of our time—including wildfire, drought, and biodiversity loss.

Further, because the Specific Plan and EIR were released before the State selected a development proposal, the Specific Plan is hypothetical. Neither it nor the EIR

disclose the characteristics or environmental impacts of the proposal that will ultimately be accepted by the State.

Why this matters:
Aligning the Specific Plan and EIR with the State's RFP, would increase efficiency, save valuable taxpayer resources, and ensure thorough planning and environmental review. **Review of the Specific Plan and EIR must be paused pending completion of the RFP process.**

Take action now by sending a letter or email before August 24 to the County at: Brian.Oh@sonoma-county.org (Subject Line: "Draft EIR Comments: SDC Specific Plan"). Make sure to cc the Department of General Services at Gerald.McLaughlin@dgs.ca.gov

Urge the County to:

1. Engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022.
2. Re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Betsy Donnelly
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov; Eamon O'Byrne and John McCaull
Subject:	Draft EIR Comments: SDC Specific Plan
Date:	Friday, August 19, 2022 8:04:23 AM

EXTERNAL

Mr. Oh,

Thank you for taking the time to read my email today.

C2-1

I would like to ask that the County engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022. Because the Specific Plan and EIR were released before the State selected a development proposal, the Specific Plan is hypothetical. Neither it nor the EIR disclose the characteristics or environmental impacts of the proposal that will ultimately be accepted by the State.

C2-2

I also ask that for a re-drafting of the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.

Thank you for your time and attention to this matter.

Sincerely,
Betsy Donnelly

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Brad McCarty
To: Brian Oh
Subject: SDC Draft EIR question
Date: Wednesday, August 24, 2022 9:35:36 PM

EXTERNAL

The DEIR doesn't seem to look at the impact on cyclists and pedestrians OUTSIDE the campus: it does acknowledge that VMT along Arnold Dr and Hwy 12 will increase and cannot be mitigated. Does the traffic impact analysis estimate the corresponding increase in the number of bicycle and pedestrian collisions along Arnold Drive and Hwy 12 both with and without bike and pedestrian infrastructure improvements? If so, what are those numbers? C3-1

It is not valid to assume that the County or Caltrans will make the needed improvements as part of future development: they have, to date, been unable to make ANY improvements on those roadways in the impacted area: both roadways have ZERO shoulder width sections which require cyclists and pedestrians to be in the vehicle lanes. C3-2

Brad McCarty
Glen Ellen

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Brad McCarty
To: Brian Oh; Susan Gorin
Subject: SDC DEIR Emergency evacuation times
Date: Wednesday, August 31, 2022 8:21:45 AM

EXTERNAL

The SDC DEIR states that traffic modelling was done to estimate evacuation travel times throughout the Sonoma Valley during various emergency conditions. Its conclusion is that evacuation times are barely impacted at all (worse case less than a 2 minute additional delay I believe) by the addition of 1,000 new housing units and 2,000 residents. Obviously many of us who did evacuate during the 2017 wildfires found those results difficult to believe. C4-1

Well, yesterday afternoon (8/30/22) there was a single structure fire in Boyes Hot Springs which caused emergency responders to close Hwy 12 in both directions for about 1.5 hours. That closure snarled traffic throughout the valley and travel times WELL exceeded an additional 2 minutes over normal times. Arnold Dr, Agua Caliente Rd and Boyes Blvd were complete stand stills. Perhaps the impact was even greater due to the diverted Northbound and Southbound traffic from Hwy 12 intersecting each other at the roundabout on Arnold Dr. C4-2

This huge snarl was due to a single structure fire! This is why valley residents are VERY sceptical of the evacuation traffic impacts of the proposed plan.

Brad McCarty
Glen Ellen

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: brian bollman
To: Brian Oh
Subject: Sonoma Developemental Center Specific Plan DEIR
Date: Thursday, September 1, 2022 4:19:23 PM

EXTERNAL

Hi,

I have the following concerns regarding the Sonoma Developmental Center Specific Plan C5-1

--The Specific Plan does not appear to address the issue of embodied carbon within existing buildings to be removed.

--The Specific Pan does not appear to address the environmental consequences of creating a high density development at a great distance from jobs and other facilities. specifically it doesn't adequately address commute and errand times. C5-2

In these times of global warming these concerns need to considered in the planning of any new development. Any development in this area needs to re-purpose existing buildings to the greatest degree possible without building any new buildings, and either be extremely limited in size, or be entirely self contained, having all of the industry and facilities needed to support the new community within the community. C5-3

Building removal and construction is a major contributor to global warming, and should only be done when clearly necessary. Sonoma County is into its sixth straight year of population decline. It is unclear as to why we would need to do a great deal of construction and development in such and out-of-the-way corner of the county. And such construction and development is clearly not consistent with our county's stated goal of reducing greenhouse gas emissions. C5-4

Thank you,

Brian Bollman

Wellington Circle

Windsor CA 95492

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Carol Carr
To: Brian Oh
Cc: Gerald.McLaughlin@dgs.ca.gov
Subject: Draft EIR Comments: SDC Specific Plan
Date: Friday, August 19, 2022 10:01:28 AM

EXTERNAL

PLEASE protect the natural treasure of SDC!!!! The intricacies of what is being moved on by your agencies are difficult for the lay person to follow, but I do understand that the county has an opportunity to proceed in a respectful and environmentally protective fashion at SDC or not - and that your agencies are willing to manipulate the regulations and the process in order to circumvent environmental impact and protection, despite the desires of the Board of Supervisors and the constituencies they represent. I ask you to please have a conscience that includes longterm impacts for the quality of life and nature and the planet as a whole and protect the incredible resource of SDC. I ask that you do not exploit that space for gain and development, creating more damage and loss of the ecosystem and precious habitat that currently exists. Truly, those are not yours to squander, yet unfortunately, you apparently have the power and willingness to do. Please, as followed by the Sonoma Land Trust and the rest of us who care deeply about this very important issue, -until after October 24th- pause this review of the Specific Plan and EIR pending completion of the RFP process so that the county specific plan can be aligned with an environmental impact that respects the grave issue of the development of SDC. You may think that what you do is not crucial and that rationales of development and profit support your abuse of power, but we need leaders who are no longer motivated by exploitation, greed, and profit. Please act both consciously and conscientiously on this very important decision. If you are in a position of authority, you have a mandate to act responsibly and with conscience for the greater good.

C6-1

Carol Carr, RN
Santa Rosa

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	carole harbard
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov
Subject:	Draft EIR Comments: SDC Specific Plan
Date:	Sunday, August 21, 2022 4:38:41 PM

EXTERNAL

Dear Sirs,

It seems the community has not been heard and vital considerations like the actual boundaries of the properties and how they relate to the wildlife corridor, the fire risk and evacuation of so many residence, the increased use of water in a drought ridden environment to name a few. C7-1

Urge the County to:

1. Engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022.
2. Re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.

C7-2

Regards

Carole Harbard
Resident of Sonoma

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	CHARLES TSEGELETOS
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov
Subject:	Draft EIR Comments:SDC Specific Plan
Date:	Sunday, August 21, 2022 8:49:14 PM

EXTERNAL

Dear Brian Oh,

I am a 30 year resident of Sonoma Valley and I ride and hike the trails above SDC almost every week. C8-1

I feel the current plan of 1,000 homes and 900 on-site jobs will destroy the uncrowded and rural character of the area. This magical place will become just another crowded, housing place and it will be lost to all Sonomans now and into the future.

There just aren't places like this anymore and it would be a terrible loss to our community. Perhaps half the number of houses would be okay but even that is a risk.

Please work to align the Specific Plan and the EIR with the states RFP.

Thank you and sincerely,
Charles G. Tsegeletos
707-249-0400

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Brian Oh

From: Chris Gralapp <eyeart@chrisgralapp.com>
Sent: Friday, August 19, 2022 10:49 AM
To: Brian Oh
Cc: Gerald.McLaughlin@dgs.ca.gov
Subject: To Brian Oh--Draft EIR Comments: SDC Specific Plan

EXTERNAL

C9-1

Dear Mr. Oh,

The August Draft Specific Plan for Sonoma Developmental Center was released in advance of the State's RFP for selection of a developmental proposal, way too soon. Sonoma County should align the SDC Specific Plan with the State's RFP, not work completely independently before you know the parameters set by the State. You are putting the cart before the horse.

Sonoma County must engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR **only after the State announces the RFP selection** on October 24, 2022.

Please redraft the Specific Plan and the EIR to match and analyze the impacts of the **actual proposa**l that the State selects for this site! It only makes sense, and will help to make for a much smoother process.

Thank you,

Chris Gralapp
Bennett Valley

C9-2

PS: The SDC site cannot support 1000 residential units--adding that much would put massive pressure on Bennett Valley Road, which already has problems with traffic and a high accident rate. As a Bennett Valley homeowner, I cringe at the thought of multiple times the high speed traffic moving through our quiet valley.

Also, that much density would also disastrously impact the native environment. We have the chance of a lifetime to protect this stunning habitat, and link some significant corridors. Please reduce proposed population density. We know the state has mandated new housing, but it doesn't have to all be at SDC!

--

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Christina Barasch
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.gov
Subject:	Draft EIR Comments: SDC Specific Plan
Date:	Tuesday, August 23, 2022 2:05:49 PM

EXTERNAL

C10-1

I am horrified that a 1000 homes and commercial developments are proposed for the developmental property in Glen Ellen and especially because the proposal was released before the EIR. This is a precious area and I have lived here for 33 years and I know how fragile this environment is in everyway (water, traffic, wild life, recreation,population growth to mention a few). I worked for the county for many years and I know you can do better then this. For the sake of town and our county I implore you to carefully consider the impact these ideas and implementing them will have and will have forevermore.

Sincerely,
Christina Barasch

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: David Eichar
To: Brian Oh
Cc: Gerald.McLaughlin@dgs.ca.gov
Subject: Comments on SDC Specific Plan and DEIR
Date: Sunday, September 4, 2022 2:25:15 PM

EXTERNAL

The board of supervisors directed staff to pursue an SDC specific plan with 750 residential units. Despite this, the main EIR project is for the 1000 residential unit plan. This provides less details about the environment impacts of a 750 unit plan, mainly just saying the impacts are less than the 1000 unit plan. If the 750 unit plan had been the main plan under review, more details regarding environmental mitigation would have been defined.

C11-1

The draft EIR does not take into account the full impact of the hotel for Vehicle miles traveled and Greenhouse gas emissions. Hotels with conference rooms, especially one in the SDC, would be a destination hotel and draw more visitors to the Sonoma Valley. The entire trip, door to door, needs to be counted, including visitors' travel to their airport, air travel, and the trip from the airport to the hotel at SDC. Many EIRs I have seen assume that a hotel would not bring any more visitors to Sonoma County, arguing that they are coming for other destinations within Sonoma, such as wineries. You need to look no further than MacArthur Place Hotel and Sonoma Mission Inn, which have business conferences during the week. These business conferences bring visitors to Sonoma Valley, who would not have traveled here if it were not for the conference.

C11-2

The estimate of increase in traffic times during wildfire evacuations is completely inadequate. In Oct 2017, wildfires started Sunday night. We did not need to evacuate immediately. But by Wednesday, with the Nunns fire spreading towards us from the north, and another spreading from the east, we left early that evening.
Arnold Drive southbound was back up almost to Boyes Blvd. It was stop and go to Watmaugh Road. It took us an additional hour or more to travel from Boyes Hot Springs to get to the intersection of Arnold Drive and Watmaugh Road, than usual. In order to get an accurate estimate of increased travel time during an evacuation, the DEIR must start with a valid base. At survey of residences' experiences evacuating from wildfires needs to be conducted.

C11-3

Regards,
David Eichar
Boyes Hot Springs

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Denise Sobel
To:	Brian Oh; Gerald.McLaughlin@dgs.ca.gov
Subject:	Draft EIR Comments: SDC Specific Plan
Date:	Saturday, August 20, 2022 3:10:35 PM

EXTERNAL

I am not sure this is the place to send this email. But, I hope it finds someone who might listen. C12-1

1000 homes in SDC means at least 2000 people, 2 to 4000 cars, noise, lights, pollution, traffic, destruction of Sonoma's wild life corridor, to name a few concerns. People employed there would bring another 1000 cars to the now overcrowded Arnold Drive, more pollution, noise and destruction. A road cutting across to Hwy 12 will do nothing to alleviate the problem and destroy the beauty of this wild area.

Yes, at one time there were 3000 people living at SDC, but during that time, the population of Sonoma was way less. And, most of those people didn't drive!

Is anyone looking at where the water will come to supply the 1000 homes. Right now, everyone in Sonoma is counting each drop of water they use. I have heard no one addressing this problem. Plans are to take out the Pillsbury dam and end diverting water to the eel river which feeds into the Russian River where Sonoma gets 30% of its water. Where is more water going to come from? C12-2

And, what about evacuation if there is a fire? I am asking you to drive down Arnold Drive or Hwy 12 one of these weekday mornings or late afternoon. Bumper to bumper traffic on both roads. The intersection of Hwy 12 and Verano is at a standstill most days after 3pm. I cannot imagine what will happen if evacuation is required during commute times. C12-3

People died in Paradise when their city burned down, there was only one way out, and it could not handle all the people needing to get out.

Thank you for taking the time to read this.

Denise Sobel
sobeld@comcast.net

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	dcrice112@aol.com
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov; susan@susan-gorin.com; mike.mcguire@senatormikemcguire.com
Subject:	"Draft EIR Comments: SDC Specific Plan"
Date:	Thursday, September 1, 2022 12:01:51 PM

EXTERNAL

To Mr. McLaughinWhom It May Concern,

The different proposals, some of which have true merit, must be weighed against what is sensible and feasible and not in a monetary calculation from a developers perspective but from a community perspective. C13-1

I was an employee of SDC for more than 37 years. My position was with work development as the Director of Sunrise Industries the Sheltered Workshop for the clients living at SDC. My 'dream' was to take the egress from Hwy 12 onto what is called the soccer field adjacent to the vineyards of the Teller family and make this an industrial site set up to do limited manufacturing for start up companies. This site would be leased by DGS to individuals living at SDC/community who would own and operate this manufacturing site aided by a Board to assist in helping to make decisions and how to grow. This, along with housing for the worker/owner of this company would be a hand and glove providing a true base for this population to become self-reliant and self-funded. Alas, this never came to be.

However, this email is not about what could have been but what it will become.

I am a very strong proponent of affordable housing, but not a strong proponent of attempting to solve this issue in one fell swoop dedicating it all to property at SDC. I understand that SDC's land is a perfect site for this sort of endeavor but to what degree is the meaningful question. Given all of the objections I am sure that you have received related to the proposal of allowing 1,000 housing units to the property should be strongly considered. A plan to set aside property for some housing is reasonable and should be competed in stages.

When you look at developments such as Oakmont and its process to develop their property should be an example of how SDC might be developed and also learn what they did wrong and how not to make the same mistakes. So many lessons to be learned from previous attempts that should not be over looked or reinvented.

C13-2 I would like to see, as I believe most locals, a dedicated pathway across this land for wildlife to use freely and without the threat of harm.

I would also like to see a scaled back version of quantity of affordable housing allowed. A caveat for future expansion if all goes well could be put into place to allow for controlled and limited growth with each phase and in turn each phase to be reviewed with the same conditional parameters and community input.

C13-3 A few of my essential worries is the ongoing drought and our ability to handle more housing with diminishing water supplies, traffic mitigation and how our roads would look, not if but when we have a repeat of the fire storm in 2017 let alone the daily traffic we will see increased with no possibility for widening any of the corridors, Hwy 12 or Arnold Dr. This is a major safety issue

Even though there appears to have been little to no consideration for any of the use plans with regard to the population that lived at SDC, it is a shame that some sort of accommodation for those that lived here and those in the community to avail themselves of some part in this development for their better good.

Thank you for taking the time to read my input...I hope it helps in some small way in making decisions on

what SDC will become tomorrow.

Cheers

Douglas C Rice
1795 Warm Springs Rd
Glen Ellen Ca

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	David Eichar
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov
Subject:	Further Comments on SDC Specific Plan and DEIR
Date:	Tuesday, September 13, 2022 2:22:04 PM

EXTERNAL

C14-1

The addition of the road from SDC out to Highway 12 (highway 12 connection) would result in significant impact on wildlife. This area is a wildlife corridor. As wildlife currently traverse this area, the addition of vehicles in this area would disrupt the wildlife movement. This is especially true during construction. It is best not to add this road.

If the road is built, despite the significant impact, then the following mitigation measure can be taken to reduce the impact.

1. Limit construction of the road to certain hours and months, where wildlife movement through the corridor is less.
2. Make the road one-way only, east bound.
3. Close the road, except for emergency evacuation.

Regards,
David Eichar
Boyes Hot Springs

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Technical Note

Toward Simulating Dire Wildfire Scenarios

Thomas J. Cova[1]; Dapeng Li[2]; Laura K. Siebeneck[3]; and Frank A. Drews[4]

Abstract: Recent extreme wildfires are motivating unprecedented evacuation planning. A critical need is to consider *dire scenarios* that allow less time to clear an area than required. Although these scenarios often begin with an ignition near a community, any scenario can become dire due to weather conditions, human response, technology, cascading events, and community design. Although research has widely addressed scenarios with ample time and favorable conditions, protecting people in dire scenarios is much more challenging. We provide a framework for generating dire scenarios that includes difficult starting conditions, delayed decision-making, variable fire spread rates, limited warning technology, and random adverse events. The goal is to move beyond favorable scenarios and generate challenging ones that inspire novel protective planning. A key finding is that minimizing losses in dire scenarios may involve disaster response elements not represented in current simulation models, including improvisation and altruism. **DOI: 10.1061/(ASCE)NH.1527-6996.0000474.** © *2021 American Society of Civil Engineers.*

Downloaded from ascelibrary.org by Thomas Cova on 04/21/21. Copyright ASCE. For personal use only; all rights reserved.

Introduction

The 2018 Camp Fire in Paradise, California, began as a scenario that most residents would consider common based on previous experience. The town had experienced 13 near miss fires in the last two decades, some that resulted in stressful evacuations, but none that resulted in any major losses. However, as the Camp Fire advanced toward Paradise at an unprecedented rate, officials planning for a 2–3 h evacuation were unaware that homes on the north edge of town would ignite in less than 90 min (Mooallem 2019). The result was a dire scenario that garnered worldwide attention and motivated a new era in wildfire evacuation planning, which has historically been very scarce (Kano et al. 2011).

Dire scenarios have not been a focus of previous study. Researchers and planners prefer favorable ones with ample time and positive outcomes to highlight model and plan efficacy. The accepted approach is to set ignition points far enough from a community to allow sufficient time for the residents to clear a study area. However, favorable scenarios do not challenge emergency managers to identify novel protective plans for the most difficult cases that arise in real wildfires. Furthermore, these dire cases are becoming more common as drought leads to larger, faster-moving wildfires (Thompson 2020). The goal of this paper is to propose a framework for generating dire scenarios, highlight their value in evacuation planning, and identify research challenges and opportunities.

[1]Professor, Center for Natural and Technological Hazards, Dept. of Geography, Univ. of Utah, Salt Lake City, UT 84108 (corresponding author). Email: cova@geog.utah.edu

[2]Assistant Professor, Dept. of Geography, South Dakota State Univ., Brookings, SD 57007.

[3]Associate Professor, Emergency Management and Disaster Science, Univ. of North Texas, Denton, TX 76203.

[4]Professor, Dept. of Psychology, Univ. of Utah, Salt Lake City, UT 84108.

Note. This manuscript was submitted on September 8, 2020; approved on January 20, 2021; published online on April 21, 2021. Discussion period open until September 21, 2021; separate discussions must be submitted for individual papers. This technical note is part of the ***Natural Hazards Review***, © ASCE, ISSN 1527-6988.

Dire Scenarios

We define a scenario as "dire" if the required time to clear an area is greater than the time available (i.e., lead time). Dire scenarios fall into the class of extreme events where important variables are located at the tail of their distribution (Tedim et al. 2018; Sanders 2005). *Evacuation time* and *lead time* are common metrics, where the former is the estimated time to clear an area of its population and the latter is the estimated time available to do so before hazard impact (Lindell et al. 2019). Here, we adopt a dynamic perspective and assume that both variables can be estimated at every point in time during a scenario. The estimate at time t represents the *remaining* lead time and evacuation time to move residents to safety. For example, if the estimated evacuation time is 1 h, and 20 min has transpired since it commenced, the remaining evacuation time is 40 min. We define a direness index that yields a score at time t across a scenario as

$$d_{ijt} = e_{ijt}/l_{ijt} - 1 \quad t = 0..T \tag{1}$$

where d_{ijt} = score for community i threatened by wildfire j at time t; e_{ijt} = time required to evacuate the remaining residents in community i from wildfire j at time t; and l_{ijt} = lead time at t before wildfire j impacts community i. This is a socioecological metric that integrates a human system variable (evacuation time) with a natural system one (lead time) (Moritz et al. 2017). Fig. 1 depicts a means to translate a score into a direness category ranging from "routine" to "extremely dire."

For example, assume that at 3:15 p.m. ($t = 0$), a community has 1 h to evacuate before a fire arrives at 4:15 p.m. ($l_{ijt} = 1.0$), and it will take 1.25 h to evacuate the residents ($e_{ijt} = 1.25$). Thus, the initial state of the scenario at time t is "dire" using Fig. 1 because evacuation time is 25% greater than lead time [$(1.25/1.0) - 1 = 0.25$]. Because this score is dynamic, a scenario can enter or exit a given dire category as events alter l_{ijt} and e_{ijt} (e.g., a blocked egress point at time t_1 that increases e_{ijt} or a change in wind direction at t_2 that increases or decreases l_{ijt}). In real wildfires, these variables are uncertain and so are a direness score and associated category. This means that a scenario that appears routine may turn out to be dire.

To provide an example, Fig. 2 depicts the anatomy of a routine scenario that turns dire due to a dramatic increase in a fire's

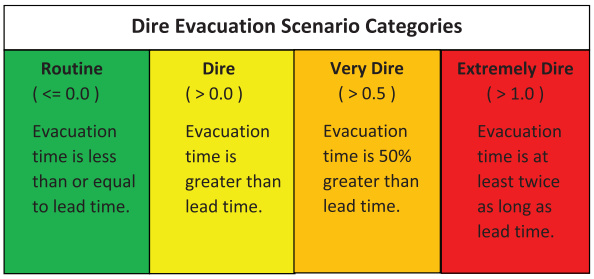


Fig. 1. (Color) Dire evacuation scenario categories based on a score.

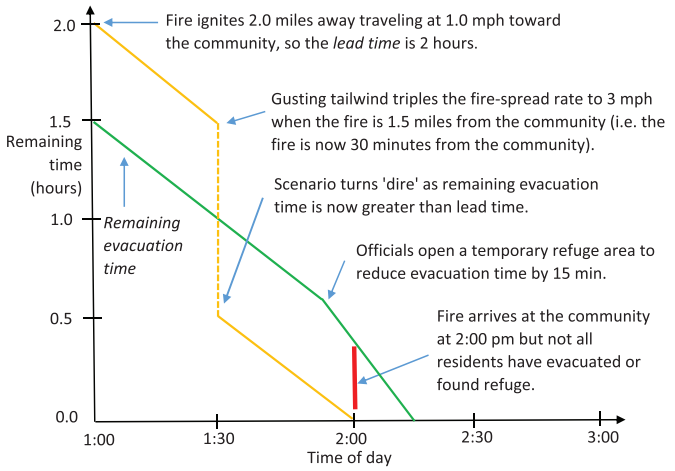


Fig. 2. (Color) Anatomy of a dire scenario due to a sudden increase in fire spread rate.

spread rate. At 1:00 p.m., a deputy reports a fire 2 mi from a community traveling 1 mph toward it, and officials estimate the initial lead time at 2 h. Evacuation time is estimated at 1.5 h, so the scenario is not initially dire ($1.5/2.0 - 1 = -0.25$). Officials warn the residents, and the plan is to have the area cleared by 2:30 p.m. At 1:30 p.m., a gusting tailwind triples the fire spread rate to 3 mph, and the lead time drops from 1.5 h to 0.5 h. Because the remaining evacuation time is 1 h, the scenario turns "very dire" ($1.0/0.5 - 1 = 1.0$). At 1:45 p.m., officials designate a temporary refuge area (TRA) to reduce the required time to protect the remaining residents by 15 min. Despite their best efforts, the fire enters the community at 2:00 p.m., but some residents have yet to clear the area or secure shelter, which could lead to casualties.

Dire Scenario Sources

Dire scenarios arise from a variety of sources. Foremost is a wildfire ignition point close to a community because this condition offers less time to respond than one further away. A second factor is detection time, which is usually brief because citizens rapidly report smoke plumes, but nighttime wildfires can go undetected longer when people are asleep. A third factor is official decision-making because emergency managers may delay the decision to alert or warn residents to avoid unnecessarily disrupting a community based on their threat assessment (Drews et al. 2014). This can lead to a dire scenario if officials subsequently issue a warning at the last minute (Cova et al. 2017). Notification systems can also affect a scenario if many residents do not receive an alert or warning in time (Lindell 2018; Doermann et al. 2021). Public response rates can affect scenario direness due to low-mobility households (e.g., age, disability, resources), a low warning compliance rate, or a tendency to adopt a wait-and-see approach (Dash and Gladwin 2007; McCaffrey et al. 2018; Edgeley and Paveglio 2019). Traffic factors can affect a scenario, as in the case where residents have difficulty finding a safe exit route (Brachman et al. 2019) or when many households depart at once and induce gridlock (Chen and Zhan 2008). Community design can affect a scenario if a road network cannot support rapid residential evacuation (e.g., many homes and few egress points).

There are many recent examples of dire wildfire scenarios. The 2018 Camp Fire is an iconic example because it includes many interacting factors. This case included a fast-moving fire that ignited near a low-egress community with many low-mobility residents. Furthermore, officials accustomed to prior near misses waited to assess the fire's direction and spread rate before ordering the first phased warning, and many residents did not receive a warning due to a low reverse-911 subscription rate (Todd et al. 2019). On the favorable side of the scenario, officials and residents were highly prepared and experienced with a state-of-the-art plan, and officials successfully reversed a lane on the main exit to increase the capacity of a key traffic bottleneck. Other examples of recent dire wildfire scenarios include the 2020 Almeda and Holiday Farm fires in Oregon, which both ignited close to a community and offered very little time to act. The 2017 Tubbs Fire in California was also dire given that it moved 12 mi in its first 3 h through populated areas on a Sunday night, and many residents reported not receiving a warning.

Modeling Dire Scenarios

To generate a dire scenario, a modeler can start with lead time less than evacuation time or design a scenario where the former falls below the latter at any point. Fig. 3 shows a scenario dashboard with factor categories (columns) to generate a dire scenario ranging from no impediment (green) to a minor impediment (yellow) to a major impediment (red). For example, Scenario 1 (row 1) includes minor impediments in the ignition location, fire spread rate, public response, and mobility. This scenario could be a proximal fire moving moderately fast toward households, some of whom voluntarily delay their decision to leave and others with low mobility. Scenario 3 has major impediments, including official decision-making, notification and warning, public response, and traffic congestion. In this scenario, the fire started far from the community, but delays and difficulties in warning residents ultimately led to a dire scenario with traffic congestion. Scenario 4 is the most challenging, with major impediments in all of the factor categories. Although Fig. 3 lists impedance categories in the columns, an analyst must provide the details for each category to create a realistic scenario.

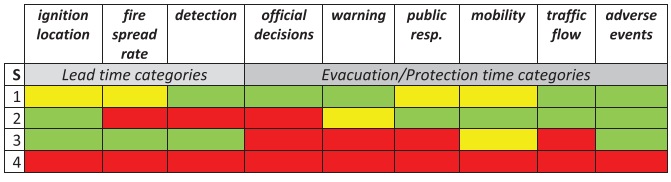


Fig. 3. (Color) Dire scenario dashboard where scenarios (rows) progress from routine to extremely dire (1–4) due to varying factor impediment levels (green, yellow, red).

Downloaded from ascelibrary.org by Thomas Cova on 04/21/21. Copyright ASCE. For personal use only; all rights reserved.

In addition to combining factors to create a dire scenario, we need new metrics to compare outcomes that may not be successful. Wolshon and Marchive (2007) provide one example: the number of vehicles that do not clear a community in time when the lead time is short. This does not mean that the fire will trap the remaining residents because recent events reveal that many evacuees safely navigate burning corridors. Beloglazov et al. (2016) also developed a valuable dynamic metric to estimate the population threatened throughout a wildfire scenario called the *exposure count*, which may rise or fall as scenario direness changes.

Reducing Scenario Direness

Dire scenarios can become less so due to natural and human factors that increase lead time, decrease evacuation time, or both. Factors that may increase lead time by reducing a fire's spread rate include weather (natural), as well as fuel management and fire suppression (human). Although fuel management and fire suppression refer to an array of techniques, modelers do not generally include their effects in coupled fire-evacuation model scenarios because of a lack of data on local fuel management actions. There are also limits on including structural fuels in fire models, which reduces the predictive accuracy of fire spread rate estimates through communities (Kaufman and Roston 2020).

Many factors can decrease evacuation time before and during a scenario. Examples include phased warnings (Li et al. 2015), lane reversal (Xie et al. 2010), and traffic signal optimization (Ren et al. 2013). To broaden the purview, *protection time* is preferable because there are other options. Fire shelters and safety zones are alternatives that have multiple benefits (Amideo et al. 2019). First, they can protect people who cannot leave in time due to low mobility or egress issues, and second, they can reduce traffic delays for residents who decide to leave (i.e., shorter travel times). Households and communities can construct or assign areas of refuge, which can be public or private and permanent or temporary. In the 2018 Camp Fire, parking lots and community buildings were designated as temporary refuge areas (i.e., improvised fire shelter and safety zones), and designating and constructing places of refuge is a growing need. Steer et al. (2017) and Shahparvari et al. (2016) provide representative examples of optimal plans that combine evacuation and refuge shelters to protect people.

Many facets of human response in an actual wildfire can be challenging to model. One example not represented in current models is improvised protective actions. However, improvisation and flexible decision-making is often required in responding to dire disaster scenarios (Webb and Chevreau 2006). One recent example is the use of military transport helicopters to rescue campers trapped by the 2020 Creek Fire in California (Fuller and Mervosh 2020). Altruism is another neglected factor, particularly for many individuals caught in uniquely dire circumstances. Altruism refers to self-selected individuals who demonstrate a willingness to help others address a problem (Batson and Powell 2003). Altruistic examples in wildfires include (1) citizens providing rides for others, (2) citizens providing temporary refuge shelter, (3) citizens providing information via social media, (4) individuals clearing blocked traffic, and (5) citizens aiding in relocating vulnerable populations (e.g., medical facilities, retirement homes, childcare centers). Altruism relates to social capital because communities with greater social cohesion are more likely to have residents help one another (Aldrich and Meyer 2014). One example in the 2018 Camp Fire was Joe Kennedy, who single-handedly cleared abandoned cars that blocked traffic with a bulldozer (Mooallem 2019). Modelers may not have considered altruistic behavior because the need only arises in very dire scenarios, and it is difficult to predict how much might be displayed or where. However, altruistic acts can also lead to losses if people take excessive risks in helping others. Thus, it represents a challenging research frontier in creating more realistic agent-based wildfire evacuation simulations (i.e., agents helping or cooperating with other agents).

Conclusion

Although dire wildfire scenarios have not been a focus of study or modeling, they hold potential to help emergency planners and communities cooperate and consider novel protective actions. Key questions for further research include:

1. What can we learn from studying and modeling dire scenarios over favorable ones?
2. How does the direness of a scenario vary geographically across a threat area?
3. What factors serve to make a scenario more or less dire at different scales?
4. How can we incorporate protective behavior found in real wildfires into simulation models (e.g., improvisation, altruism)?
5. How many places of refuge do we need, where should they be located, and what capacity should they have to reduce likely scenarios from dire to routine?
6. What advanced technologies can help reduce the likelihood of dire scenarios before one occurs (e.g., artificial intelligence, wireless emergency alerts, automated fire detection, real-time decision support) (Zhao et al. 2021)?
7. What technology can aid in responding to a dire scenario (e.g., rescue robots, protective fire suits, temporary fire shelter)?
8. How can we visualize the dynamics of dire scenarios, as well as the beneficial and adverse events that affect lead and evacuation time, to improve situational awareness and decision-making?

Studying and modeling dire scenarios are important because they are challenging and increasing in frequency (Schoennagel et al. 2017). The benefit of simulating them is that it may lead to better planning and outcomes in cases where more things go wrong than right. Modeling wildfire evacuation as a coupled natural-human system is challenging (Ronchi et al 2019; Li et al. 2019), and there are limitations to the framework presented herein due to human behavior and uncertainty. Although the science of simulation continues to advance, we still have a long way to go toward incorporating many events that occur in real wildfires.

Data Availability Statement

No data, models, or code were generated or used during the study.

Notation

The following symbols are used in this paper:

d_{ijt} = direness score for community i threatened by wildfire j at time t;
e_{ijt} = time required to evacuate remaining residents in community i from wildfire j at time t;
i = index of communities;
j = index wildfires;
l_{ijt} = lead time at t before wildfire j impacts community i; and
t = index of time.

Downloaded from ascelibrary.org by Thomas Cova on 04/21/21. Copyright ASCE. For personal use only; all rights reserved.

References

Aldrich, D. P., and M. A. Meyer. 2014. "Social capital and community resilience." *Am. Behav. Sci.* 59 (2): 254–269. https://doi.org/10.1177/0002764214550299.

Amideo, A. E., M. P. Scaparra, and K. Kotiadis. 2019. "Optimising shelter location and evacuation routing operations: The critical issues." *Eur. J. Oper. Res.* 279 (2): 279–295.

Batson, C. D., and A. A. Powell. 2003. "Altruism and prosocial behavior." In Vol. 5 of *Handbook of psychology: Personality and social psychology*, edited by T. Millon and M. J. Lerner, 463–484. New York: Wiley.

Beloglazov, A., M. Almashor, E. Abebe, J. Richter, and K. C. B. Steer. 2016. "Simulation of wildfire evacuation with dynamic factors and model composition." *Simul. Modell. Pract. Theory* 60 (Jan): 144–159. https://doi.org/10.1016/j.simpat.2015.10.002.

Brachman, M., R. L. Church, B. Adams, and D. Bassett. 2019. "Wayfinding during a wildfire evacuation." *Disaster Prev. Manage.* 29 (3): 249–265. https://doi.org/10.1108/DPM-07-2019-0216.

Chen, X., and F. B. Zhan. 2008. "Agent-based modelling and simulation of urban evacuation: Relative effectiveness of simultaneous and staged evacuations." *J. Oper. Res. Soc.* 59 (1): 25–33. https://doi.org/10.1057/palgrave.jors.2602321.

Cova, T. J., P. E. Dennison, F. A. Drews, L. K. Siebeneck, and M. K. Lindell. 2017. "Warning triggers in environmental hazards: Who should be warned to do what and when?" *Risk Anal.* 37 (4): 601–611. https://doi.org/10.1111/risa.12651.

Dash, N., and H. Gladwin. 2007. "Evacuation decision making and behavioral responses: Individual and household." *Nat. Hazard. Rev.* 8 (3): 69–77. https://doi.org/10.1061/(ASCE)1527-6988(2007)8:3(69).

Doermann, J. L., E. D. Kuligowski, and J. Milke. 2021. "From social science to engineering practice: Development of a short message creation tool for wildfire emergencies." *Fire Technol.* 57 (2): 815–837.

Drews, F. A., A. Musters, L. K. Siebeneck, and T. J. Cova. 2014. "Environmental factors that influence wildfire protective-action recommendations." *Int. J. Emergency Manage.* 10 (2): 153–168. https://doi.org/10.1504/IJEM.2014.066187.

Edgeley, C. M., and T. B. Paveglio. 2019. "Exploring influences on intended evacuation behaviors during wildfire: What roles for pre-fire actions and event-based cues?" *Int. J. Disaster Risk Reduct.* 37: 101182. https://doi.org/10.1016/j.ijdrr.2019.101182.

Fuller, T., and S. Mervosh. 2020. "You couldn't see anything': Harrowing helicopter rescues as California fires rage." *N.Y. Times*, September 8, 2020.

Kano, M., M. Kelley, and M. Hashemi. 2011. "Local emergency evacuation planning in California, USA: A comparison with the hurricane states." *Int. J. Emergency Manage.* 8 (1): 74–96. https://doi.org/10.1504/IJEM.2011.040400.

Kaufman, L., and E. Roston. 2020. "Wildfires are close to torching the insurance industry in California." *Bloomberg Businessweek*. November 10, 2020.

Li, D., T. J. Cova, and P. E. Dennison. 2015. "A household-level approach to staging wildfire evacuation warnings using trigger modeling." *Comput. Environ. Urban Syst.* 54 (Nov): 56–67. https://doi.org/10.1016/j.compenvurbsys.2015.05.008.

Li, D., T. J. Cova, and P. E. Dennison. 2019. "Setting wildfire evacuation triggers by coupling fire and traffic simulation models: A spatiotemporal GIS approach." *Fire Technol.* 55 (2): 617–642. https://doi.org/10.1007/s10694-018-0771-6.

Lindell, M. K. 2018. "Communicating imminent risk." In *Handbook of disaster research: Handbooks of sociology and social research*, edited by H. Rodríguez, W. Donner, and J. Trainor. Cham, Switzerland: Springer.

Lindell, M. K., P. Murray-Tuite, B. Wolshon, and E. J. Baker. 2019. *Large-scale evacuation: The analysis, modeling, and management of emergency relocation from hazardous areas*. Boca Raton, FL: CRC Press.

McCaffrey, S., R. Wilson, and A. Konar. 2018. "Should I stay or should I go now? Or should I wait and see? Influences on wildfire evacuation decisions." *Risk Anal.* 38 (7): 1390–1404. https://doi.org/10.1111/risa.12944.

Mooallem, J. 2019. "We have fire everywhere." *N.Y. Times Magazine*, July 31, 2019.

Moritz, M. A., E. Batllori, R. A. Bradstock, A. M. Gill, J. Handmer, P. F. Hessburg, J. Leonard, S. McCaffrey, D. C. Odion, and T. Schoennagel. 2017. "Learning to coexist with wildfire." *Nature* 515 (7525): 58–66. https://doi.org/10.1038/nature13946.

Ren, G., Z. Huang, Y. Cheng, X. Zhao, and Y. Zhang. 2013. "An integrated model for evacuation routing and traffic signal optimization with background demand uncertainty." *J. Adv. Transp.* 47: 4–27.

Ronchi, E., S. M. V. Gwynne, G. Rein, P. Intini, and R. Wadhwani. 2019. "An open multi-physics framework for modelling wildland-urban interface fire evacuations." *Saf. Sci.* 118 (Oct): 868–880. https://doi.org/10.1016/j.ssci.2019.06.009.

Sanders, D. E. A. 2005. "The modeling of extreme events." *Br. Actuarial J.* 11 (3): 519–557. https://doi.org/10.1017/S1357321700003251.

Schoennagel, T., et al. 2017. "Adapt to more wildfire in western North American forests as climate changes." *Proc. Nat. Acad. Sci.* 114 (18): 4582–4590. https://doi.org/10.1073/pnas.1617464114.

Shahparvari, S., P. Chhetri, B. Abbasi, and A. Abareshi. 2016. "Enhancing emergency evacuation response of late evacuees: Revisiting the case of Australian Black Saturday bushfire." *Transp. Res. Part E: Logist. Transp. Rev.* 93 (Sep): 148–176. https://doi.org/10.1016/j.tre.2016.05.010.

Steer, K. C. B., E. Abebe, M. Almashor, A. Beloglazov, and X. Zhong. 2017. "On the utility of shelter in wildfire evacuations." *Fire Saf. J.* 94 (Dec): 22–32. https://doi.org/10.1016/j.firesaf.2017.09.001.

Tedim, F., et al. 2018. "Defining extreme wildfire events: Difficulties, challenges, and impacts." *Fire* 1 (1): 9. https://doi.org/10.3390/fire1010009.

Thompson, D. 2020. "California wildfires growing bigger, moving faster than ever." Accessed September 10, 2020. https://apnews.com/article/wildfires-forests-holidays-fires-california-dc30bcead69e5b67004711b78bbda868.

Todd, Z., S. Trattner, and J. McMullen. 2019. "Ahead of camp fire anniversary, new details emerge of troubled evacuation." *PBS Frontline*, October 25, 2019.

Webb, G. R., and F. R. Chevreau. 2006. "Planning to improvise: The importance of creativity and flexibility in crisis response." *Int. J. Emergency Manage.* 3 (1): 66–72. https://doi.org/10.1504/IJEM.2006.010282.

Wolshon, B., and E. Marchive, III. 2007. "Emergency planning in the urban-wildland interface: Subdivision-level analysis of wildfire evacuations." *J. Urban Plann. Dev.* 133 (1): 73–81. https://doi.org/10.1061/(ASCE)0733-9488(2007)133:1(73).

Xie, C., D. Y. Lin, and S. T. Waller. 2010. "A dynamic evacuation network optimization problem with lane reversal and crossing elimination strategies." *Transp. Part E: Logist. Transp. Rev.* 46 (3): 295–316. https://doi.org/10.1016/j.tre.2009.11.004.

Zhao, X., R. Lovreglio, E. Kuligowski, and D. Nilsson. 2021. "Using artificial intelligence for safe and effective wildfire evacuations." *Fire Technol.* 57 (2): 1–13. https://doi.org/10.1007/s10694-020-00979-x.

Downloaded from ascelibrary.org by Thomas Cova on 04/21/21. Copyright ASCE. For personal use only; all rights reserved.

Senate Governance and Finance

And

Natural Resources and Water Committee

Living Resiliently in the New Abnormal: The Future of Development in California's Most Fire Prone Regions

Speaker Kate Dargan: Former California State Fire Marshal ktdargan@gmail.com

Summary: Some areas of California may be too dangerous to build upon. But to know this, we first need to develop a systematic way of evaluating where those areas exist and what mitigations will reduce wildfire risk enough to be acceptable. This should include a trained body of professionals in land use, a clear risk model for mitigation requirements, and an approach that addresses both current buildings and new. The land use development process will substantially benefit from the following programs to enable this risk assessment. These are the gaps in the current wildfire resiliency planning process.

Critical Needs for Land Use Best Practices

1. **Educate and certify Land Use Planners, Building Officials, and Fire Marshals** – these are the 'first responders' of the development world and need better training, certification, and knowledge sharing than they currently have access to. These professionals approve the permitting, maps, development agreements, zoning, General Plans, Fire Protection Plans and other necessary enforcement provisions but do not have ready access to training, wildfire planning specialist certification, or continuing education.
   Action: Develop coursework and require certification in Wildland-Urban Interface Plan Review or equivalent and require at a minimum one-time certification.
   Value: Planners, builders, inspectors, and consultants across the state will develop consistent means and methods of designing, approving, and enforcing wildfire resilient communities because they share a common body of practice.

2. **Develop both a wildfire zoning overlay and parcel-based risk maps.** The FHSZ methodology accurately describes hazard and is suitable for a zoning overlay but it is not a risk analysis. To understand risk, you need to measure the fire hazard PLUS the mitigations that reduce the hazard. This combination is risk. This will become an increasingly apparent gap if development approvals become tied to fire hazard zones. Using CEQA as an example, consider the process of evaluating a development for environmental impact. The core of the CEQA decision is based on whether the project can meet a defined need for mitigation so that the project impact is either negligible or acceptable. To do this for wildfire, we must define the wildfire mitigations that result in negligible or acceptable risk to lives, homes, and communities. The FHSZ's do not have this capability but risk

assessment does. We need to extend the concept of fire hazard into the more mature evaluation of fire risk and this assessment must be enabled at the parcel scale to be useful for land use decision-making.
Action: Adopt a statewide wildfire zoning overlay. Direct CAL FIRE to develop a Wildfire Risk Assessment Model for state and local use in all aspects of wildfire resiliency planning, development, and mitigation.
Value: The quantifiable metrics of mitigations will take shape within a systematic risk framework that is predictable for land use development and will measure against fire mitigation effectiveness over time. This will drive improved outcomes.

3. **Build capacity for Hardened Home assessments at the local level.** Home Hardening includes BOTH ignition-resistant building construction and defensible space. Each must be present to harden the home to withstand the heat from fire in adjacent landscaping/ household items and the ember storm that threatens the home. Local community firesafe education groups, defensible space code enforcement, and the building community all need assistance to place boots on the ground to work with homeowners to both retrofit and maintain these fundamental mitigations that improve structural vulnerability.
Action: Assist local governments with funding for the first 3 years of home retrofit and defensible space enforcement efforts through 3-year block grants. Encourage collaborative approaches that link to land use best practices, parcel-based risk assessments, and resilient community actions.
Value: Creates a holistic set of practices that reinforce one another and leads to a more fully hardened community rather than one divided into new and old housing vulnerabilities.

Bio: Kate Dargan has been a firefighter, fire chief and the former State Fire Marshal (CAL FIRE) for California. She has responded to emergencies and disasters around the state and worked on boards, committees, councils, and task forces to advance wildland-urban interface fire safety. She chaired the State Board of Fire Services, co-chaired the Tahoe Fire Commission, served on the Napa County Watershed Board, and is a Board Member of the CA Firesafe Council and the United States Geospatial Intelligence Foundation. She has worked at the community, public agency, industry, and policy levels of the California fire service and is widely recognized for her consensus-building style and innovative approaches to old problems. She founded Intterra in 2010, a successful situational awareness and analytics software company for firefighters.

From:	Deborah Eppstein
To:	Greg Carr; Larry Reed; Jacquelynne Ocana; Shaun McCaffery; Eric Koenigshofer
Cc:	Scott Orr; Brian Oh; SAFRR
Subject:	SAFRR Comments on SDC DEIR Wildfire Hazard and Risk
Date:	Tuesday, September 13, 2022 3:30:43 PM
Attachments:	SDC DEIR Fire Safety Comments from SAFRR 9-13-22.pdf Kate Dargan Sen Gov and Fin And Nat Res and Water Comm 3 2019.pdf Cova Dire Scenarios NHR 2021.pdf

EXTERNAL

C15-1

Dear Planning Commissioners and Permit Sonoma,

SAFRR appreciates the opportunity to present our concerns regarding the Sonoma Developmental Center DEIR. If you have any comments or questions regarding this letter, please contact Deborah Eppstein by email (deppstein@gmail.com) or phone (801-556-5004).

The two articles referenced in the letter are also attached.

Thank you.

Sincerely,
Deborah Eppstein
Director
State Alliance for Firesafe Road Regulations (SAFRR)

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Denise Lacampagne
To: Brian Oh; PlanningAgency
Cc: Susan Gorin; eldridgeforall@gmail.com
Subject: Re: DEIR OF Sonoma Developmental Center Campus
Date: Wednesday, September 14, 2022 3:09:57 PM

EXTERNAL

Greetings,

I am ordinary citizen that is concerned about the future of Sonoma Developmental Center. I have lived on Marty Drive in the Glen Ellen neighborhood adjacent to SDC since 1976. I own my home. I worked at the Center for 33 years. I am not opposed to reasonable renovation, housing and development. I appreciate this opportunity to share my thoughts. C16-1

Overall, it has been disheartening and unbelievable to see this report indicate that this project, overall, would have less than significant impact in so many areas that seem directly related to quality of life and environmental issues. Already, since the facility has closed, the campus portion has been impacted by the lack of care and upkeep of the grounds as evidenced by overgrown foliage and dying and fallen trees.

Although I have reviewed parts of the DEIR, I make no claim to understanding everything, following the format or what some of the references to acronyms and regulations of this tool are. I am the first to admit my comprehension is minimal. I must trust the experts to address the impact of numerous outstanding water, light, noise, climate/environmental, fire safety, traffic, demolition, wildlife and habitat, etc. issues.

3.10-1 indicates this project as having no impact regarding dividing an established community and 3.12-1 speaks to the population growth as less than significant. C16-2

As I understand this document, a **separate** development of with 1000 homes, shops, adjacent buildings and businesses and over twice the number of vehicles appears to directly contradict the terms “no impact” and “less than significant”. As proposed, this development **would** divide an established community.

My concerns are primarily the number of homes and businesses that are being considered (along with other Sonoma Valley proposed developments at Hanna Boys Center and Elnoka Lane) and how this will impact evacuation throughout Sonoma Valley and our everyday life in Glen Ellen. As you are well aware, both

Arnold Drive and Highway 12 are one lane roads to/from Santa Rosa, Napa or Highway 37. Petaluma and Rohnert Park can only be reached by one lane roads, as well.

Please note that references to population and vehicles at Sonoma Developmental Center when it was an active community are skewed. Overall, the number of people that lived there at any time did not drive or own vehicles. They lived in congregate housing. The staff who worked there came in at least 3 separate shifts and were not on the roads at all times of day or simultaneously. C16-3

Fire in this area has been a very real threat. Some tables in the original reports showed the fire line of the 2017 Nun's fire within the SDC grounds. In fact, the fire extended beyond the SDC grounds, burning a home on Burbank St. and continuing along the creek bordering several more homes. During that evacuation, cars were bumper to bumper, taking over two hours to get out of this end of the valley. C16-4

Many questions have come up after reviewing pieces of this DEIR for Sonoma Developmental Center. I do have several simple questions that jumped out at me that I am hoping to get direct answers to. C16-5

1) I would like to **NOTE** that the yellow area identified as Eldridge North area on pages 75-76 **DOES NOT** border on Eldridge South. It is part of Eldridge and the SDC campus. It **DOES** border on Martin St. which is part of the town of Glen Ellen. Labeling the Martin St., Burbank St., Cecilia Dr., Lorna Drive and Marty Drive as Eldridge has been a confusing and misleading misnomer and continued to not be addressed or corrected throughout the SDC planning documents.

Would you please consistently clarify the correct boundaries in ALL of the maps, tables

and ALL documents pertaining to this SDC.

2) **Will a barrier/fence remain in place between the the yellow area identified as Eldridge North on page 76 and the current Glen Ellen neighborhood where Martin St. and Burbank St. intersect? Will the proposed streets of Eldridge North merge onto Burbank St.?**

3) **Where exactly does the possible road from the SDC campus to Highway 12 come out at? How would the cars trying to merge onto Highway 12 be managed?**

I have personally tried merging on to Highway 12 past Temelec during an ordinary accident where traffic was at a lengthily, complete stop because of emergency vehicles (not threatened by fire) and other drivers were unwilling to let other cars onto the major thoroughfare.

4) Land Use Classifications indicates that the Institutional area-page 72- Walnut Circle identified in blue on page 76 could allow short term residential housing and events. **What is meant by short term residential housing? What type of additional events other than the types noted for the Historic Core (purple), Firehouse Commons (hot**

pink) and the Maker Place(coral) are intended? With these combined events, it is reasonable that a significant number of attendees/tourists/employees will need daily access and egress from the venues as well as convenient parking on campus. **How is this traffic generated by other than residential housing, being accounted for in terms of the single road/narrow bridge coming in and out of this campus?**

C16-6

5) There are references Paratransit/Dial-a- Ride options being presented. Although, they provide a great service, there are eligibility and time frame requirements that do not make it simply a matter of making an appointment whenever a ride is needed. **Whose oversight will the proposed Transportaion Management Association (TMA) be under?**

6) As a resident that lives very close to the proposed project and a retired employee that signed annual asbestos waivers, I am concerned how the asbestos issues will be contained during demolition. I see references to "should, may, could", but no definitive "will or must" terms.

Who exactly will actually be monitoring and ensuring this process is carried out correctly?

I look forward to your responses.

Sincerely,

Denise
Lacampagne

834
Marty
Drive

Glen
Ellen,
CA
95442

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Elisa Stancil
To:	Brian Oh
Cc:	Chuck Levine; Arthur Dawson; Susan Gorin; Chuck Levine; Melissa Dowling
Subject:	EIR draft report: contaminants on site
Date:	Wednesday, August 10, 2022 4:55:39 PM

EXTERNAL

Hello Brian,
There is no mention of mercury contamination in the report, and the evaluation of numerous buildings, based on casual visual examination, is suspect. Many of these buildings deemed in good condition are not. As a historic restoration specialist I find the absence of mention of mercury very concerning, just as I find the minimal testing of actual building materials on the site concerning.
I appreciate the detail and depth of the report but must raise a flag for full disclosure and proper testing, thank you.
Elisa Stancil Levine
Glen Ellen resident
Founder of Stancil Studios, Inc
415-902-6230
elisastancil@gmail.com

C17-1

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Elisa Stancil
To: engage@sdcspecificplan.com
Subject: reviewing hazardous materials...no mention of mercury
Date: Wednesday, August 10, 2022 4:48:50 PM

EXTERNAL

Please explain why mercury contamination is not included in the EPA report. Elisa Stancil Levine, concerned citizen and historic restoration specialist

C18-1

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Elizabeth Crabtree
To:	Brian Oh
Cc:	Susan Gorin; David Rabbitt; district3; district4; district5
Subject:	SDC DEIR
Date:	Tuesday, August 23, 2022 8:26:14 AM

EXTERNAL

C19-1

Dear Brian Oh:

I am deeply concerned by the vague and misleading way that the SDC DEIR addresses the very real and growing risk of catastrophic wildfire and drought in Sonoma Valley. The current proposal to create a densely populated community (with low-ball estimates of the number of future residents—3,000+ is far more likely) on the SDC campus, under the guise of building much-needed affordable housing, is untenable. Such development will create a town with a population over 4 times the size of Glen Ellen, and nearly a third the size of Sonoma, on a relatively small parcel of land, with one way in and out. This ill-conceived development plan puts our community at tremendous risk in the event of an uncontained wildfire. During rush hour, it can take 3-5 minutes to safely merge onto Arnold Drive. Imagine thousands more vehicles on this two-lane country road, trying to flee a fast-moving fire. To the extent that the DEIR addresses the possibility of wildfire at all, it envisions an orderly evacuation with ample time for residents to get to safety—or, if that is not feasible, to "shelter in place." As a survivor of the 1991 Oakland Hills fire, I know that wildfire is neither orderly nor predictable. The 2018 Camp Fire that leveled the town of Paradise came upon the residents so quickly that hundreds of people—including children—were forced to abandon their gridlocked cars (bumper-to-bumper on a two-lane road) and "shelter in place" on a concrete pad for hours as propane tanks blew up around them. Those people survived, with severe PTSD; 85 others did not. It is beyond my comprehension that in 2022, in the midst of a years-long drought, knowing what we now know about wildfire risk in California, Sonoma County officials would put forth such an extravagant development plan without adequately considering the danger to its constituents, present and future. Insurance companies have stopped writing policies in high-risk fire areas; we feel lucky to have insurance, but the cost of our policy has doubled in the past year. The County of Sonoma owes its constituents responsible, realistic, honest, and thoughtful planning. This DEIR falls far short of that minimum standard.

Sincerely,

Elizabeth Crabtree
16528 Arnold Drive
Sonoma, CA 95476

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Fred Hodgson
To: Brian Oh
Subject: Draft EIR Comments: SDC Specific Plan
Date: Friday, August 19, 2022 9:47:03 AM

EXTERNAL

Good morning,
After reading the last SDC plans, I am reminded again that very little thought is given to water. If we are to triple the local population in the near future, where is the water to come from. As we are already restricted and have been off and on for a number years, it seems ludicrous to build hundreds of housing units and very little if any water for them. Please give some thoughts on how this problem will be solved.
Thank You
Fred Hodgson
1010 Horn ave, Glen Ellen, Ca.

C20-1

Sent from my iPad

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Geri Brown
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov
Subject:	Draft EIR Comments: SDC Specific Plan
Date:	Monday, August 22, 2022 3:30:06 PM

EXTERNAL

Dear Brian,

C21-1

The recent proposal for development of the SDC contains a housing element and commercial space that is too dense for the area and is not in alignment with the community engagement process and proposals. The latest plan increases the extensive risks of congested traffic, inadequate evacuation routes, inadequate water sources, encroachment of wildlife corridors and watershed, and is basically just too big for this part of Sonoma County.

I live in Oakmont and dread the resulting additional daily traffic congestion along highway 12 and Arnold Drive as a result of over 1000 new homes and 900+ new jobs contained in this latest proposal, especially given our recent wildfire evacuations. This influx of new residents and workers will destroy the peaceful nature of our community. Let's be more creative with the use of SDC and keep in alignment with the community needs.

I urge the County to:

1. Engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022.
2. Re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.

Respectfully,
Geri Brown

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Valley of the Moon Water District Board Declares Stage Two Water Shortage

(Sonoma Valley, CA) - The Valley of the Moon Water District (District) Board of Directors passed Resolution number 210703 and Ordinance number 1013 enacting Stage Two of the District's 2020 Water Shortage Contingency Plan (WSCP), at the July 6, 2021, Board meeting. The new water use restrictions outlined, seek a 20% overall reduction in water use for the months of July through October as compared to the same period in 2020.

The action was brought on by the historic drought in the region and recent reduced allocations of water supply from the regional wholesaler, Sonoma Water. This, in combination with declining groundwater well production due to the lack of rainfall to recharge the aquifer over the last two years, has led the District to move from voluntary conservation to mandatory water use restrictions. Please see the specific restrictions/prohibitions below:

- Washing sidewalks, walkways, driveways, parking lots and other hard-surfaced areas by direct hosing is prohibited, unless necessary for public health and safety.
- Breaks or leaks must be corrected within 72 hours of discovery or notice from the District.
- Irrigation in a manner that allows excessive runoff of water, or unreasonably over-sprays the area of irrigation is prohibited.
- Use of potable water for non-recycling decorative water fountains is prohibited.
- Use of water for single pass evaporative cooling systems for air conditioning, for all connections installed after 6 June 2000, unless required for health or safety reasons is prohibited.
- Use of water for new, non-recirculating conveyor car wash systems is prohibited.
- Use of water for new non-recirculating industrial clothes wash systems is prohibited.
- Restaurants may only serve water upon request.
- Hotels and lodging establishments must offer a linen service opt-out.
- Irrigation of ornamental turf on public street medians with potable water is prohibited.
- Irrigation with potable water outside of newly constructed homes and buildings that is not delivered by drip or microspray systems is prohibited.
- Use of any garden or utility hose without a hose-end shut-off nozzle is prohibited.
- Irrigation is limited to three days per week: **Monday, Wednesday, and Friday and between the hours of 12 midnight to 6am.**
- Instead of using potable water, only recycled water may be used for construction dust control.
- Car washing shall be allowed only at facilities using recycled or recirculating water.
- Dedicated irrigation customers are required to conduct the District's irrigation survey.
- Use of water from a fire hydrant except for fighting fires is prohibited.

Valley of the Moon Water District Board Declares Stage Two Water Shortage

(Sonoma Valley, CA) - The Valley of the Moon Water District (District) Board of Directors passed Resolution number 210703 and Ordinance number 1013 enacting Stage Two of the District's 2020 Water Shortage Contingency Plan (WSCP), at the July 6, 2021, Board meeting. The new water use restrictions outlined, seek a 20% overall reduction in water use for the months of July through October as compared to the same period in 2020.

The action was brought on by the historic drought in the region and recent reduced allocations of water supply from the regional wholesaler, Sonoma Water. This, in combination with declining groundwater well production due to the lack of rainfall to recharge the aquifer over the last two years, has led the District to move from voluntary conservation to mandatory water use restrictions. Please see the specific restrictions/prohibitions below:

- Washing sidewalks, walkways, driveways, parking lots and other hard-surfaced areas by direct hosing is prohibited, unless necessary for public health and safety.
- Breaks or leaks must be corrected within 72 hours of discovery or notice from the District.
- Irrigation in a manner that allows excessive runoff of water, or unreasonably over-sprays the area of irrigation is prohibited.
- Use of potable water for non-recycling decorative water fountains is prohibited.
- Use of water for single pass evaporative cooling systems for air conditioning, for all connections installed after 6 June 2000, unless required for health or safety reasons is prohibited.
- Use of water for new, non-recirculating conveyor car wash systems is prohibited.
- Use of water for new non-recirculating industrial clothes wash systems is prohibited.
- Restaurants may only serve water upon request.
- Hotels and lodging establishments must offer a linen service opt-out.
- Irrigation of ornamental turf on public street medians with potable water is prohibited.
- Irrigation with potable water outside of newly constructed homes and buildings that is not delivered by drip or microspray systems is prohibited.
- Use of any garden or utility hose without a hose-end shut-off nozzle is prohibited.
- Irrigation is limited to three days per week: **Monday, Wednesday, and Friday and between the hours of 12 midnight to 6am.**
- Instead of using potable water, only recycled water may be used for construction dust control.
- Car washing shall be allowed only at facilities using recycled or recirculating water.
- Dedicated irrigation customers are required to conduct the District's irrigation survey.
- Use of water from a fire hydrant except for fighting fires is prohibited.

From:	Greg Guerrazzi
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov
Subject:	Comments to Draft EIR- SDC Specific Plan
Date:	Wednesday, August 24, 2022 11:06:57 AM
Attachments:	Guidelines - Stage Two Water Shortage.pdf

EXTERNAL

Hello Permit Sonoma and State DGS:

C22-1

I am a 28 year resident of Glen Ellen and lifelong resident of Sonoma County. My family has been in the County for over 100 years.

I have diligently participated in the SDC Specific Plan process with the local community. It is very apparent that the local community input, guaranteed to be included in the plan by Permit Sonoma and required by DGS, has been thoroughly ignored. The local community feels they have been placated to during this entire process and no longer can rely on Permit Sonoma to conduct a fair, honest and equitable EIR process.

Please engage the community in a meaningful planning process for SDC. The draft EIR and records of the community input substantiate that a meaningful and truthful planning process has not been undertaken. Align the County Specific Plan with the State's Request for Development Proposals and adhere to the General Plan, local zoning and historical preservation guidelines. It is very apparent that the County and State are not in sync on this process, which is obvious as the State awaits responses to the RFP due October 24, after the proposed adoption of the EIR.

C22-2

I understand that the County of Sonoma is under a State mandate to build many housing units and Permit Sonoma plans to force a large percentage of this housing into the historic village of Glen Ellen by tripling our population. It is the fault of Permit Sonoma and the negligence of our County leadership, that the County is in this dire housing situation due to years of ignorance, denial and favoritism to developers by Permit Sonoma and County leaders. So much so that now the village of Glen Ellen must bear the brunt of the County's woeful housing plans of the last decades. This is completely unacceptable. Would other historic Sonoma County villages, such as, Occidental, Bodega, Graton, Forestviille and others be subject to destruction by adding 1,000 homes?

We all agree that housing must be a part of the redevelopment of SDC but at a reasonable level of 400+/- units, with all being affordable. The Sonoma Valley does not have a need for a new commercial area as the existing commercial areas are not fully utilized.

We all agree that SDC is a unique property of great biodiversity and value to our environment. The destruction of this property, and the surrounding area by adding 1000 homes and thousands of people, is a violation of your personal commitments to protect the citizens of Sonoma County.

Below are some comments to the Draft EIR:

1. The entire Specific Plan process and the resulting EIR are negligent in their approach, rendering them hypothetical. I understand and appreciate that the State has allowed the County to develop a plan, however the County is woefully unprepared to conduct such a process, which I have witnessed very closely. Aligning the Specific Plan and EIR with the State's RFP, would increase efficiency, save valuable taxpayer resources, and ensure thorough planning and environmental review. Review of the Specific Plan and EIR must be paused pending completion of the RFP process. C22-3
2. We spent several hours trying to evacuate Glen Ellen in 2017, on our own accord as there was not notification. The Draft EIR states that only a minute or so would be added to the evacuation timeline with the addition of thousands of people at SDC. How can this be possible? The addition of an evacuation route to Hwy 12 is incomprehensible. History has proven that the fires will come out of the northeast and east and this evacuation route will send people into the face of the fire, rendering this route unusable in an emergency situation. This study is obviously flawed. C22-4
3. Building dense housing and commercial space in the wildland fire/urban interface is completely irresponsible. People will perish due to the negligence of this process. C22-5
4. We are under strict water controls in Sonoma Valley, see attached. The entire area is experiencing a severe drought. The Sonoma Valley water supply cannot support thousands of additional people. How can an entire new city be built in an area under severe water restrictions that are expected to remain in place indefinitely? The Draft EIR does not adequately address the water needs of the entire area. C22-6
5. Climate change is real and obvious in our area. Protecting biodiverse lands and precluding over development of areas such as the SDC campus are paramount to survival of the human race. C22-7
6. Approval and development according to the Specific Plan will result in the densest development in all of Sonoma Valley, completely out of scale with the surrounding area and not in accord with the General Plan C22-5
7. Re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide. C22-3
8. Over 700 market rate homes will not adequately address the dire housing situation created by Permit Sonoma and County leaders. C22-5
9. The total number of housing units the County must provide should not be the driving force of the Specific Plan. Simply evaluate the subject property based on the biodiversity and surrounding community. The housing need has extremely clouded this process.
10. The traffic study is erroneous and does not address the stress that will be created on Arnold Drive and Hwy 12. C22-8

11. Protection of the Wildlife Corridor is woefully understated. How can thousands of people live and work within yards of a critical wildlife corridor? C22-9

12. The Specific Plan and resulting Draft EIR are flawed, and the process must be re-started with preservation of the biodiversity of SDC and the existing community being paramount. C22-10

Please consider the community and the environment before pushing development on a pristine property.

Best Regards,
Greg Guerrazzi
(707) 935-1111

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Linda Hale
To: PlanningAgency
Subject: FW: Draft EIR Comments: SDC Specific Plan
Date: Sunday, August 21, 2022 1:34:37 PM

From: Linda Hale
Sent: Saturday, August 20, 2022 5:27 PM
To: Gerald.McLaughlin@dgs.ca.gov
Subject: FW: Draft EIR Comments: SDC Specific Plan

From: Linda Hale
Sent: Saturday, August 20, 2022 12:08 PM
To: Brian.Oh@sonoma-county.org
Subject: Draft EIR Comments: SDC Specific Plan

The following letter was sent to Governor Gavin Newsom and the DGS via Gerald McLaughlin. This letter was also sent to the Sonoma County Board of Supervisors, Senators Mike McGuire and Bill Dodd, and the Sonoma Index Tribune. C23-1

This letter is written in support of the Sonoma Land Trust's request to engage in meaningful planning for the SDC by aligning the County Specific Plan with the State's request for development proposals. Stating that no specific plan has been selected and that no mitigations are available for water, traffic, and wildlife is not a viable EIR.

To the Office of Governor Gavin Newsom:

The Office of the California DGS has rescinded its earlier premature offering of the Sonoma Developmental Center to a developer prior to the completion of an EIR. The 894 acre property has been held as a public trust to benefit both the disabled and the community. It also serves as the major water recharge shed for Sonoma Valley and is directly in the path of Sonoma Creek which crosses Sonoma Valley and exits through Petaluma to the San Francisco Bay. The community recognizes the need for affordable housing, but the proposed 1,000+ home development with only 250 affordable units, a high end hotel, and visitor services as businesses on site ignores the public input and will be an environmental disaster for Sonoma Valley.

The EIR process was fast tracked when the DGS released the property for sale. This is against the law since no project has been designated by the Board of Supervisors nor had the EIR process even been started. The EIR findings were released with the following legal concerns:

1. Where is the Response to Public Comments in the Draft EIR? C23-2

2. Where in the DEIR are the actual Specific Plan mitigations listed? (Executive Summary refers to Appendix A, but mitigations are not included) C23-3

3. The county is using a "Self-Mitigating Plan" approach. What is the rationale for doing this? How will implementation of mitigations work, since they won't appear in the EIR itself but only as a "condition" of moving forward with development? C23-4

4. How, when, and through what mechanism will the open space lands at SDC be permanently protected and kept in public hands? C23-5

Also Permit Sonoma states: “Public participation identified three key areas of concern among the 16 areas studied: open space and wildlife, water, and wildfire risk and evacuation routes. The draft Environmental Impact Report finds that the proposed specific plan would not create significant and unavoidable impacts in these areas.” The problem is that the impacts are significant and unavoidable. C23-6

There is really no proposed specific plan. The traffic and water studies were done when the SDC was permanently closed by the state, so no impacts were shown due to low traffic and water use in the area. Permit Sonoma has done the EIR only allowing public comments via zoom and the US Mail with no responses to critical concerns. C23-7

Sonoma Valley is congested. It has two main roads and one of them had to evacuate 1,000s of Oakmont residents by bus during the last fire since there are no exit routes that can handle evacuation traffic. Three other major developments are now permitted between the city of Sonoma and Santa Rosa and in process along the Highway 12 corridor. Traffic in Sonoma Valley is already impacted, especially in the Boyes Springs area and the city of Sonoma with only one road out. People say that they no longer come to Sonoma because of the traffic. And Sonoma County has been sued for not meeting its own emission standards. C23-8

Sonoma Valley is already in a state mandated Groundwater Study with well restrictions in place for commercial growth and homeowners' wells being monitored throughout the valley. We have asked for a reduction to 450 homes and no hotel. Please intervene before this goes any further. We need the State of California to come forward to protect what makes Sonoma Valley the destination it is and to protect local resources. This development will add a new city to the valley floor, deplete our vanishing water sources, and create urban sprawl. Please consider resources and action to protect a California resource. C23-9

Thank you for being the Governor of California!

Linda Hale

1500 Warm Springs Road

Glen Ellen, CA 95442

Sent from Mail for Windows

Virus-free.www.avg.com

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Heather Gallagher
To: Brian Oh
Subject: Draft EIR Comments: SDC Specific Plan"
Date: Friday, August 19, 2022 8:05:34 AM

EXTERNAL

Good morning,

C24-1

My name is Heather Gallagher, I was born and raised in Sonoma, I now reside in Petaluma California. I have been following the recent planning proposals for the SDC. Since I was a little girl and still now as an adult, Every time I drive thru the SDC I feel a sence of magic. I remember looking out the windows of the car with my brothers as the car drove slowly thru the SDC in the morning or early hours of the evening, we would look for deer grazing on the grassy noles. We almost always saw them and if we didn't we were so sad. Since 1986. I have watched Sonoma county go through lots of changes. Over time things start to settle in and many of the changes years later have a lasting impact on the landscape and environmental impacts that are detrimental to the wild life, water ways and environmental impacts. I haven't seen the full scale of the plans for 1000 residential and commercial spaces planned for the SDC, but I know that if even half that amount were planned that it would be detrimental to the land, environment, wildlife, and the catastrophic effects on Sonomas water will be felt even before the first faucet is turned on in one of the homes.
In the 90's I was under the impression that Sonoma developed an act that nothing like this would happen, it seems the laws have changed on expending, and that California is turning a blind eye to the environmental impact. I thought the state adopted a 30 in 30 plan, where we use 30% less resources in 2030.
Without doing the research I know that this proposal isn't good enough for the SDC, I know that the detrimental building even half the proposal would be detrimental to the impact of our local city's and county, with demolitions environmental impacts, new water, gas and electricity lines, and all the carsongenis that will be released and pollute the land, the neighborhood and the water directly on the other side of the levee.

Please, employ you, to do the research, take the time and the resources to develop a new proposal for the land, get a land grant and work with the community to make better choices.

Thank you for taking the time to read this message and consideration your actions.

Heather Gallagher-
707-387-7192

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Holly Hutter
To: Brian Oh
Subject: SDC plan
Date: Wednesday, August 10, 2022 6:18:26 PM

EXTERNAL

I find it incredulous that the EIR to put 1000 new homes on the SDC would not " significantly impact" the wildlife corridor, fire evacuate routes and water resources. As usual, it sounds like the County priorities the revenue it will receive by issuing permit fees and property taxes over the safety of current Valley residents and environmental protection.

C25-1

Holly Hertogs
Son
95476

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Jan Bowen
To: Brian Oh
Subject: Re: Sonoma Developmental Center
Date: Tuesday, August 23, 2022 12:00:18 PM

EXTERNAL

I don't need an EIR to know I don't want to see 1000+ homes appear on the property that was known as Sonoma Developmental Center. There's nothing about that that would make it OK to ravage that land.
JB

C26-1

On Aug 22, 2022, at 11:45 AM, Brian Oh <Brian.Oh@sonoma-county.org> wrote:

Thank you, Jan. The State and County are completing a joint 3-year planning and sale process of SDC. We recently released a draft Plan and its Environmental Impact Report for public review. I'm hopeful that after reading the plan, you'll agree that both State and County are committed to the campus's legacy of helping the people of Sonoma County.

From: Jan Bowen <turbownurs@comcast.net>
Sent: Friday, August 19, 2022 1:12 PM
To: Brian Oh <Brian.Oh@sonoma-county.org>
Subject: Sonoma Developmental Center

EXTERNAL

Dear Brian Oh,
The State of California is poised to sell Sonoma Developmental Center to Big Money Developers in order to enrich themselves. As long as there is ONE person standing in the rain holding a sign asking for help, SDC still has a purpose. It's legacy is about helping people, not developers. PLEASE DO NOT ALLOW THE SALE OF THAT PROPERTY.

C26-1

Sincerely,

Jan Bowen (former employee of SDC)

5867 Mountain Hawk Dr
Santa Rosa, Calif. 95409
(707) 538- 0592

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Jan
To:	Brian Oh; Arielle Kubu-Jones
Cc:	Karina Garcia
Subject:	comments on the Draft EIR
Date:	Thursday, August 25, 2022 3:45:29 PM

EXTERNAL

I oppose this draft EIR 1,000 housing units in the heart of Sonoma Valley and in the middle of the Sonoma Valley Wildlife Corridor will have **significant** and **unavoidable** impact on these four main areas of concern: 1) open space/wildlife, 2) water, 3) wildfire risk/evacuation routes, 4) quality of life for all. C27-1

There is not enough land in the Draft EIR for protected open space. 1050 + acres should be considered, especially around the campus.

The only way to reduce impacts is to adopt a smaller project The “Historic Preservation Alternative” with only 200-300 low income homes. No market rate homes. Strict building guidelines to protect impact to the environment/wildlife.

The Draft plan does not speak to the hazards of fencing on the campus, which any kind would strongly affect wildlife movement as would the introduction of thousands of people and vehicles. C27-2

This draft is wrong for SDC.

What is needed

1- The protection of more lands than 700 acres

2- a plan to reuse and re-purpose current buildings and not to expand beyond the current foot prints. 200-300 low income home max. No market rate housing. C27-3

3- allow for non-profits/ trade schools/ oceanic research or other environmental friendly to come and residence, rather than housing.

4- To not allow fences of any kind as all prevent wildlife movement.

5- SDC should remain a park friendly campus with no commercial use or investment.

Please reject this Draft and find a smaller, kinder, more protective alternative.

Jan Humphreys

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: bosshard@sonic.net
To: Brian Oh
Subject: "Draft EIR Comments: SDC Specific Plan"
Date: Tuesday, August 23, 2022 7:45:22 AM

EXTERNAL

Dear Brian,

Review of the Specific Plan and EIR must be paused pending completion of the RFP process.

C28-1

I am very concerned about this beautiful pristine area, extremely needed by wildlife. Also, Highway 12 cannot handle more traffic, especially during emergencies as wildfires, accidents, and earthquakes. there are few alternatives to move people and cars out of the area safely and quickly.

Engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022.
Re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.

Sincerely,

Janet Bosshard

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Janet Greene
To: Brian Oh
Cc: Gerald.McLaughlin@dgs.ca.gov
Subject: Draft EIR Comments: SDC Specific Plan
Date: Friday, August 19, 2022 10:26:20 AM

EXTERNAL

Dear Brian,
I am very concerned about the SDC property.
My position is fewer houses, more low cost housing, and keep the remainder as a wildlife preserve.
Increasing the population in this area will impact water, fire response and already crowded roads.
Janet Greene

C29-1

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Janet M. Laurain
To: Brian Oh
Subject: Sonoma Development Center Specific Plan (1773)
Date: Thursday, August 11, 2022 3:47:29 PM

EXTERNAL

Hi Brian,

C30-1

Who is the applicant for the Sonoma Development Center Specific Plan? Are any developers involved?

Thank you.

Janet Laurain

Janet M. Laurain, Paralegal
Adams Broadwell Joseph & Cardozo
(650) 589-1660
jlaurain@adamsbroadwell.com

This e-mail may contain material that is confidential, privileged and/or attorney work product for the sole use of the intended recipient. Any review, reliance or distribution by others or forwarding without express permission is strictly prohibited. If you are not the intended recipient, please contact the sender and delete all copies.

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Jeanette Newman
To: Brian Oh
Subject: SDC Plan
Date: Thursday, August 11, 2022 3:49:38 PM

EXTERNAL

Hi Brian,

We have lived at the address below for more than 20 years. We are happy with much of the SDC Plan however, we are vehemently opposed to putting 1000 residences on that property for two reasons: C31-1
1. Wildfire- There are only two roads out of this valley, Highway 12 and Arnold Drive. These roads are already heavily used. In the case of an evacuation I fear the added 2000 cars from these new residences could clog the roads and lead to life threatening situations.
2. Drought- How do you expect to provide the water for these additional residences with our dwindling water supplies? C31-2

Thank you,
Jeanette & Brett Newman
17272 Cragmont Drive
Sonoma, CA 95476

Sent from my iPhone (please excuse typos).

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Jessica Strachan
To: Brian Oh
Subject: SDC plan draft comment.
Date: Tuesday, August 16, 2022 8:35:03 PM

EXTERNAL

Dear Brian,
Thank you for taking the time to read my email.
I have lived in Glen Ellen for the past 20 years, and have just finished reading the draft report on the SDC.

As a person that still walks in the SDC every day, raised my children adventuring at the SDC's farm, hikes Camp Via, went to every Halloween parade put on by the SDC residents (and cried and cheered as each house went by)- I am sincerely invested in what happens less than a mile from our family home.

We all realize that eventually there will be additional homes to take the place of where residents once lived.
However- those residents did not drive- or have multiple cars at their houses. And having the three shifts of the workers cut down on the number of cars that were ever on site at one time, of course- the fires weren't as prominent THEN.

In this vein I must tell you that I am very frightened of adding additional homes (cars)- when the fire risk is always high, and our lack of water is a problem.
In the past two decades, the environment has so substantially changed that fire season is year round.
AND adding houses and cars NOW- with the knowledge that we have, does not seem appropriate.

C32-1

I really enjoyed reading the dates of when each structure was built. I love each one.
I appreciate the research, although I am a little hesitant reading about the possibility of night construction.
Even if it were far away from humans- I don't think all of the animals that you listed would enjoy the vibration and sounds day and night.

C32-2

I would be happy to discuss any of these issues with you, or anyone else, when possible, but lastly- I have to ask this:

Please come and look at Glen Ellen.
It is not ready for a fire, and neither is the SDC.
Until it is- building any homes is a bad idea.

The MOST important part of the plan is the egress to highway 12.
It is listed as PROPOSED- but it has to be mandatory because the 2017 fire proved we did not have enough ways to leave Glen Ellen.

C32-1

Thanks again for your time.
Best,
Jessica Strachan

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Jill Koenigsdorf
To: Brian Oh
Subject: The DC
Date: Wednesday, August 10, 2022 3:14:14 PM

EXTERNAL

Hello. I received the draft for the Developmental Center's future in today's email, and it still begs the question: How will Arnold drive accommodate the cars of 1000 new residents?? C33-1
Also: will a viable and critical wildlife crossing be destroyed? Hikers, bikers and dog walkers so enjoy and appreciate this green space and cannot imagine such massive development! C33-2
Thank-you, Jill Koenigsdorf

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Joan Geary
To: Brian Oh
Subject: Re: Sonoma Mountain Wildlife
Date: Monday, August 15, 2022 1:40:45 PM

EXTERNAL

C34-2

Thank you Brian….hope so…..and up the road (check out what they are doing to the 17700 Carriger property (as well as others)…it is an extension of the SDC Corridor and it is getting cut off.

On Aug 15, 2022, at 1:26 PM, Brian Oh <Brian.Oh@sonoma-county.org> wrote:

Thank you, Joan. Beautiful photos. I'm hopeful the policies that are being proposed in the draft Plan ensures preservation of a critical wildlife corridor.

From: Joan Geary <joan@joangeary.com>
Sent: Monday, August 15, 2022 1:01 PM
To: Brian Oh <Brian.Oh@sonoma-county.org>
Subject: Sonoma Mountain Wildlife

EXTERNAL

Dear Brian:

C34-1

The attached compressed PDF file illustrating Sonoma wildlife was created in a two-page horizontal book format. If you have an app that can view a PDF file in a two-page format that would be best. If not, it can be viewed page by page on a vertical basis (please ignore the blank pages in this format).

Having spent 18+ years documenting Sonoma Mountain wildlife and domesticated animals on ours and neighboring properties, I created a photographic summary of these beautiful creatures. It is my hope that you are able to utilize this information in helping preserve the wildlife corridors on Sonoma Mountain. These thoroughfares represent an extension of the SDC corridor as well as other connecting lands.

Please take a few minutes to marvel at the creatures that share Sonoma Mountain. These include an array of birds, mammals, reptiles and more. They deserve the protection of these land and water resources so that they may continue to survive.

Just in the last few months 19 acres of neighboring virgin land have been planted with grapes and new fences installed surrounding these acres, as well as cutting off access to a seasonal stream. These directly block the passage of many of these creatures on portions of this 90-acre property. Additional buildings are proposed

C34-1

and will block further areas. This, in addition, to other developing properties and **SDC** spell disaster for the animals.

If you would like to share this with others that are able to help in this fight to save these creatures please feel free to do so. I believe this is a one-of-a-kind visual history of this area.

Sincerely,

Joan Geary

Please note: The compression had a slight negative impact on the original quality of the book

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected, do not click any web links, attachments, and never give out your user ID or password.

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected, do not click any web links, attachments, and never give out your user ID or password.

From: Joan Geary
To: Brian Oh
Cc: Susan Gorin
Subject: Sonoma Mountain Wildlife
Date: Tuesday, August 16, 2022 1:35:18 PM

EXTERNAL

Hi Brian,

C35-1

In response to your email requesting suggestions on how we can further protect the wildlife below are a few ideas:

-Require wildlife access to ALL seasonal and ongoing creeks, waterways, reservoirs/ponds

-Restrict/limit/ban development impacting free movement along wildlife corridors

-Require wildlife easements for all new developments (structural and agricultural)
Conduct ongoing reviews by Sonoma County to monitor that these easements are maintained.
For example, The Carriger Lane development (former Hanna Property) was required to include a wildlife easement. Was this established in the building plans and is it continued to be followed for compliance issues?

-Create a map of all wildlife corridors

-Limit/ban fencing that restricts free movement of wildlife

-Limit noise/lights in sensitive areas including, but not limited to, breeding and nesting.

Additional input:

-All recommendations from a biological assessment conducted in conjunction with a new vineyard or agriculture permit that are incorporated into the permit must be reviewed and enforced. For example, if fields are to be disturbed during nesting bird season and the property owner is required to conduct a survey 7 days in advance of any ground disturbance and that study should be submitted to either the Ag Commission or Permit Sonoma. There does not appear to be sufficient follow-up after initial biological assessments are filed by owners.

-Design review and planning for any new homes in the Taylor/Sonoma Mountain corridor should take into account wildlife needs when approving the location of buildings, setbacks from creeks, fencing and potential noise and lighting impacts.

Thank you for working to help protect these beautiful creatures.

Best,
Joan Geary
17872 Carriger Road
Sonoma, CA 95476

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

August 18, 2022

Introduction

C36-1

Almost without exception, the plan is opposed by very many individuals and organizations. This should be a sign that something is wrong, one would think. The County keeps pointing to the State as the one who is controlling the direction of the planning. Our State legislators chose not to do anything to improve the situation. This will have a massive impact upon our valley and it is wasting a great opportunity to make things better if it were not solely driven by what a developer would want. This is ass-backward as the saying goes.

I have contacted Governor Newsom about this with hopes that he can intervene. After all, the State has a huge surplus and using some of this would greatly improve the outcome of the plan. Let's think out of the box, please.

Specific Comments

With the understanding that we should not be confined to the boundaries of the present plan here are some of my additional comments:

- Look at this as a wonderful opportunity to do something great rather than sticking to the general formula of developing a plan that would be appealing to a developer. Perhaps set up a non-profit that would handle the project similar to what was done at the San Francisco Presidio. If we had spent the last 3 years developing such an entity, we would not be in the present situation.

C36-2

- All new housing should be "affordable" as there is such a huge need for this not only in the Valley but in the entire state. The numbers of units should be dictated by what the area can broadly comfortably absorb (water capacity, sewer capacity, road capacity, fire safety and so on).
- This should be seen as a opportunity to solve other problems such as training people for good-paying jobs. Perhaps the SRJC or some other educational organization could set up a satellite campus for this purpose?
- Perhaps there could be some high-tech businesses set up to bring in good paying jobs?
- Homeless services are a possibility, but are very controversial. To me, it is preferable to get people into homes so that these services would not be needed.

- Some of the state's huge budget surplus should be used to make the SDC responsive to the community's needs and the needs of average people who cannot afford to live here. This can also be a means of addressing homelessness as it is caused by the lack of affordably of housing in this area. We are spending millions of dollars on the homeless and not solving the problem. Let's take a bigger picture approach and, again, the SDC is a gift in this regard.

So, in general, I am not commenting on numbers of units, etc. but instead have concerns about the general direction this is heading.

Thanks

Joe Lieber
Sonoma

Comments on SDC Draft EIR

C37-1

Without getting into the weeds as the saying goes, the big picture is what concerns me. There are so many problems with the way this study has been conducted. Here are a few:

- It has been strongly driven by what a developer would want, not what the community wants. This is wrong! The County always points to the State as the driver of this. The State needs to be pressured to do the right thing. After all, the state works for us, right?
- This is a HUGE opportunity to address the state's and the country's affordable housing issues. The myopia of this study is numbing! From this standpoint, this is not only a local valley issue.
- Some of the state's huge budget surplus should be used to make the SDC responsive to the community's needs and the needs of average people who cannot afford to live here. This can also be a means of addressing homelessness as it is caused by the lack of affordably of housing in this area. We are spending millions of dollars on the homeless and not solving the problem. Let's take a bigger picture approach and, again, the SDC is a gift in this regard.
- Adding to the myopia issue, this project should not be viewed within its own bubble, but, instead it should be viewed within the context of the massive housing issues we have. Again, having this driven heavily by what a developer wants is not the right way to look at this. This should be seen as an opportunity to solve some significant problems in the area. Are there sources of funds that could subsidize the project so that it can be solely affordable housing, for example? After the tons of money that has been spent on checking the boxes (this study), let's instead step back and take a broader view of this.
- There does not seem to be any evidence of creative thought with this study. It is way too market driven for something that should be of a public benefit. After all, this is the taxpayer's property.

Joe Lieber
Sonoma
8/12/22 12:46:32 PM

From: Jon Greenslade
To: Brian Oh; Susan Gorin
Subject: Support for Housing & Employment at SDC
Date: Sunday, September 4, 2022 12:47:13 PM

EXTERNAL

C38-1

Supervisor Gorin & Mr. Oh, I am writing this email in support of the Permit Sonoma plan which proposes building the most housing & work opportunities at SDC. SDC has been a source of employment and housing for this community since its inception and it is completely in line with the needs of our community to continue using it along those lines. Development at SDC will help our community in many ways, most importantly in providing housing, employment, and bolstering education opportunities at our schools.

I work in Sonoma Valley & live off Madrone Road with my wife & raised our 4 children there since 2003 when we sold our affordable housing unit off Broadway in Sonoma to buy a house in the Rancho Madrone housing tract. When we first moved up here 25 years ago, our first apartment was the large apartment complex on Madrone Road. This area is the right area for more housing, both affordable & for first time home buyers. The Rancho Madrone tract is a mix of relatively large apartments, smaller, ~1000sq. ft. homes like mine that are generally considered "starter" homes, and larger homes. The mix of the 1000 units planned for SDC seems to fit in perfectly with the character of the Rancho Madrone tract, probably SDC's closest neighborhood. When I first got a job up here in the Valley, the Madrone Apartments was one of the few places myself & my then pregnant wife could afford to live in. Later, when our family expanded to 6, the affordable housing units on Marcy Court allowed us to start to build equity and to be able to live and work in this community. After we built up equity, we were able to sell our affordable housing unit & buy one of the modest homes in the Rancho Madrone tract. The development of SDC will allow others to follow the same type of path we were fortunate enough to have.

C38-2

SDC is the perfect location for many jobs that seem to pay decently and be abundant in our area, especially warehouse & storage facilities jobs. During my 27 years living here in the Valley, I have been fortunate enough to be able to work closely to where I live, sometimes close enough to bike to work. Many SDC employees have lived in the Rancho Madrone tract over the years. Work opportunities at the new development at SDC will give many others that same opportunity. Assuming many of those jobs will be blue collar-type jobs, this is a tremendous opportunity for average working people. Many people in the Valley have a more "white collar" type job that might allow them to afford a larger house in this area and to have an office or work from home in this area, but that generally is not the case for many of the types of jobs that would be created at SDC, so having affordable housing there will be a great opportunity for them.

C38-3

Building more homes at SDC will give families a better chance of being able to afford to live in this Valley. Having raised 4 kids through the local public schools, it is no secret that this is not the type of area where young families start out and our schools generally reflect that with lower enrollment and parent participation, partially due to parents having to work further from where they live. Dunbar, the school closest to SDC, has seen both the decline of families living in its area & the "white flight" of many families there choosing to send their children up to the Kenwood School District, as Dunbar had to enlarge its boarders to find more children to fill its school as enrollment declined. Having more young families and allowing them to live where they work will create more opportunities for parents to be more active in their children's schools and bring more children to our schools.

Having development at SDC that can pay for itself is also the fair thing to do. While I enjoy the feeling of walking our dog around Lake Suttonfield in almost complete solitude, I can in

C38-3

no way say it is fair for the taxpayers of the State, County, or Valley pay for me to enjoy such privilege. People could choose to create a special district and tax themselves to keep SDC exactly as it is, but no one is willing to do that. It is only fair that the development, care & upkeep of the SDC area come from development at SDC. Our State & County have more pressing financial needs such as schools, roads, and homeless than to pay for a property in one of the more exclusive and valuable land areas in the State.

Those opposing having more people live in their backyard have thrown almost anything that they thought would stick against the wall to stop this development. They are well involved in the community, vocal and organized, but I do not feel they represent the best interest of our community on this issue, especially when you take into account how unaffordable it is to live in our community and state. I applaud you and Permit Sonoma for forging ahead with a plan that offers solid housing and working opportunities for all.

Thank you, Jon Greenslade

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Juliet Langley
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov
Subject:	Draft EIR Comments: SDC Specific Plan
Date:	Friday, August 19, 2022 8:54:48 AM

EXTERNAL

Dear Brian Oh,

C39-1

I am writing to ask you to urge Sonoma County to engage in meaningful planning for SDC - to align the County specific plan with the State's request for developmental proposals. Specifically, to re-draft the County Specific Plan and EIR to describe and analyze the impacts of the **actual** proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.

As I understand it, earlier this month the County released its draft Environmental Impact Report and draft Specific Plan for SDC. And, despite the Board of Supervisor's direction to pursue a specific plan with **fewer** than 1,000 home, the drafts propose 1,000 residential units and extensive commercial development. : Align the County Specific Plan with the State's Request for Development Proposals

The draft specific plan fails to respond to the challenges of our time—including wildfire, drought, and biodiversity loss.

Further, because the Specific Plan and EIR were released **before** the State selected a development proposal, the Specific Plan is hypothetical. Neither it nor the EIR disclose the characteristics or environmental impacts of the proposal that will ultimately be accepted by the State.

I believe it is critical that review of the Specific Plan and EIR **must be paused** pending completion of the RFP process.

Aligning the Specific Plan and EIR with the State's RFP, would increase efficiency, save valuable taxpayer resources, and ensure thorough planning and environmental review.

Thank you in advance for your attention to this matter.

Juliet Langley

5244 Monte Verde Drive
Santa Rosa, CA

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Justin Beck
To: BrianOh@sonoma-county.org; engage@sdcspecificplan.com
Subject: Sonoma Development Center
Date: Sunday, August 28, 2022 4:20:02 AM

EXTERNAL

Hello,

C40-1

In 2000, the main building of the Sonoma Development Center was listed in the National Register of Historic Places. I am not sure if the new plans involve demolition of the building but just imagine if California had historical buildings like other interesting parts of the world instead of a bunch of lifeless, soulless money-comes-first structures. Just imagine for a moment.

Thanks,
Justin Beck

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: karen robidoux
To: Brian Oh
Subject: NOOOO!!
Date: Thursday, August 25, 2022 3:34:26 PM

EXTERNAL

Hello Brian, please put me down for a no to your plan. This little community can not support 1000 housing units. Thanks, karen robidoux

C41-1

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Kate Cooper
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov
Subject:	Draft EIR Comments: SDC Specific Plan
Date:	Sunday, August 21, 2022 8:02:37 AM

EXTERNAL

Good morning,

I am concerned about the proposal to build a substantial amount of homes and buildings at SDC. This site is a critical wildlife corridor, and protecting this corridor should be the top priority. These wildlife corridors are dwindling, but are so important and relied on by species we need to protect. Therefore, I urge the following: C42-1

1. Engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022.
2. Re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide. C42-2

Thank you for your consideration.

Sent from my iPhone

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Kathy Pons
To: Brian Oh
Subject: Question on SDC
Date: Monday, August 29, 2022 3:56:57 PM

EXTERNAL

Brian,
I just finished watching the video of the joint CAC and MACs meeting on August 24th. That was a long one! I wanted to let you know that I thought your presentation was very professional and personal. I know you and others have done a LOT of work on this project and seem to be between a rock and a hard place....
Would it help if there was consensus among the community? If the community could get behind the "Historical option" with 450 units, could that "footprint" fly? Who wouldn't like it?
If it became the "Specific Plan", I understand that would be for 20 years... but how specific does the plan need to be? Could there be changes made as needed? There are always changes to the General Plan or other specific plans too...right?
So if the plan starts out on the smaller side (450 units) as a precautionary attitude, maybe after 10 -15 years it is shown that this number works and there may be a need for more units, could this be remedied up to 1000 in steps?
We would be able to see how the water supply works, what kind of jobs might be on campus, setbacks from the creek and wildlife corridor could be increased initially and I believe that the 450 number of units is considered economically feasible...
This Historical option may also increase the possible re-use of existing buildings too.
What do you think?
Appreciate your answer.
Thank you,
Kathy Pons

C43-1

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Comments of Bennett Valley Citizens for a Ban on Commercial Marijuana Facilities

Commercial Cannabis Projects Violate the Bennett Valley Plan.

C44-1

The Board of Supervisors adopted the Bennett Valley Plan (BV Plan) in 1979 with a goal of preserving and protecting the traditional rural character and natural environment of Bennett Valley. The BV Plan was supported by a full environmental impact report. Its area-specific policy requirements were adopted to avoid significant environmental impacts within Bennett Valley. Policy LU-1a of the General Plan states:

> A Specific or Area Plan may establish more detailed policies affecting proposed development, but may not include policies that are in conflict with the General Plan. In any case where there appears to be a conflict between the General Plan and any Specific or Area Plan, the more restrictive policy or standard shall apply.

The BV Plan has three unique features that are pertinent to commercial cannabis development.

C44-2

1. **Commercial Marijuana Development Violates Land Use Policy 2 of the Bennett Valley Plan.**

Land Use Policy 2 of the BV Plan provides "**Commercial development** is not considered appropriate to the rural character of Bennett Valley (emphasis added)." U.S. Attorney McGregor Scott in Sacramento describes marijuana grows as "industrial agriculture."[1] The process involves manipulation and processing of plants as much as growing them. The Cannabis Ordinance, § 26-02-40, defines "cultivation" as **commercial** cannabis activity. A letter from Adam Brand, Sonoma County Deputy County Counsel, to Kevin Block (January 18, 2019, pp. 2-4) concluded that that any use permit is by law "**development**."

Growing cannabis commercially is obviously commercial development. This inevitable conclusion was drawn by Commissioner Greg Carr during the November 2019 BZA hearing for 4065 Grange Road. On April 10, 2018, Supervisor James Gore remarked at a Board of Supervisors meeting that a commercial cannabis operation on Lakeville Highway was "definitely **commercial industry** within a small area with a lot of neighborhood impact."[2]

Commercial cannabis operations are both in fact and in law commercial development, and violate Land Use Policy 2. They do not belong in Bennett Valley.

---

[1] Don Thompson, "Agents seize Northern California pot houses tied to Chinese" (April 4, 2018) https://www.vcstar.com/story/news/2018/04/04/agents-seize-northern-california-pot-houses-tied-chinese/488258002/

[2] http://sonoma-county.granicus.com/MediaPlayer.php?view_id=2&clip_id=816, at 6:22.

2. Under Land Use Policy 3 Commercial Marijuana Development Cannot Be Approved in Bennett Valley Without Enhanced Law Enforcement.

Under Land Use Policy 3 ("Development shall be coordinated with the public's ability to provide schools, fire, **police** and other needed services"), permitting commercial marijuana in Bennett Valley must be coordinated with improved law enforcement. Cannabis businesses attract crime, and § 26-02-140 of the Cannabis Ordinance notes that growing cannabis poses unique risks to the health, safety, and welfare of residents.[3] Home invasions related to marijuana grows are increasingly common in Sonoma County, and the risks of criminal activity is a major concern to Bennett Valley residents. Non-growing neighbors have been terrorized when the "wrong" home was invaded. Crime increases in the immediate neighborhood where cannabis businesses are located and in adjacent areas. While no one can predict which homes and individuals will be victimized, statistically, it is much more likely that residents of Bennett Valley will become crime victims if a commercial cannabis operation is located there. There are already insufficient sheriffs on duty, especially at night when home invasions tend to occur. It can take thirty to forty-five minutes for a sheriff to respond to a call.

C44-3

According to the Sheriff's office, since 2013 ten marijuana-related murders and 22 marijuana-related home invasions have been reported in the unincorporated areas of Sonoma County. During the past 18 months, 59 marijuana-related crimes were reported (five per month) that do not involve murder or home invasions. These numbers would increase substantially if data from the county's nine cities were included.

Commercial marijuana grows open the door to a dangerous activity in Bennett Valley that is inimical to the polices in the BV Plan. The county recognizes the dangers of marijuana cultivation when it comes to protecting its own employees. In eliminating the mandatory minimum 24-hour notice for an inspection of a cultivation, the code enforcement staff "for safety" will still call in advance so the visit is expected."[4] The county is rightfully concerned for the safety of its staff, but lacks concern for residents.

C44-4

The county has done nothing to improve public safety while inviting widespread commercial marijuana cultivation in Bennett Valley. For example, the county might establish a sheriff's substation in Bennett Valley at the fire station to reduce response time. The county might ban permits on properties located on shared access roads as a means to minimize home invasions of non-growers. Ordinary residents should not have to share milelong dead-end roads with growers.

[3] Those risks include criminal activity (Ordinance No. 6189, Findings, § I, subsections I, N, O and Q).

[4] Memo from Amy Lyle, Permit Sonoma, to Sonoma County Planning Commission, "Cannabis Ordinance Amendments, ORD18-0003 (September 6, 2018), p. 2 [sic]. Actually p. 3.

3. **Bennett Valley Plan's Development Guidelines Require Adequate Roads.**

The Planning Director must find for any development located in Bennett Valley that "private streets and driveways, **both existing and proposed**, are properly designed." Under the plain language of the BV Plan (p. 21), the requirements for existing and new streets are identical. Thus, the county's argument that developments on older, pre-1991 roads (but not driveways) are exempt from the CalFire SRA Fire-Safe Regulations does not apply to roads in Bennett Valley. Under the BV Plan, both existing private roads and driveways where development occurs must meet new road requirements. There is no exemption for commercial cannabis operations. Existing private roads that serve new development and are under 20 feet wide must be substantially upgraded to new street standards.

C44-5

4. There Are Too Many Commercial Marijuana Projects in Bennett Valley.

Since 2017, thirteen marijuana projects have been proposed in Bennett Valley (Table). Many, for now, are not going forward but could be resurrected.

C44-6

Table. Bennett Valley Marijuana Projects That Have Been Proposed.

APN	Address
049-130-015	4944 Bennett Valley Road
055-010-031	7170 Bennett Valley Road
049-150-005	4050 Grange Road
049-130-005	4065 Grange Road
049-071-054	4265 Sonoma Mountain Rd
049-030-090	5365 Sonoma Mountain Rd
136-201-004	6480 Eagle Ridge Road
055-150-018	3141 Matanzas Creek Lane
055-150-011	3220 Matanzas Creek Lane
055-150-010	3400 Matanzas Creek Lane
055-140-015	3575 Matanzas Creek Lane
055-140-006	3700 Matanzas Creek Lane
055-140-024	3803 Matanzas Creek Lane

Bennett Valley has about 1.3% of Sonoma County's land, and about 6% or more of the proposed commercial marijuana projects. This is far too many and reflects gross over-concentration.

C44-6

Bennett Valley
Community Association

P.O. Box 2666, Santa Rosa, CA 95404
http://bennettvalley.org
info@bennettvalley.org

September 19, 2022

Brian Oh
Planning Manager at Permit Sonoma
Via email to Brian.Oh@sonoma-county.org

Re: Sonoma Developmental Center

Dear Mr. Oh:

On behalf of the Bennett Valley Community Association (BVCA) and the residents of Bennett Valley, the BVCA Board of Directors wants to express its concerns about the Draft EIR and Specific Plan for the Sonoma Developmental Center (SDC). The BVCA was established in 1970 and is dedicated to promoting and preserving the rural, residential character and natural environment of Bennett Valley.

C45-1

Specific Plan Policies Do Not Provide Sufficient Protection.

The centerpiece of this planning effort is a specific plan, which is intended to adopt area-specific policy requirements to avoid or mitigate significant environmental impacts within the plan's boundaries. Bennett Valley residents are familiar with how the county implements such plans. The attached Bennett Valley Area Plan was adopted over 40 years ago and, like the SDC Specific Plan, was supported by an environmental impact report. Policy LU-1a of the General Plan states "a Specific or Area Plan may establish more detailed policies affecting proposed development . . . where there appears to be a conflict between the General Plan and any Specific or Area Plan, the more restrictive policy or standard shall apply.

Our experience in Bennett Valley is that the supposed protections offered in an area plan can be illusory and unenforced. Land Use Policy 2 in the Bennett Valley Area Plan provides "Commercial development is not considered appropriate to the rural character of Bennett Valley." Yet PRMD and county counsel distort the plain words and concluded that commercial cannabis development and operations are not "commercial development." In addition, any new structure must undergo design review to preserve scenic vistas and corridors. The county has decided that large and unsightly hoop houses that can be in place six months each year need not undergo design review. Residents who think the SDC Specific Plan contains policies that forbid or regulate certain activities may learn that the county has made a closed-door decision that is the opposite of any logical interpretation of the plan's provisions.

Evacuation Issues.

The BVCA endorses and incorporates by reference the comments filed by the State Alliance for Firesafe Road Regulations on September 13, 2022. About 30% of the land area of Sonoma County has burned since 2017, making wildlife and evacuation issues paramount. Although the DEIR acknowledges that 95% of wildfires are caused by human activity (p. 500), it fails to analyze the extent to which 2,500 new residents, new hotel guests, and new business patrons will exacerbate this risk. All four criteria from the CEQA checklist for Wildfire (XX) would create a significant impact. The DEIR ignores that areas downwind from or adjacent to high or very high fire hazard zones can be consumed by wildfires, as experienced recently in Sonoma County. The 2017 Nuns fire consumed areas near the SDC that are rated as moderate fire hazard, and this occurs across California. Hoping that much of the area is safe because it is only in a moderate fire hazard zone is not a strategy. The DEIR concludes that the proposal would increase wildfire risk to new residents and visitors, but only proposes policies for future consideration without requiring mitigation measures.

C45-2

The DEIR fails to describe existing wildfire hazards or properly analyze potential impacts. It is impossible to evaluate evacuation safety and the associated impacts on existing residents and employees when no baseline is provided for their evacuation utilizing the same routes. We know from the 2017 Nuns Canyon Fire, 2019 Kincaid Fire, and 2020 Glass Fire that Highway 12 was blocked, with traffic often at standstill for hours. The proposal jeopardizes the lives of Bennett Valley residents who need to flee from a fire driving east to Sonoma Valley using Route 12 or Arnold Drive. Moreover, because those routes are known bottlenecks, residents of Sonoma Valley might elect to escape a conflagration by driving west using Bennett Valley Road or even Sonoma Mountain Road. This could congest the escape routes for Bennett Valley residents who need to flee to the west.

The evacuation analysis for Bennett Valley needs to include the fact that during normal conditions Penngrove has become a chokepoint for traffic because of massive housing developments along Petaluma Hill Road. The Board of Supervisors has recognized this problem and recently approved the "Railroad Avenue traffic circulation study." The evacuation route for Bennett Valley residents via Petaluma Hill Road toward Penngrove is already compromised. The DEIR's lack of subregional traffic circulation studies to identify such problems, let alone mitigate them, jeopardizes not only Bennett Valley residents but also the thousands of others sharing these evacuation routes. This violates Public Safety Goal PS-3 of the Sonoma County General Plan ("prevent unnecessary exposure of people and property to risks of damage or injury from wildland and structural fires"), as well as Objective PS-3.2 (new development must minimize fire hazards to acceptable levels).

C45-3

The conclusion that the proposed development would not substantially impair an adopted emergency response plan or evacuation plan (p. 511) is unsupported and contradicted by experience. We know that Highway 12 already gets rapidly congested during mass evacuations, turning it into a parking lot for hours. Depending on the

direction of the fires, residents may either need to evacuate south, thus combining with traffic from Boyes Hot Springs and Sonoma, or north, with additional traffic from eastern Santa Rosa. To conclude that adding thousands more people would not impair existing evacuation is incomprehensible. Emergency alarm systems are now implemented (e.g., during the September 13, 2022 earthquake), and residents will flee simultaneously. Assuming that a maximum of 65% of residents would evacuate in the first hour (Figures 3.16-3 and 3.16-4) is unrealistic. The fire may be upon them within the hour.

A shelter-in-place facility is never a first choice; studies have shown that people want to flee a fire, not let it burn over them. Most fire professionals say that shelter-in-place is a last resort and emergency plans cannot rely upon it to mitigate fire risks. Fires kill people with smoke and oxygen deprivation, not just flames. The proposal has not mitigated the potentially significant impacts related to wildfire.

C45-3

Normal Traffic Circulation in Bennett Valley.

The proposal will force more traffic onto the few east-west arterial routes in Sonoma County, especially Bennett Valley Road and Sonoma Mountain Road. The most recent Bennett Valley Road study was done in 2011, when over 3,500 vehicle trips were recorded per day. There is no adequate sub-regional traffic circulation study of these impacts. Bennett Valley Road is notoriously tortuous, especially the section between Warm Springs Road and Walker Road. More traffic on this section would be especially dangerous. The portion of Bennett Valley Road that approaches Santa Rosa has had 5 investigated accidents during the last six months, and scores in recent years. The BVCA is very concerned about increases in these already unacceptable statistics. The DEIR concludes there will be significant and unavoidable impacts regarding increased traffic, and proposes no mitigation. This is unacceptable.

C45-4

Conclusion

The DEIR and Specific Plan ignore the unenforceability of specific plans and gives short shrift to evacuation issues and general traffic issues in Sonoma Valley and Bennett Valley. It must be revised to address them. The proposal risks not only the lives of future residents of the SDC, but also residents of Bennett Valley. The DEIR ignores current and potential wildfire risk factors and assessment methods, and bizarrely dismisses them as insignificant. We recommend drastically reducing the number of housing units and eliminating hotel and new businesses.

C45-5

Sincerely,
Chris Gralapp
Board of Directors,
Bennett Valley Community Association

cc: Supervisor Susan Gorin Susan.Gorin@sonoma-county.org



September 19, 2022

VIA ELECTRONIC MAIL to Brian.Oh@sonoma-county.org

Brian Oh
Planning Manager, Permit Sonoma

Re: DEIR for Sonoma Developmental Center

Dear Mr. Oh:

The proposed specific plan inherently fails to mitigate environmental impacts. In Bennett Valley the County arbitrarily refuses to implement our area plan, despite the requirement in Policy LU-1a of the General Plan whereby the more restrictive policies in a specific or area plan apply if there is a conflict with the General Plan. The Bennett Valley Area Plan forbids commercial development in Bennett Valley (Land Use Policy 2), yet the County supports and encourages commercial cannabis development and operations there. The plan also requires new structures to undergo design review to protect our bucolic viewsheds, but the County allows ugly hoop houses without design review because they are taken down during winter. Thus, according to the County, the viewsheds of Bennett Valley residents are protected only for 6 months of any year. This violates the plan and insults the intelligence of anyone who is not a county employee.

C46-1

For these reasons, any mitigations in the proposed Specific Plan for the Sonoma Developmental Center fail to meet the requirements of CEQA.

Sincerely,

Craig S. Harrison
For Bennett Valley Residents for Safe Development

From: David Eichar
To: Brian Oh
Cc: Gerald.McLaughlin@dgs.ca.gov
Subject: Further Comments on SDC Specific Plan and DEIR
Date: Tuesday, September 13, 2022 2:22:04 PM

EXTERNAL

The addition of the road from SDC out to Highway 12 (highway 12 connection) would result in significant impact on wildlife. This area is a wildlife corridor. As wildlife currently traverse this area, the addition of vehicles in this area would disrupt the wildlife movement. This is especially true during construction. It is best not to add this road.

C47-1

If the road is built, despite the significant impact, then the following mitigation measure can be taken to reduce the impact.

1. Limit construction of the road to certain hours and months, where wildlife movement through the corridor is less.
2. Make the road one-way only, east bound.
3. Close the road, except for emergency evacuation.

Regards,
David Eichar
Boyes Hot Springs

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

SDC Campus Project

sdccampusproject@gmail.com

Brian Oh
Comprehensive Planning Manager
Permit Sonoma
County of Sonoma
2550 Ventura Ave.
Santa Rosa, CA 95403
Brian.Oh@sonoma-county.org

Re: Sonoma Developmental Center Specific Plan Draft Environmental Impact Report ("DEIR")

Dear Mr. Oh and County of Sonoma Supervisors,

Thank you for the opportunity to comment on the recently issued Sonoma Developmental Center (SDC) Specific Plan and Program Environmental Impact Report (PEIR). The following comments are submitted on behalf of the SDC Campus Project.

1. Adequate Alternatives Analysis for Affordable Housing

C48-1

The SDC Campus Project has proposed the adaptive reuse of five of the existing residential buildings in the southeast corner of the SDC Campus for affordable co-housing. This would serve the needs of low wage workers currently forced to make long commutes to jobs in the Sonoma Valley due to housing costs and the needs of other people for basic housing. This proposal has been submitted to Permit Sonoma. Thus far the County has declined to give this proposal any consideration.

The buildings proposed by the SDC Campus Project for adaptive reuse are in the area designated as the Agrihood District on the Specific Plan maps. The Agrihood District is envisioned as a new neighborhood that is a nod to historic agricultural lands with physical and visual connections to the historic agricultural areas, low-impact development at a lower intensity, and a smooth visual

transition between higher intensities to the west and the agricultural open space at the east. The clear implication is that existing buildings in this area will be demolished. The adaptive reuse of the former residential buildings for affordable co-housing would be consistent with the vision for this area. Adaptive reuse of existing buildings is environmentally superior to new construction when the energy use and GHG emissions from the mining, processing, transportation and assembling of new materials are considered. Adaptive reuse can also be more cost effective if done properly by people with experience in this type of construction. Permit Sonoma should at least have provided some evaluation of this proposed alternative to new construction.

C48-1

An agency may not approve a project that will result in significant impacts unless it first finds that mitigation measures or alternatives are infeasible. (PRC section 21081; Guidelines 15091, 15093) The Supreme Court of California decided that considering alternatives is one of the most important functions of an EIR (*Wildlife Alive v. Chickering (*1976) 18 Cal.3d 190, 197) Without evidence why the alternatives are insufficient to meet the project or CEQA goals, meaningful analysis is impossible. An EIR must "explain in meaningful detail the reasons and facts supporting the conclusion." (*Marin Municipal Water Dist. V. KG Land Corp.* (1991)235 Cal.App.3d 1652,1664)

C48-2

The SDC Campus Project proposal will serve the goal of providing affordable housing, which was emphasized in State legislation as one of the primary objectives for the future use of the SDC site. The SDC Campus Project has presented a credible cost-benefits analysis of this adaptive reuse co-housing project. To comply with the requirement under CEQA that a lead agency must evaluate a reasonable range of alternatives, Permit Sonoma must either include the SDC Campus Project in its SDC Specific Plan or present evidence why this project is insufficient to meet the SDC Specific Plan or CEQA goals. The EIR must set forth the alternatives necessary to permit a reasoned choice and in a manner that will allow "meaningful evaluation". (Guidelines 15126.6(a),(d),(f); *San Bernardino Valley Audubon Soc. Inc. v. County of San Bernardino* (1984) 155 Cal.App.3d 738,750-751).)

Respectfully submitted by,

Jerry Bernhaut
Attorney for The SDC Campus Project
Law Office of Jerry Bernhaut
23 Woodgreen St.
Santa Rosa, CA 95409
Telephone: 707-595-1852
Email: j3bernhaut@gmail.com

From: Josette Brose-Eichar
To: Brian Oh
Subject: Comments SDC DEIR
Date: Monday, September 19, 2022 5:02:42 PM

EXTERNAL

Hi Brian,

Here are my comments on the Draft EIR for SDC.

As it states that the Historic Preservation Alternative is environmentally superior, why is it not considered in the DEIR? As there is really no definition of what is required for financial feasibility, how can any plan then be considered or analyzed with an EIR? The lack of what is required for this so called financial feasibility makes it hard to understand why an assumption of 1000 to possibly 1200 homes or residential units, and a very large tourist hotel are what is being spelled out as the basis for this EIR. The starting point seems to be that this much market rate housing and a large hotel must be the only plan and the only one addressed in the EIR, even though it is not known what the actual costs are and what a developer will want as a return on this project. And what about the state's financial responsibility for this site?

C49-1

The impacts on water use and needs are totally unrealistic. Planning and mitigation for a water shortage are just pushed to the future which is not allowed in an EIR. For a project this size the EIR does not take into account how much water will be needed for all the planned residents, tourists, employees. There is no analysis of what our local water districts have now and if they could support it. The EIR seems to rely on the two existing reservoirs. All you have to do is take a hike around them right now to see how low the water level is. Climate change is the new normal, more heat and less rain. Climate change is not factored into this EIR in relation to water usage. Why would an EIR not have the mitigation of recycling water in it right now? Should not all water be recycled and used on site be mandated in the EIR?

C49-2

Vehicle miles traveled is also given an unrealistic treatment. The simple fact that if you have a luxury hotel you will have hundreds of lower wage workers driving from other locations every day, in addition to the residents of the 1000 to 1200 homes, and any other employees of commercial use at SDC. As most people can not afford housing in the valley today, having only 25% of the housing as affordable in no way assures these employees will be housed on the SDC campus. It guarantees that they will be driving long distances from other locations. I see no real mitigation for these facts as it relates to VMT. Real measures would include mandated changes to public transportation, if the development is as large as planned. Or that actual affordable housing be included in the plan specifically for the low wage employees at the SDC site.

C49-3

The planned connector road to Highway 12 is shown as being needed for fire evacuation. This road would only be environmentally sound as it relates to the campus being a wild life corridor if it was a gravel

road, with no lighting and only used for fire evacuation and closed at all other times. Then there is the simple fact that it will be useless in a real fire. Simply routing two or three thousand people over to Highway 12 will do nothing if the fire behaves as it did in 2017, from east to west, in addition to from the north. And given what we have seen with wild fires since 2017, the situation could be even worse.

C49-3

I know that we are to keep our comments on the DEIR and not the Specific Plan, but it still baffles me why we have this plan, when almost no one in the valley wants, nor do we need an other large tourist hotel and another 700 or 800 units of market rate housing for wealthy or second home owners. Would we be not be better served economically and environmentally by adapting and saving what we have and creating all affordable housing for those that already live in the Sonoma Valley? And let's be realistic, market rate is not for the so called "missing middle". I have crunched the numbers based on actual real estate values and these market rate homes would have to sell for under $600,000 to be for those at 120% AMI. We all know that is not what two bedroom homes are selling for in the Sonoma Valley, nor would any for profit developer build with that as the selling price.

C49-4

Sincerely,

Josette Brose-Eichar
1110 Loma Court
Boyes Hot Springs

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Lauren Reed
To:	PlanningAgency; Brian Oh
Cc:	senator.mcguire@senate.ca.gov; Lynda Hopkins; senator.dodd@senate.ca.gov; BOS; engage@sdcspecificplan.com
Subject:	Public Comment on SDC Specific Plan and DEIR
Date:	Thursday, September 15, 2022 2:37:22 PM

EXTERNAL

Sonoma County Planning Commissioners,

Please do not support the SDC Specific Plan or DEIR as proposed by Permit Sonoma. The DEIR does not adequately analyze and prevent or reduce environmental impacts in most if not all of the areas studied as evidenced by few actual requirements and many vague words such as “promote” or “encourage” or “if feasible.” The DEIR needs to be revised and the Conditions of Approval strengthened and moved into a legally enforceable Mitigation and Monitoring Program. Instead: C50-1

Scale back size of development to 450 or fewer homes and require that most or all of them be affordable to the majority of people who live in Sonoma Valley.

Eliminate the hotel, retail and commercial space that is already provided in Glen Ellen.

Protect Open Space by providing enforceable timeline, boundaries and actions for permanently preserving open space and keeping it in public hands. In the DEIR, analyze the impacts of and add enforceable measures to reduce impacts of proposed new uses in the open space including agriculture, agricultural processing, tasting rooms, farm stands, recreation, parking lots, geothermal development and sports facilities (see Table 4-3 of Specific Plan). Increase setbacks along Sonoma Creek, Riparian areas and the Sonoma Wildlife Corridor to at least 100 feet, instead of inadequate 50 feet as proposed.

Revise wildfire evacuation impacts to reflect on-the-ground experiences during recent wildfires and new county wildfire risk and hazard maps.

Revise the Specific Plan and DEIR with legally enforceable measures to reduce climate emissions, such as reusing and demolishing fewer buildings and providing transit.

Signed,

Lauren Reed

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	ORNY
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov; lawrence "ORNY" wilcox; johnm@sonomalandtrust.org
Subject:	"Draft EIR Comments: SDC Specific Plan"
Date:	Monday, August 22, 2022 10:06:15 AM

EXTERNAL

Certainly have some respect for the land and open space. We are in a serious drought situation and Sonoma County can only think about tax dollars, but that has always been the mantra of Sonoma county officials. We live in one of the most beautiful lands in California and that is a tribute to those in continue to fight, donate, and encourage the development of open space, trails and wildlife corridors. Stop the incessant development of mega homes and shopping areas and get outdoors. C51-1

Lawrence A. Wilcox

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: lenachyle
To: Brian Oh
Cc: Gerald.McLaughlin@dgs.ca.gov
Subject: Draft EIR Comments: SDC Specific Plan
Date: Friday, August 19, 2022 1:41:49 PM

EXTERNAL

Please do not rush the planning of the SDC. It could be a wonderful addition to our county but needs to be approached with a thorough, realistic and meaningful process that includes, amongst many considerations, wildfire, drought and bio-diversity.

Please engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022.

C52-1

Also please re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.

Lena Chyle
Sonoma County resident for 46 years

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Linda Curry
To: Brian Oh
Cc: Gerald.McLaughlin@dgs.ca.gov
Subject: Draft EIR Comments: SDC Specific Plan
Date: Wednesday, August 24, 2022 4:59:33 PM

EXTERNAL

Congratulations on compiling alot of data and public feedback into SDC Specific Plan. Just a little confused at the magnitude of the housing element proposed as most of the community input I remember seeing/hearing said that 400-500 units is the maximum density tolerable to the existing community when considering impacts to traffics, schools and services. However, if 500 out of the 1000 units are going to be used as housing for those that were displaced from SDC or newer clients with similar needs, I think a high density structure that assumes residents that will neither drive or require individual cooking accommodations could be a possibility. In no case should the emphasis shift from low income housing to market rate mini mansions. C53-1

Keeping the wildlife corridor intact and stream protections for Sonoma Creek can only enhance the health of the watershed and regional community. However, any plan must consider impacts on transient wildlife and one element had the Maker element positionned where wildlife would undoubtedly be disturbed by the noise and dust of any creative work. No point in having a corridor if you are going to scare wildlife away.

I am concerned that with the shift in State timeline for the RFP being extended to 9/9/22, the timeline for draft specific plan and EIR should be adjusted accordingly so that the documents can reflect the potential of qualified proposals for the facility. Less than 2 weeks for review of specific plan and EIR is too tight a schedule to allow the thorough review and careful consideration that many members of the community who have been involved thus far would need for comment. Why end comments for specific plan today and extend comments for EIR till 9/23? Why not pause the whole review process until the State selects qualified proposal so that we are talking about what is actually proposed for the site? C53-2

I know I have only had time for specific plan review and that has been less than I would usually devote to a project of this magnitude. Sonoma Development Center is a jewel that has served Sonoma County and the State for over a century. After the careful collections of public concerns since 2018, it seems more than a little strange that there should be the last minute disconnect between county and state processes. Please get them back into tandem so that Sonoma County does not miss out on the biggest opportunity this generation will have for continuing our traditions of forward thinking, environmentally sensitive public planning while serving the State in relieving them of a burden. For goodness sake don't let the neglect that was shown in the Community Hospital property handoff be the model for this project. Too much is at stake.

Regards,
Linda Curry

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,

do not click any web links, attachments, and never give out your user ID or password.

From: Linda Hale
To: Brian Oh
Subject: Draft EIR Comments: SDC Specific Plan
Date: Saturday, August 20, 2022 12:08:52 PM

EXTERNAL

The following letter was sent to the Governor Gavin Newsom and the DGS via Gerald McLaughlin. This letter was also sent to the Sonoma County Board of Supervisors, Senators Mike McGuire and Bill Dodd, and the Sonoma Index Tribune.

This letter is written in support of the Sonoma Land Trust's request to engage in meaningful planning for the SDC by aligning the County Specific Plan with the State's request for development proposals. Stating that no specific plan has been selected and that no mitigations are available for water, traffic, and wildlife is not a viable EIR.

C54-1

To the Office of Governor Gavin Newsom:

The Office of the California DGS has rescinded its earlier premature offering of the Sonoma Developmental Center to a developer prior to the completion of an EIR. The 894 acre property has been held as a public trust to benefit both the disabled and the community. It also serves as the major water recharge shed for Sonoma Valley and is directly in the path of Sonoma Creek which crosses Sonoma Valley and exits through Petaluma to the San Francisco Bay. The community recognizes the need for affordable housing, but the proposed 1,000+ home development with only 250 affordable units, a high end hotel, and visitor services as businesses on site ignores the public input and will be an environmental disaster for Sonoma Valley.

The EIR process was fast tracked when the DGS released the property for sale. This is against the law since no project has been designated by the Board of Supervisors nor had the EIR process even been started. The EIR findings were released with the following legal concerns:

1. Where is the Response to Public Comments in the Draft EIR?

2. Where in the DEIR are the actual Specific Plan mitigations listed? (Executive Summary refers to Appendix A, but mitigations are not included)

3. The county is using a "Self-Mitigating Plan" approach. What is the rationale for doing this? How will implementation of mitigations work, since they won't appear in the EIR itself but only as a "condition" of moving forward with development?

4. How, when, and through what mechanism will the open space lands at SDC be permanently protected and kept in public hands?

Also Permit Sonoma states: "Public participation identified three key areas of concern among the 16 areas studied: open space and wildlife, water, and wildfire risk and evacuation routes. The draft Environmental Impact Report finds that the proposed specific plan would not create significant and unavoidable impacts in these areas." The problem is that the impacts are significant and unavoidable.

C54-2

There is really no proposed specific plan. The traffic and water studies were done when the SDC was permanently closed by the state, so no impacts were shown due to low traffic and water use in the area. Permit Sonoma has done the EIR only allowing public comments via zoom and the US Mail with no responses to critical concerns.

Sonoma Valley is congested. It has two main roads and one of them had to evacuate 1,000s of Oakmont residents by bus during the last fire since there are no exit routes that can handle evacuation traffic. Three other major developments are now permitted between the city of Sonoma and Santa Rosa and in process along the Highway 12 corridor. Traffic in Sonoma Valley is already impacted, especially in the Boyes Springs area and the city of Sonoma with only one road out. People say that they no longer come to Sonoma because of the traffic. And Sonoma County has been sued for not meeting its own emission standards.

C54-3

Sonoma Valley is already in a state mandated Groundwater Study with well restrictions in place for commercial growth and homeowners' wells being monitored throughout the valley. We have asked for a reduction to 450 homes and no hotel. Please intervene before this goes any further. We need the State of California to come forward to protect what makes Sonoma Valley the destination it is and to protect local resources. This development will add a new city to the valley floor, deplete our vanishing water sources, and create urban sprawl. Please consider resources and action to protect a California resource.

Thank you for being the Governor of California!

Linda Hale

1500 Warm Springs Road

Glen Ellen, CA 95442

Sent from Mail for Windows

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Linda Kay Hale
To: PlanningAgency
Subject: DEIR
Date: Wednesday, September 14, 2022 11:09:41 AM

EXTERNAL

Following are a few specific comments on the content and intent of the SDC's DEIR prior to tomorrow's meeting:

Brian Oh & Staff:

I have specific concerns about information released in the DEIR regarding the land use, hydrology and water, and the methodology used and assumptions made.

C55-1

1) In Article 64 the DEIR states that the property is "located in a local voter-approved Community Separator overlay that preserves lands with low densities between communities....to maintain natural (rural) character and low intensities of development in open spaces between cities and communities."
The SDC traditionally served as a buffer between the communities of Sonoma, El Verano, and Glen Ellen because of the open space between buildings and the land available for clear vistas and access. As noted in the DEIR, voters approved the preservation of open space specifically here now and until renewal in 2036. How can "the high density of the development" as stated later in the report regarding buildings, businesses, parking lots, water runoff and paving throughout the development along with bus stops with lights, shelters, and concrete pads in any way meet the criteria for a Community Separator?

2) Nowhere under Hydrology and Methodology (39.3.2) is the current state mandated Groundwater Study mentioned. Sonoma Valley is currently at the limit of groundwater usage and Russian River resources for the city of Sonoma. Aquifers are not recharging and have reached historic lows. All local wells are now being monitored. The four wells mentioned on the SDC property are subject to the same drought conditions as all the other wells in the valley. Sonoma County just added new, stricter requirements for well permits. In this DEIR you state that "surface water diversions from local creeks supply the majority of water for domestic uses at the site such that groundwater supplies would not be interfered with substantially." How is this possible? Keep in mind that the reservoirs on the property are already earmarked by most water agencies four times over for emergency backup.

C55-2

3) Your methodology and assumptions made regarding groundwater supply, water bodies, impervious surfaces, and drainage patterns seem to imply that developers or homeowners will be responsible for creating "drainage, permeable pavements, and the use of porous concrete" by providing them with educational materials about these alternatives. This is not credible.

The restraints on water, traffic, and the impacts this development will have on the cities around it deserve a realistic plan. This DEIR points that out.

Thank you for responding to my questions,

Linda Hale
1500 Warm Springs Road
Glen Ellen, CA 95442

Sent from my iPhone

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Linda Kay Hale
To: Brian Oh
Subject: Draft EIR Specific Questions
Date: Wednesday, September 14, 2022 2:32:55 PM

EXTERNAL

Brian Oh & Staff:

I have specific concerns about information released in the DEIR regarding the land use, hydrology and water, and the methodology used and assumptions made.

1) In Article 64 the DEIR states that the property is "located in a local voter-approved Community Separator overlay that preserves lands with low densities between communities....to maintain natural (rural) character and low intensities of development in open spaces between cities and communities."
The SDC traditionally served as a buffer between the communities of Sonoma, El Verano, and Glen Ellen because of the open space between buildings and the land available for clear vistas and access. As noted in the DEIR, voters approved the preservation of open space specifically here now and until renewal in 2036. How can "the high density of the development" as stated later in the report regarding buildings, businesses, parking lots, water runoff and paving throughout the development along with bus stops with lights, shelters, and concrete pads in any way meet the criteria for a Community Separator?

C56-1

2) Nowhere under Hydrology and Methodology (39.3.2) is the current state mandated Groundwater Study mentioned. Sonoma Valley is currently at the limit of groundwater usage and Russian River resources for the city of Sonoma. Aquifers are not recharging and have reached historic lows. All local wells are now being monitored. The four wells mentioned on the SDC property are subject to the same drought conditions as all the other wells in the valley. Sonoma County just added new, stricter requirements for well permits. In this DEIR you state that "surface water diversions from local creeks supply the majority of water for domestic uses at the site such that groundwater supplies would not be interfered with substantially." How is this possible? Keep in mind that the reservoirs on the property are already earmarked by most water agencies four times over for emergency backup.

C56-2

3) Your methodology and assumptions made regarding groundwater supply, water bodies, impervious surfaces, and drainage patterns seem to imply that developers or homeowners will be responsible for creating "drainage, permeable pavements, and the use of porous concrete" by providing them with educational materials about these alternatives. This is not credible.

C56-3

The restraints on water, traffic, and the impacts this development will have on the cities around it deserve a realistic plan. This DEIR points that out.

Thank you for responding to my questions,

Linda Hale

1500 Warm Springs Road
Glen Ellen, CA 95442

Sent from my iPhone

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Hale Linda
To: PlanningAgency; Hale Linda; Sonoma Water
Subject: Specific Comments on the DEIR for the SDC
Date: Tuesday, September 13, 2022 1:57:44 PM

EXTERNAL

Brian Oh & Staff:

I have specific concerns about information released in the DEIR regarding the land use, hydrology and water, and the methodology used and assumptions made.

1) In Article 64 the DEIR states that the property is "located in a local voter-approved Community Separator overlay that preserves lands with low densities between communities....to maintain natural (rural) character and low intensities of development in open spaces between cities and communities."
The SDC traditionally served as a buffer between the communities of Sonoma, El Verano, and Glen Ellen because of the open space between buildings and the land available for clear vistas and access. As noted in the DEIR, voters approved the preservation of open space specifically here now and until renewal in 2036. How can "the high density of the development" as stated later in the report regarding buildings, businesses, parking lots, water runoff and paving throughout the development along with bus stops with lights, shelters, and concrete pads in any way meet the criteria for open space? C57-1

2) Nowhere under Hydrology and Methodology (39.3.2) is the current state mandated Groundwater Study mentioned. Sonoma Valley is currently at the limit of groundwater usage and Russian River resources for the city of Sonoma. Aquifers are not recharging and have reached historic lows. All local wells are now being monitored. The four wells mentioned on the SDC property are subject to the same drought conditions as all the other wells in the valley. The Country has just added new requirements for well permits. In this DEIR you state that "surface water diversions from local creeks supply the majority of water for domestic uses at the site such that groundwater supplies would not be interfered with substantially." How is this possible? Keep in mind that the reservoirs on the property are already earmarked by most water agencies four times over for emergency backup. C57-2

3) Your methodology and assumptions made regarding groundwater supply, water bodies, impervious surfaces, and drainage patterns seem to imply that developers or homeowners will be responsible for creating "drainage, permeable pavements, and the use of porous concrete" by providing them with educational materials about these alternatives. This is not credible. C57-3

The restraints on water, traffic, and the impacts this development will have on the cities around it deserve a realistic plan. This DEIR points it out.

Thank you for responding to my questions,

Linda Hale
1500 Warm Springs Road
Glen Ellen, CA 95442

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Linda Hale
To: PlanningAgency
Subject: FW: Draft EIR Comments: SDC Specific Plan
Date: Sunday, August 21, 2022 1:34:37 PM

From: Linda Hale
Sent: Saturday, August 20, 2022 5:27 PM
To: Gerald.McLaughlin@dgs.ca.gov
Subject: FW: Draft EIR Comments: SDC Specific Plan

From: Linda Hale
Sent: Saturday, August 20, 2022 12:08 PM
To: Brian.Oh@sonoma-county.org
Subject: Draft EIR Comments: SDC Specific Plan

The following letter was sent to Governor Gavin Newsom and the DGS via Gerald McLaughlin. This letter was also sent to the Sonoma County Board of Supervisors, Senators Mike McGuire and Bill Dodd, and the Sonoma Index Tribune.

This letter is written in support of the Sonoma Land Trust's request to engage in meaningful planning for the SDC by aligning the County Specific Plan with the State's request for development proposals. Stating that no specific plan has been selected and that no mitigations are available for water, traffic, and wildlife is not a viable EIR.

C58-1

To the Office of Governor Gavin Newsom:

The Office of the California DGS has rescinded its earlier premature offering of the Sonoma Developmental Center to a developer prior to the completion of an EIR. The 894 acre property has been held as a public trust to benefit both the disabled and the community. It also serves as the major water recharge shed for Sonoma Valley and is directly in the path of Sonoma Creek which crosses Sonoma Valley and exits through Petaluma to the San Francisco Bay. The community recognizes the need for affordable housing, but the proposed 1,000+ home development with only 250 affordable units, a high end hotel, and visitor services as businesses on site ignores the public input and will be an environmental disaster for Sonoma Valley.

The EIR process was fast tracked when the DGS released the property for sale. This is against the law since no project has been designated by the Board of Supervisors nor had the EIR process even been started. The EIR findings were released with the following legal concerns:

C58-2

1. Where is the Response to Public Comments in the Draft EIR?

2. Where in the DEIR are the actual Specific Plan mitigations listed? (Executive Summary refers to Appendix A, but mitigations are not included)

3. The county is using a "Self-Mitigating Plan" approach. What is the rationale for doing this? How will implementation of mitigations work, since they won't appear in the EIR itself but only as a "condition" of moving forward with development?

4. How, when, and through what mechanism will the open space lands at SDC be permanently protected and kept in public hands?

C58-2

Also Permit Sonoma states: “Public participation identified three key areas of concern among the 16 areas studied: open space and wildlife, water, and wildfire risk and evacuation routes. The draft Environmental Impact Report finds that the proposed specific plan would not create significant and unavoidable impacts in these areas.” The problem is that the impacts are significant and unavoidable.

There is really no proposed specific plan. The traffic and water studies were done when the SDC was permanently closed by the state, so no impacts were shown due to low traffic and water use in the area. Permit Sonoma has done the EIR only allowing public comments via zoom and the US Mail with no responses to critical concerns.

Sonoma Valley is congested. It has two main roads and one of them had to evacuate 1,000s of Oakmont residents by bus during the last fire since there are no exit routes that can handle evacuation traffic. Three other major developments are now permitted between the city of Sonoma and Santa Rosa and in process along the Highway 12 corridor. Traffic in Sonoma Valley is already impacted, especially in the Boyes Springs area and the city of Sonoma with only one road out. People say that they no longer come to Sonoma because of the traffic. And Sonoma County has been sued for not meeting its own emission standards.

C58-3

Sonoma Valley is already in a state mandated Groundwater Study with well restrictions in place for commercial growth and homeowners' wells being monitored throughout the valley. We have asked for a reduction to 450 homes and no hotel. Please intervene before this goes any further. We need the State of California to come forward to protect what makes Sonoma Valley the destination it is and to protect local resources. This development will add a new city to the valley floor, deplete our vanishing water sources, and create urban sprawl. Please consider resources and action to protect a California resource.

Thank you for being the Governor of California!

Linda Hale

1500 Warm Springs Road

Glen Ellen, CA 95442

Sent from Mail for Windows

C58-2

Virus-free.www.avg.com

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.



Springs
Municipal Advisory Council

September 14, 2022

Sonoma County Board of Supervisors
575 Administration Drive
Room 102A
Santa Rosa, California 95403
Via email:

Dear Sonoma County Board of Supervisors:

The Springs Municipal Advisory Council (SMAC) approved on September 14, 2022, the following recommendation in response to the Draft Environmental Impact Report presentation received on August 24, 2022 for the future use of the Sonoma Developmental Center (SDC) in Eldridge, California.

C59-1

The following paragraph is an amendment to the previously submitted letter dated January 12, 2022

Affordable Housing:
That any future SDC housing development be affordable; either owner occupied or long-term rental units. Our recommendation is that housing be for people who work and/or live in Sonoma Valley. The development should be a phased project, incorporating multiple developers and should periodically evaluate the impact to fire, roads, climate, equity, and infrastructure. **Could the percentages of housing be reversed so that affordable housing is 75% in all its permutations and market rate housing be 25% of the ratio?**

Sincerely,

Maité Iturri
Chair, *Springs Municipal Advisory Council*

CC: Congressman Mike Thompson, Representative Cecilia Aguiar-Curry, Governor Gavin Newsom, Senator Mike McGuire, Senator Bill Dodd, Senator Diane Feinstein, Senator Alex Padilla, North Sonoma Valley Municipal Advisory Council, Generation Housing, Sonoma City Council, Luther Burbank Housing, MidPen Housing, Sonoma County Community Development Commission, Sonoma County Permit Sonoma, Sonoma Valley Citizens Advisory Commission, Sonoma Index Tribune, Press Democrat, Sonoma Sun, SAHA

Enclosure: SDC letter of support APPROVED 01.12.2022 signed



January 12, 2022

Sonoma County Board of Supervisors
575 Administration Drive
Room 102A
Santa Rosa, California 95403
Via email:

Dear Sonoma County Board of Supervisors:

The Springs Municipal Advisory Council (SMAC) approved on January 12, 2022 the following recommendation for the future use of the Sonoma Developmental Center (SDC) in Eldridge, California.

We want to urge the Board of Supervisors (BOS) to consider a fourth alternative that is inclusive of the ideas and vision of our Sonoma Valley community. The information provided by local organizations was not incorporated into the plans. There needs to be an effort to outreach to Latinx, low income elder communities, renters, disabled and other disenfranchised populations. Locally gathered information will be useful in addressing the recent, pressing and ongoing concerns not exclusive of but including drought and fire. As a guiding principle, we urge the BOS to require local knowledge and experience in formulating a fourth option. C59-2

We acknowledge that during a Global Pandemic, outreach can be challenging and for that reason alone, we request adequate time—up to a 2-year period—to find another alternative.

In addition, we urge the BOS to lobby the State of California to financially support the remediation and repair of the SDC campus.

We have heard the variety of interests regarding the development of SDC. Some are competing and others are complimentary. The following are some commonalities and agreements among the stakeholders that we represent:

Affordable Housing: C59-3
That any future SDC housing development be affordable; either owner occupied or long-term rental units. Our recommendation is that housing be for people who work and/or live in Sonoma Valley. The development should be a phased project, incorporating multiple

developers and should periodically evaluate the impact to fire, roads, climate, equity, and infrastructure.

Road Access and Transportation:
Consider and evaluate a second access to HWY 12 from the Eastside of SDC campus for emergency egress with the possibility of a permanent thoroughfare if modeling agrees. Provided that said road not have an impact on the wildlife corridor. Any plan should include a class 4 bike lane through the existing SDC and the new egress road.

Vegetation/wildlife/land Preservation:
Maintain the rural nature of our valley. Develop and plan to maintain the wildlife corridor while preserving in perpetuity the currently undeveloped/natural lands of the site.

C59-3

Community Services & Facilities:
That the development provide the following community services at the new SDC:

- Education and Employment Training facilities
- Community facilities that include: a plaza, community hall, park, and a performing arts theater
- Recreation: Swimming pools, sports fields, fitness classes
- Mental Health outreach or crisis center for youth and adults
- Community Health Center

Funding:
Explore creative funding from all levels of government and non-government organizations.

These suggestions were developed based upon information provided by the Springs Municipal Advisory Council members, Sonoma Valley Housing Group and community members. Thank you for your consideration.

Sincerely,

Maite Iturri
Chair, *Springs Municipal Advisory Council*

CC: Congressman Mike Thompson, Representative Cecilia Aguiar-Curry, Governor Gavin Newsom, Senator Mike McGuire, Senator Bill Dodd, Senator Diane Feinstein, Senator Alex Padilla, North Sonoma Valley Municipal Advisory Council, Generation Housing, Sonoma City Council, Luther Burbank Housing, MidPen Housing, Sonoma County Community Development Commission, Sonoma County Permit Sonoma, Sonoma Valley Citizens Advisory Commission, Sonoma Index Tribune, Press Democrat, Sonoma Sun, SAHA

From: Marcia Johnson
To: Brian Oh; Gerald.McLaughlin@dgs.ca.gov
Subject: Draft EIR Comments: SDC Specific Plan
Date: Wednesday, August 24, 2022 1:06:14 PM

EXTERNAL

Dear Gentlemen:

I ask that you please review the Specific Plan as well as the EIR of the Sonoma Development Center. Taxpayer resources can be saved if aligned with the State's RFP. We must wait for completion of the RFP. Rushing to push through something without all parts being completed defeats the purpose of working together, plus not considering the importance of what environmental damage may occur.

C60-1

Thank you.

Sincerely,

Marcia Johnson
1460 Big Cedar Lane
Sebastopol, CA 95472

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: margandbo@gmail.com
To: Brian Oh
Subject: Draft EIR Comments: SDC Specific Plan
Date: Tuesday, August 23, 2022 4:47:38 PM

EXTERNAL

We've lived next to SDC for 44 years. The dramatic density increase proposed would forever transform us. Gone would be the pastoral small town setting we treasure. Even more importantly, please realize that our snail-paced, stop and go, vehicle-packed evacuation during the 2017 fires was absolutely terrifying and full of danger. So to add 1000 more homes with thousands of additional vehicles to our drought stricken, wildfire prone area is absurd! How can that make sense to anyone? In addition, the drought is serious and real. We're already not watering our gardens, limiting flushes, shortening showers, not washing cars, etc., etc. Adding thousands of people makes no sense since there's already not enough water for those currently here. Of major importance also is that our wildlife's survival depends on our intelligent and realistic planning ....the wildlife corridor must be much wider! Thank you for all the time and effort you are putting into this issue. It can't be easy to have the future of Sonoma Valley in your hands.

C61-1

Sent from my iPhone

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Marie Andel
To: Brian Oh
Cc: Gerald.McLaughlin@dgs.ca.gov
Subject: Draft EIR Comments: SDC Specific Plan
Date: Monday, August 22, 2022 3:36:17 PM

EXTERNAL

Dear Mr. Oh:

I am writing to express my disappointment with the County's August 10, 2022 Draft Specific Plan and Draft EIR for the future of SDC -- and to urge needed action to align the State and County processes.

While we need housing, SDC can't solve it all at once. The proposed addition of 1000 residential units is far too many and feels completely tone deaf to issues of wildfire and drought - much less traffic.

I strongly urge the county to engage in a truly meaningful planning process that aligns with the State's RFP process.

Draft the plan and EIR to effectively and thoroughly analyze the impacts of the proposal.

Listen to your constituents!

Thank you for your attention to this matter. A thoughtful and thorough process can result in a great outcome for the valley, for our safety and the welfare of generations of humans, animals and flora!

C62-1

Respectfully,
Marie Andel
682 Charles Van Damme Way, Sonoma, 95476

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Mark Speer
To: PlanningAgency
Subject: SDC
Date: Tuesday, September 13, 2022 8:35:13 AM

EXTERNAL

To whom it may concern,

I just wanted to convey how important it is to preserve the open space, along with keeping a wildlife corridor available at the former SDC campus. We have all studied the maps and have seen how critical this area is to protecting wildlife in Sonoma/Marin county! To allow corporate greed to take over, and destroy this precious habitat we have in Glen Ellen would be very sad for mankind.

C63-1

Just the other day I saw two species cross the road in front of me on my way to Sonoma as I drove through the SDC campus. To choke them off through more development would be a mistake forever, and a true pity.

Thank you,

Sincerely:

Mark Speer, Glen Ellen.

Sent from my iPad

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Mary Currie
To:	Brian Oh
Cc:	Mary C. Currie; Gerald.McLaughlin@dgs.ca.gov
Subject:	Draft EIR Comments: SDC Specific Plan
Date:	Friday, August 19, 2022 8:57:14 AM

EXTERNAL

As you know, Sonoma County released the Draft Environmental Impact Report (EIR) and Draft Specific Plan for Sonoma Developmental Center (SDC) on August 10, 2020.

I am submitting the following comments:

1. The Sonoma County Board of Supervisors gave direction to pursue a specific plan for SDC with fewer than 1,000 homes, yet the Drafts (EIR and SDC) propose 1,000 residential units with extensive commercial development. This leaves the drafts inadequate as the environmental impacts and challenges of today that include wildfire, drought, and biodiversity loss are not addressed. C64-1

2. Aligning the Specific Plan and EIR with the State's RFP selection process, would increase efficiency, save valuable taxpayer resources, and ensure thorough planning and environmental review. Review of the Draft Specific Plan and Draft EIR must be paused pending completion of the RFP process. The State is due to announce the RFP selection on October 24, 2022. C64-2

3. Re-draft the Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the Specific Plan and EIR provide the streamlined process they are designed to provide. C64-3

Thank you for the opportunity to comment.

Mary Currie
marycurriecommunications@gmail.com
415-793-8420

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Mary & Brian Reeves
15421 Woodside Court
Glen Ellen, CA 95442

Sonoma County Planning Commission
c/o Brian Oh, Comprehensive Planning Manager,
Permit Sonoma
County of Sonoma
2550 Ventura Avenue Santa Rosa, CA 95403

September 14, 2022

RE: SDC Draft EIR and Specific Plan

To the Sonoma County Planning Commission:

We have lived within a mile of the Sonoma Developmental Center for over 20 years. We have raised our two children here, walking its streets and trails while appreciating the truly special place it is, from its diverse community of residents, to its rich wildlife population, and its verdant landscape. It is a unique resource for our community--- for the entire North Bay, that requires a well-considered, thoughtful approach to its transition.

C65-1

While the process may have started out this way, this push to approve an inadequate, nonspecific and unenforceable Draft EIR and Specific Plan is a dangerous and unconscionable rush to judgement. Undertaking this process simultaneous to the State's Request for Proposal is a waste of precious resources; these tools should react to a *specifc* development proposal that has yet to be produced. The Draft EIR and Specific Plan before you makes it clear the process is out of order. Simply, the cart has been placed before the horse.

Your overarching question has to be: What happens if the RFP generates a proposal that this Draft EIR and Specific Plan doesn't *specifically* address, or worse, is so broad that the room for interpretation allows a full range of unintended and unacceptable consequences? The requisite comprehensive detail

of this proposal mandates an EIR and Specific Plan that analyzes point by point all the merits and drawbacks of this enormously complicated project.

C65-1

3.4 Biological Resources

To bring development to the SDC necessitates adding additional roadways to handle the traffic associated with such an overload of residential and commercial units. A new Arnold Drive to Highway 12 connector is proposed—one that would cut a path right though the critical Valley of the Moon Wildlife Corridor. How can this have a "less than significant impact" on the black bears, mountain lions, bobcats, and dozens of other species that have all been documented in the area? If left undisturbed, studies have shown the Wildlife Corridor through the SDC can continue to provide critical connectivity. If development is more important to our environment, what is the plan to mitigate this unrecoverable loss?

C65-2

3.9 Hydrology and Water Quality

Where is the water coming from to support 2,400 new residents? The Draft EIR suggests there will be no impact on groundwater. For those who have been asked to conserve water because of a local dwindling supply, development on this scale makes no sense. How will this undeniable impact during a drought emergency be mitigated?

C65-3

3.10 Land Use and Planning

How can we know that "development under the Proposed Plan would not physically divide an established community" if the Draft EIR isn't even reacting to a specific development proposal? Those of us on the southside of Glen Ellen would argue any type of major development in the SDC corridor could sever our connection to the village on the north side of Glen Ellen. The project should work to unify, not divide, our historic community, but without specifics, we cannot know what impacts might occur and how they might be mitigated.

C65-4

3.12 Population and Housing

While we are aware how much Sonoma County needs affordable housing (with two sons who've regretfully had to settle elsewhere to afford their homes), using the SDC to resolve this issue is unrealistic. From a practical standpoint, this

C65-5

project's horizon is not even within ABAG's Regional Housing Needs Allocation time frame (2040 vs. 2023-2030). As broadly conceived as it is now, the Draft EIR and Specific Plan can't even ensure development that complies with the requirements that new housing be firesafe, reduce environmental impacts and traffic, and mitigates the drought emergency.

Right now, there are about 700 dwelling units in the Village and 350 in the concentrated southside. You don't need an expert to see that doubling—not to mention potentially tripling, the housing units in Glen Ellen by building them all in the acres between the two will have an impact. Even the lowest increase of 450 units in the Historic Preservation Plan would represent a 45% increase and have an impact of at least equal measure. Trying to solve Sonoma County's housing crisis all in one project located in a narrow Valley with one road in and out is poor planning pure and simple; *nothing* in this Draft EIR suggests how the attendant problems of this scale of development might be resolved.

C65-5

3.14 Transportation

Again: one road in, one road out. Then layer in at least one car in every new garage. Even in its heyday in the 1950's the SDC didn't have as much traffic as this scale of development will generate, and the Valley of the Moon, had a much lower surrounding population back then. Adding 1,000 homes could easily add as many cars, particularly given the limited public transportation and limited services in the area. These new residents will need cars and they will need a great deal more time for commuting when they are stuck on that one road in, one road out. Adding another crossing between Arnold Drive and Highway 12 will still place all these cars, a substantial increase, on two two-lane roads that are already heavily travelled—and have a devastating record for traffic fatalities in this very area. There will be a transportation impact regardless of the scope of the project—it must be comprehensively and specifically analyzed and the impacts duly mitigated.

C65-6

3.16 Wildfire

In 2017, we packed up our family and pets as we were ordered to evacuate our home due to the Nuns Fire and were stuck in gridlock on Arnold Drive for *hours* as we joined our neighbors attempting to flee the flames. The suggestion that

C65-7

adding 2,400 residents would not "not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan," would be laughable, if the consequences were not so frightening. The location proposed for an additional crossing between Arnold Drive and Highway 12? In 2017, it was *in flames.*

C65-7

We urge you to set this process aside and wait the short time until a development proposal has been chosen by the State. Then a Draft EIR and Specific Plan can be prepared to react to specific issues, impacts can be better analyzed and reasonable mitigation measures proposed. Please do not make a rush to judgement; this resource is too valuable to put at risk.

Sincerely,





Mary Poppic-Reeves Brian Reeves

Cc: Susan Gorin
Mike Thompson

From: Mary Poppic-Reeves
To: Brian Oh
Cc: Gerald.McLaughlin@dgs.ca.gov
Subject: Draft EIR Comments: SDC Specific Plan
Date: Friday, August 19, 2022 9:46:12 AM

EXTERNAL

I am deeply concerned about the recently released Draft Environmental Impact Report (EIR) and Draft Specific Plan for the Sonoma Developmental Center (SDC). Initiating this review is premature as the California State's Request for Proposal (RFP) has not yet concluded. Spending time and resources reviewing hypotheticals is unnecessary and wasteful, particularly when predominant, critical issues of wildfire, drought and biodiversity loss are not even being addressed. Continuing the review process at this point would be irresponsible. I urge you to pause this process until such time that the Specific Plan and EIR can be aligned with the State's RFP. Specifically:

C66-1

1. Engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022.
2. Re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.

Sincerely,

Mary Poppic-Reeves

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: mdg *
To: Brian Oh
Subject: Re: Form Submission - Leave a Comment! - August 24 meeting to be recorded?
Date: Tuesday, August 23, 2022 5:43:43 PM

EXTERNAL

Thanks, Brian!
Mike

> On Aug 23, 2022, at 3:21 PM, Brian Oh <Brian.Oh@sonoma-county.org> wrote:
>
> Hi Michael, you can access info for the SVCAC here:
> https://sonomacity.civicweb.net/filepro/documents/5421/?expanded=51493
>
> ---
>
> **From:** Squarespace <form-submission@squarespace.info>
> **Sent:** Tuesday, August 23, 2022 9:51 AM
> **To:** engage@sdcspecificplan.com
> **Subject:** Form Submission - Leave a Comment! - August 24 meeting to be recorded?
>
> EXTERNAL
>
> Sent via form submission from *Sonoma Developmental Center Specific Plan*
>
> **Name:** Michael Gill
>
> **Email:** spanky_velo@yahoo.com
>
> **Subject:** August 24 meeting to be recorded?
>
> **Message:** Hello,
>
> I wanted to know if tomorrow's Joint Meeting will be recorded for later viewing. If so, please direct me where to find it.
>
> Thank you,
> Michael Gill
> Glen Ellen
>
> Does this submission look like spam? Report it here.

C67-1

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Michael Lockert
To: Brian Oh; Susan Gorin; PlanningAgency
Subject: Response to DEIR and Specific Plan for SDC
Date: Saturday, September 10, 2022 11:32:34 AM

Dear Sonoma County Planning Commissioners,

As a 46 year resident of Sonoma Valley, I am infuriated by the total dismissal of public input and disregard for public safety reflected in the SDC Plan and Draft EIR. Virtually ALL of the public comments at various meetings over several years have been in support of a much smaller development, with a MAXIMUM of 400 (affordable) units, no hotel, little to no businesses, and honoring the historic significance of the site. The current proposal has so many problems I hardly know where to begin. C68-1

First and foremost, the impact on fire safety and emergency evacuation cannot be overstated. Valley residents well remember the 2017 wildfire which came into Glen Ellen, and forced the evacuation of hundreds of residents, who found themselves stuck in traffic, taking 2-3 hours just to get to Hwy 37. The idea that adding 2-3000 residents and their pets to the Eldridge area will not have a significant impact on that traffic would be laughable if it were not so potentially dangerous. Adding one connector between Arnold Drive and Hwy 12 will not seriously mitigate that problem. In my opinion, anybody approving the plan, as is, will have blood on their hands when the next wildfire happens. And it will.

Secondly, the impact on daily traffic is summarily dismissed as minimal, needing no mitigation whatsoever. I don't know where the authors of this report live, but it is not in Sonoma Valley. It's insane and ridiculous on its face. If we are adding 1000 units of housing, AND a hotel, we are talking about a daily increase of AT LEAST a couple thousand car trips daily without the hotel. The hotel will add who knows how many guests, and staff working 24/7. This will be true even if, decades from now, everyone will be driving electric cars. C68-2

Although that should lead us to a discussion of the Greenhouse Gas Emissions involved in such a plan, which are required to be considered by any EIR in California, I want to mention another factor that no one seems to be considering, namely the effect of all these residents having pets. There is an explosion of the number of people owning dogs and cats in the USA, and I presume this will be the case for any residents of this project. Inevitably, many of these will escape, having a huge impact on the current and proposed wildlife corridor. Since 1970, the songbird population in the US has declined by 30%, and according to the American Bird Conservancy, cats are the leading cause of direct, human-caused bird mortality. The International Union for Conservation of Nature (IUCN) lists domestic cats as one of the world's worst non-native invasive species.

Dogs, both on leash and off, will also have a negative impact on the wildlife corridor, but no one is even considering these impacts let alone recommending any mitigations.

Apparently, all of the meetings and requests for public input by the State and County have been a sham. Not one of our governmental representatives

has worked as public servants, taking the voice of the people to the halls of power. Not one of our state reps, for instance, has objected to the onerous burden of the estimated $100 million cost of cleaning up the neglected water system and other sources of pollution, caused by the State of California, sole owner of the property for over 100 years. Shame on the Department of Governmental Services and shame on all our state and county representatives for betraying the public trust.

C68-2

Yours sincerely,
Michael Lockert
20526 Birch Road
Sonoma CA 95476

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Michael Lockert
To: Brian Oh; Susan Gorin
Subject: SDC draft EIR
Date: Monday, September 5, 2022 7:34:15 AM

EXTERNAL

Dear Mr. Oh,

As a 46 year resident of Sonoma Valley, I am infuriated by the total dismissal of public input and disregard for public safety reflected in the SDC Plan and Draft EIR. Virtually ALL of the public comments at various meetings over several years have been in support of a much smaller development, with a MAXIMUM of 400 (affordable) units, no hotel, little to no businesses, and honoring the historic significance of the site. The current proposal has so many problems I hardly know where to begin. C69-1

First and foremost, the impact on fire safety and emergency evacuation cannot be overstated. Valley residents well remember the 2017 wildfire which came into Glen Ellen, and forced the evacuation of hundreds of residents, who found themselves stuck in traffic, taking 2-3 hours just to get to Hwy 37. The idea that adding 2-3000 residents and their pets to the Eldridge area will not have a significant impact on that traffic would be laughable if it were not so potentially dangerous. Adding one connector between Arnold Drive and Hwy 12 will not seriously mitigate that problem. In my opinion, anybody approving the plan, as is, will have blood on their hands when the next wildfire happens. And it will.

Secondly, the impact on daily traffic is summarily dismissed as minimal, needing no mitigation whatsoever. I don't know where the authors of this report live, but it is not in Sonoma Valley. It's insane and ridiculous on its face. If we are adding 1000 units of housing, AND a hotel, we are talking about a daily increase of AT LEAST a couple thousand car trips daily without the hotel. The hotel will add who knows how many guests, and staff working 24/7. This will be true even if, decades from now, everyone will be driving electric cars.

Although that should lead us to a discussion of the Greenhouse Gas Emissions involved in such a plan, which are required to be considered by any EIR in California, I want to mention another factor that no one seems to be considering, namely the effect of all these residents having pets. There is an explosion of the number of people owning dogs and cats in the USA, and I presume this will be the case for any residents of this project. Inevitably, many of these will escape, having a huge impact on the current and proposed wildlife corridor. Since 1970, the songbird population in the US has declined by 30%, and according to the American Bird Conservancy, cats are the leading cause of direct, human-caused bird mortality. The International Union for Conservation of Nature (IUCN) lists domestic cats as one of the world's worst non-native invasive species. C69-2

Dogs, both on leash and off, will also have a negative impact on the wildlife corridor, but no one is even considering these impacts let alone recommending any mitigations.

Apparently, all of the meetings and requests for public input by the State and County have been a sham. Not one of our governmental representatives has worked as public servants, taking the voice of the people to the halls of power. Not one of

our state reps, for instance, has objected to the onerous burden of the estimated $100 million cost of cleaning up the neglected water system and other sources of pollution, caused by the State of California, sole owner of the property for over 100 years. Shame on the Department of Governmental Services and shame on all our state and county representatives for betraying the public trust.

C69-2

Yours sincerely,
Michael Lockert
20526 Birch Road
Sonoma CA 95476

Cats #1 Threat to Birds

Predation by domestic cats is the number-one direct, human-caused threat to birds in the United States and Canada.,

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Michael Lockert
To: Brian Oh; Susan Gorin
Subject: SDC draft EIR
Date: Monday, September 5, 2022 7:34:15 AM

EXTERNAL

Dear Mr. Oh,

As a 46 year resident of Sonoma Valley, I am infuriated by the total dismissal of public input and disregard for public safety reflected in the SDC Plan and Draft EIR. Virtually ALL of the public comments at various meetings over several years have been in support of a much smaller development, with a MAXIMUM of 400 (affordable) units, no hotel, little to no businesses, and honoring the historic significance of the site. The current proposal has so many problems I hardly know where to begin. C69-1

First and foremost, the impact on fire safety and emergency evacuation cannot be overstated. Valley residents well remember the 2017 wildfire which came into Glen Ellen, and forced the evacuation of hundreds of residents, who found themselves stuck in traffic, taking 2-3 hours just to get to Hwy 37. The idea that adding 2-3000 residents and their pets to the Eldridge area will not have a significant impact on that traffic would be laughable if it were not so potentially dangerous. Adding one connector between Arnold Drive and Hwy 12 will not seriously mitigate that problem. In my opinion, anybody approving the plan, as is, will have blood on their hands when the next wildfire happens. And it will.

Secondly, the impact on daily traffic is summarily dismissed as minimal, needing no mitigation whatsoever. I don't know where the authors of this report live, but it is not in Sonoma Valley. It's insane and ridiculous on its face. If we are adding 1000 units of housing, AND a hotel, we are talking about a daily increase of AT LEAST a couple thousand car trips daily without the hotel. The hotel will add who knows how many guests, and staff working 24/7. This will be true even if, decades from now, everyone will be driving electric cars.

Although that should lead us to a discussion of the Greenhouse Gas Emissions involved in such a plan, which are required to be considered by any EIR in California, I want to mention another factor that no one seems to be considering, namely the effect of all these residents having pets. There is an explosion of the number of people owning dogs and cats in the USA, and I presume this will be the case for any residents of this project. Inevitably, many of these will escape, having a huge impact on the current and proposed wildlife corridor. Since 1970, the songbird population in the US has declined by 30%, and according to the American Bird Conservancy, cats are the leading cause of direct, human-caused bird mortality. The International Union for Conservation of Nature (IUCN) lists domestic cats as one of the world's worst non-native invasive species. C69-2

Dogs, both on leash and off, will also have a negative impact on the wildlife corridor, but no one is even considering these impacts let alone recommending any mitigations.

Apparently, all of the meetings and requests for public input by the State and County have been a sham. Not one of our governmental representatives has worked as public servants, taking the voice of the people to the halls of power. Not one of

our state reps, for instance, has objected to the onerous burden of the estimated $100 million cost of cleaning up the neglected water system and other sources of pollution, caused by the State of California, sole owner of the property for over 100 years. Shame on the Department of Governmental Services and shame on all our state and county representatives for betraying the public trust.

C69-2

Yours sincerely,
Michael Lockert
20526 Birch Road
Sonoma CA 95476

Cats #1 Threat to Birds

Predation by domestic cats is the number-one direct, human-caused threat to birds in the United States and Canada.,

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Michael Lockert
To: Brian Oh; Susan Gorin
Subject: SDC draft EIR
Date: Monday, September 5, 2022 7:34:15 AM

EXTERNAL

Dear Mr. Oh,

As a 46 year resident of Sonoma Valley, I am infuriated by the total dismissal of public input and disregard for public safety reflected in the SDC Plan and Draft EIR. Virtually ALL of the public comments at various meetings over several years have been in support of a much smaller development, with a MAXIMUM of 400 (affordable) units, no hotel, little to no businesses, and honoring the historic significance of the site. The current proposal has so many problems I hardly know where to begin. C69-1

First and foremost, the impact on fire safety and emergency evacuation cannot be overstated. Valley residents well remember the 2017 wildfire which came into Glen Ellen, and forced the evacuation of hundreds of residents, who found themselves stuck in traffic, taking 2-3 hours just to get to Hwy 37. The idea that adding 2-3000 residents and their pets to the Eldridge area will not have a significant impact on that traffic would be laughable if it were not so potentially dangerous. Adding one connector between Arnold Drive and Hwy 12 will not seriously mitigate that problem. In my opinion, anybody approving the plan, as is, will have blood on their hands when the next wildfire happens. And it will.

Secondly, the impact on daily traffic is summarily dismissed as minimal, needing no mitigation whatsoever. I don't know where the authors of this report live, but it is not in Sonoma Valley. It's insane and ridiculous on its face. If we are adding 1000 units of housing, AND a hotel, we are talking about a daily increase of AT LEAST a couple thousand car trips daily without the hotel. The hotel will add who knows how many guests, and staff working 24/7. This will be true even if, decades from now, everyone will be driving electric cars.

Although that should lead us to a discussion of the Greenhouse Gas Emissions involved in such a plan, which are required to be considered by any EIR in California, I want to mention another factor that no one seems to be considering, namely the effect of all these residents having pets. There is an explosion of the number of people owning dogs and cats in the USA, and I presume this will be the case for any residents of this project. Inevitably, many of these will escape, having a huge impact on the current and proposed wildlife corridor. Since 1970, the songbird population in the US has declined by 30%, and according to the American Bird Conservancy, cats are the leading cause of direct, human-caused bird mortality. The International Union for Conservation of Nature (IUCN) lists domestic cats as one of the world's worst non-native invasive species. C69-2

Dogs, both on leash and off, will also have a negative impact on the wildlife corridor, but no one is even considering these impacts let alone recommending any mitigations.

Apparently, all of the meetings and requests for public input by the State and County have been a sham. Not one of our governmental representatives has worked as public servants, taking the voice of the people to the halls of power. Not one of

our state reps, for instance, has objected to the onerous burden of the estimated $100 million cost of cleaning up the neglected water system and other sources of pollution, caused by the State of California, sole owner of the property for over 100 years. Shame on the Department of Governmental Services and shame on all our state and county representatives for betraying the public trust.

C69-2

Yours sincerely,
Michael Lockert
20526 Birch Road
Sonoma CA 95476

Cats #1 Threat to Birds

Predation by domestic cats is the number-one direct, human-caused threat to birds in the United States and Canada.,

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Moira Jacobs
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov
Subject:	Draft EIR Comments: SDC Specific Plan
Date:	Wednesday, August 24, 2022 3:42:24 PM

EXTERNAL

Dear Mr. Oh,

I'm writing to you regarding the SDC plan for its future development.

First, I request the county please align the Specific Plan and EIR with the State's RFP, which would increase efficiency, save valuable taxpayer resources, and ensure thorough planning and environmental review. **Review of the Specific Plan and EIR must be paused pending completion of the RFP process.**

I urge the County to:

1. Engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022.
2. Re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.

C70-1

Suggestions for alternative plans at SDC:

I request you please consider a much smaller housing footprint in this area, no more than 400 units. The proposed 1,000 units in that hard to access area is a very bad idea. The traffic would be terrible and our rural roads can't sustain this.

Why couldn't the county focus instead on beautifying and redeveloping the already developed areas all over Sonoma County, especially the Santa Rosa Ave corridor, the downtown mall and the admin center on Mendocino?

C70-2

Santa Rosa avenue is practically an urban blight. After decades of haphazard development from Rohnert Park up to Santa Rosa downtown, it's a hodgepodge with many undeveloped lots, businesses that seem on brink of closing, and overall it's an eyesore.

Instead, as other urban renewal projects have done very successfully, a long term plan for 1,000+ new housing units closer to our core, with better public transport and bike/walk paths lining a beatified tree lined boulevard from RP to SR would be the best plan for our County's future. This can be done in partnership with private sector developers and a voluntary program attractive to property owners in this corridor. Many of these owners might be happy to sell to a developer, especially with a creative program.

Imagine our future with a beautiful tree lined Santa Rosa Ave, with wide bike/walk path from

C70-3

RP to SR, along with small sitting/resting parks/gardens along the way. The area can include new housing units, some 5 stories high or higher, yet all along the boulevard the set backs would be tree lined and park like looking. With a model like this you could provide enough housing in Sonoma County for the next 50+ years.

Commercial and retail could remain and be integrated into this model, yet they should be more consolidated to take up less space, multi story retail mini malls integrated with shared work sites and housing as an example. It can be done, it would take a 25 year plan, but that is better than destroying the few open spaces we have left.

C70-3

The SDC is best developed as mostly a park like resource for Sonoma County, and something far less traffic creating or sprawl inducing. That land is far better left to very sparsely populated development, a small number of large private residential parcels, a few dense low/mid income units, and mostly a beautiful park like area with some land set aside as wildlife corridors to help sustain what we have left here of our native flora and fauna. This SDC area should have open space land set aside connecting the Sonoma Valley and Jack London State Park with the greater Mayacamas wildlife corridors.

Please, before it's too late, reconsider this Sonoma County knee jerk decision of sprawl everywhere. This will only cause more problems than it solves. At the very least, decrease the numbers of units to no more than 400.

Thank you,
Moira Jacobs
Bennett Valley

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	M2
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov
Subject:	Draft EIR Comments: SDC Specific Plan
Date:	Wednesday, August 24, 2022 2:08:08 PM

EXTERNAL

Dear Mr. Oh,

Why is the County pursuing its own agenda concerning the SDC before the State RFP process is complete? This seems like a waste of time and will only lead to confusion and great frustration for the residents affected by what happens to the SDC.

C71-1

Please wait until the State selects a speciic proposal so that the County Specific Plan and EIR will actually address the chosen developmental strategy.

We need to have this done correctly.

Sincerely,

Monica A Menco

Kenwood Resident and Property Owner

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Nancy Murray
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov
Subject:	Draft EIR Comments:SDC Specific Plan
Date:	Monday, August 22, 2022 8:34:04 AM

EXTERNAL

Sonoma County's Specific & EIR Plans should be working in tandem and in conjunction with the State's RFP, & both should address the threats of wildfires
drought, climate change & loss of wildlife habitat and biodiversity.
Commercial development of this unique property would be a travesty that would
profit a few developers & enrich County & State coffers with the resulting property taxes.
I encourage you to work together in designing a futuristic plan for SDC that will
preserve it's unique, pristine and natural beauty for the enjoyment and health of all the citizens of CA . **Once commercially developed this jewel, SDC, is gone forever, never to be replaced.**

C72-1

Nancy Murray & Family

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Sonoma Developmental Center Site Planning Considerations for Housing Needs for Individuals with Developmental Disabilities

Introduction

The Sonoma Developmental Center site closure has affected many individuals with developmental disabilities. Many have been successfully integrated into their communities through the group home, supported living services, and enhanced behavioral support home (EBSH) models. This has allowed many individuals greater access to their community than may have been previously afforded to them. One population, individuals with developmental disabilities and high behavioral needs, have been less successful integrating into the new community model.

C73-1

What are the issues that are prohibitive to successful integration?

There are several issues that are prohibitive to successful integration. Individuals with high behavioral needs often display aggressive or disruptive behaviors in their neighborhoods while attempting to access natural walking paths or enter into staff vehicles. Even with trained behavioral staff, staff may at times need to implement restraint measures to assist an individual to a safe environment to emotionally regulate. An individual may yell, cuss, or attempt to kick or hit staff during an episode, as well as engage in self-injurious behaviors. In their residence and yards, individuals may yell, cuss, engage in self injury and property destruction. These behaviors can be alarming to neighbors who are unfamiliar with the population and neighbors often feel angry and resentful that an enhanced behavioral support (EBSH) home has been built in their neighborhood. Neighbors often rally together to prevent homes from being developed in their neighborhoods and to shut down existing homes, which has happened successfully in Sonoma County in 2022 when pressure from neighbors shut down a new EBSH home on Hunter Lane in Santa Rosa. As a result, it is currently slated as a home for medical clients with developmental disabilities.

C73-2

What is the current status of housing for individuals with high behavioral needs who cannot successfully enter into community?

C73-3

Many of these individuals are in and out of long-term crisis units when they are not successfully integrated into their communities. Many are warehoused outside of Sonoma County and away from their families and communities because there is more affordable access to acreage in less expensive counties.

What are the housing needs of this community that can be uniquely served by Sonoma Developmental Center Site planning committee?

Our community members with developmental disabilities and high behaviors previously served by Sonoma Developmental Center would benefit from the following structure:

1. Five parcels dedicated to enhanced behavioral support (EBSH) homes, and/or acute or long term (up to 13 months) crisis homes for individuals with developmental disabilities.
2. Homes would be developed on 1-2 acre parcels/and or parcels situated away from dense housing and busy commercial structures to allow for adequate space and privacy for individuals with high behavioral needs.

C73-3

State legislation mandates that the housing needs of individuals with developmental disabilities must take priority in planning measures. The above model is the most advantageous way to meet the needs of those who have not been served by the closure of the Sonoma Developmental Center and continue to have outstanding needs.

Questions or comments can be sent to Orlando O'Shea at orlandokaioshea@gmail.com

From:	Pamela Merchant
To:	Brian Oh
Subject:	Sonoma Development Center - Comments on the Draft EIR
Date:	Monday, September 19, 2022 12:13:29 PM

EXTERNAL

Dear Mr. Oh,

Please accept these comments on the Draft EIR for the Sonoma Development Center issued in August 2022. My partner and I are homeowners in Glen Ellen and will be adversely affected by the proposal to build over 1000 homes without taking into account the tremendous impact such a large for- profit development will be on the limited fire/police/highway/water infrastructure. C74-1

PROJECT SCALE and HOUSING

Why isn't the Preservation of Historic Resources and Balancing Redevelopment with Land Use (DEIR pages 5 and 6) which would allow for the largest project in Sonoma Valley – 450 new homes – being considered since it is consistent with the state's statutory objectives? Moreover, even the 450 homes are too many to support the existing infrastructure. During the 2017 fires, Highway 12, Arnold Road and Bennett Valley Road couldn't handle current traffic flow.

As many have already commented, scale is the best way to mitigate environmental and resource impact.

UTILITY INFRASTRUCTURE

PG&E has not been able to keep up with fire mitigation responsibilities with the current housing stock – it's unlikely that they will be able to handle 450, 1000 or 1200 more housing units. By way of example, we live on Warm Springs Road – the PG&E utility pole for our neighborhood has been slated for replacement for 4 years now due to safety and fire concerns. Will PG&E preference bringing utilities to a new hotel over maintaining its' existing infrastructure? C74-2

WILDLIFE CORRIDOR

Why is there no analysis of the impacts on the wildlife corridor through the campus? C74-3

POPULATION AND GROWTH ASSUMPTIONS

The proposed plan represents double or tripling of community housing numbers and an extraordinary increase in traffic on already crowded rural roads. The urban sprawl growth scenario is in direct conflict with climate change policies to encourage smart/dense growth near existing transit.

C71-3

FIRE/EMERGENCY PREPAREDNESS

Having experienced all the disruption of the 2017 fires, it's shocking that the DEIR did not consider a fire scenario where the fire comes from the West. It's also troubling that the DEIR does not take into account an evacuation scenario where the broadband and cell service is out (which would replicate the 2017 fires). Building on-site shelter (Section 16.1.3.4) makes no sense given how devastating fire can be in this area.

C74-4

During the 2017 fire it took between 1 and 2 hours for Oakmont residents to get onto Hwy 12 and it took our neighborhood (Glen Ellen near Kenwood) hours. Adding 450, 1000, or 1200 homes (and twice or 3x as many cars given the lack of public transportation in Sonoma) will create unprecedented traffic jams during a fire. The SR 12 connector road will only work if the fire doesn't cross the road (during the 2017 fires the fire jumped Hwy 12 and Bennett Valley Road in a number of places).

In sum, we strongly recommend that the DraftEIR be rejected and that instead of focusing on for profit housing and hotel development, that the County reopen the process for the development of the SDC to take into account fire, safety, community, wildlife, climate change considerations. My personal preference would be that the site be used to support nonprofits and nonprofit run temporary supportive housing for the homeless, those escaping sex trafficking, and the recently incarcerated at a scale more suitable to the space. The space could also be used for 30-60-90 day addiction treatment programs.

Best,

Pamela Merchant
1693 Warm Springs Road
Glen Ellen, CA 94114

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Patricia Spicer
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov
Subject:	Draft EIR comments:SDC Specific Plan
Date:	Saturday, August 20, 2022 9:31:40 AM

EXTERNAL

Esteemed Planners of Sonoma County:

After decades of climate investigation and repeated and prolonged episodes of drought, I think it is vital for the county to engage in an alignment of the Specific Plan and EIR with the State's RFP. "Development," even for tax base purposes, is no longer defensible in this region, mostly owing to lack of water, but for many other environmental and traffic considerations. I need not elaborate, as these problems are already well known. I would only suggest that lack of water is a major factor in this case. I would also suggest that anyone involved in current planning leave their offices to visit the sad remains of Sonoma Creek and the lake at Jack London Park. What lake? The old era of expanding commercial and residential growth has ended. Conservation and preservation are essential.

C75-1

The SDC acreage is a gem of Sonoma County and even of northern California, an invaluable remnant of historical importance and wildlife sustainability. I grant that SDC property is owned by the State, but any State property also belongs to state residents and native wildlife. State ownership is more a matter of responsible guardianship than control for the sake of commercial exploitation.

On my personal involvement: As a longtime Glen Ellen property owner, I realize that any further reduction in ground water could result in the need to deepen my water well, which I could not afford. I trust we are all aware of the dire situation in Klamath County, Oregon, and other desert regions. Water is life and must be conserved, not depleted.

Thank you for considering my lengthy letter.

Patricia Spicer

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected, do not click any web links, attachments, and never give out your user ID or password.

Paul Rockett
Rusmusic19@gmail.com
Sonoma, CA 95476
Aug. 29, 2022

Permit Sonoma
Attn: Brian Oh and Bradley Dunn
2550 Ventura Ave
Santa Rosa CA 95403

Questions **1-22** for SDC Specific Plan DEIR
Due Sept. 23, 2022

Definitions:
SDC – Sonoma Development Center
DEIR – Draft Environmental Impact Report
HCD – Dept. of Housing and Community Development
RHNA – Regional Housing Needs Assessment, issued by HCD

APPENDIX D WATER SUPPLY ASSESSMENT AND HYDROLOGY & WATER QUALITY

- (p. 469 of the DEIR) The DEIR claims that "The WSA concludes all future demands within its service area can be met, inclusive of the Proposed Project in normal and multiple dry hydrologic years from 2025 through 2045." This same DEIR only acknowledges the likelihood of "single dry years", rather than a concatenation of multiple dry years.
  1. **Recognizing that we are already in our second year of a severe drought in Sonoma County and are still under water restrictions that date back to 2014, what justification does Permit Sonoma use to assert that the only issues concerning water availability were for "single dry years?"**
  2. **Does Permit Sonoma accept that a) Climate Change is driving new drier, hotter climates worldwide, including that in Sonoma County, b) that these changes are man-made, and c) that they will continually worsen until the atmosphere's load of CO_2 diminishes significantly?**

C76-1

- (p. 15 of Appendix D) Climate Change as described by the UN Intergovernmental Panel on Climate Change is a cumulative phenomenon. The more CO_2 we place in the atmosphere, the more dry, warm years we will have, NOT LESS.
  3. **If Permit Sonoma accepts man-made Climate Change, and that our dry, warming pattern will only get worse, then why does it presume that there will "Rebound"**

C76-2

years, and why does it presume that the Rebound will be sufficient to make up for the dry years?

4. **In Appendix D, p. 41, your own model predicts that "starting in 2030, water demands will exceed water supplies due to Lake Sonoma declining below 100,000 Acre-Feet before July 15. For the last two years Lake Sonoma water supplies were below 130,000 Acre-Feet. With recognition that Climate Change is forcing even dryer conditions, how can Permit Sonoma glibly add more total hookups from not just the SDC Specific Plan (1000+ hookups), but also the Springs Specific Plan (480+ hookups), the Sonoma Airport Specific Plan --- with such a small margin of error regarding the water levels in Lake Sonoma?**
5. **The last option for Sonoma Water is to obtain water from its groundwater pumps. While capacity is high today, groundwater depends upon rainfall plus snowmelt, both of which will be diminishing for the foreseeable future. Where can I find your predictions of rainfall and snowmelt for the next two decades, and their comparison to the 2000-2010 decade?**
6. **Snowpack in the Northern Sierra's 8-Station Index fell to 61% of normal between 2019-2022. Santa Rosa has received only 55% of normal rainfall in the 2019-2022 period. <u>Using</u> these conditions, and given that they were not included in any estimate or calculation of water supplies in the DEIR, what is the Permit Sonoma prediction of expected water supplies for the Valley of the Moon Water District for the next decade?**

C76-2

- Table 13 of Appendix D attempts to show that even in multiple dry years the supply exceeds the demand. Yet on its face, this cannot be true. Multiple dry years imply that demand exceeds supply for several years in a row. This never occurs in Table 13. In fact supply remains exactly as it was during normal years.
  7. **How can the yearly supply not diminish during multiple dry years?**
  8. **Why is the VOMWD supply in a normal year 3200 AFY and in a multiple dry year still 3200 AFY?**
  9. **Where is there evidence of ANY dry year??**

C76-3

WILDFIRE EVACUATION

- The SDC Specific Plan DEIR utilized the study by Wong, Broader, and Shaheen to establish the fraction of the working and living population present during a wildfire evacuation.
  10. **Many if not most of the evacuations used in the Wong et al. study occurred at night, not during rush hours. How would your two scenarios' results change if a scenario had been provided at midnight?**
  11. **The Wong study was used to establish the number of people needing to evacuate. However, at the chosen time, rush hour, many residents would be returning home. Did the studied scenarios include the presence of residents returning against the evacuating traffic to retrieve their spouses and important documents?**

C76-4

12. Did your two scenarios include the neighborhoods of Glen Ellen, Kenwood, Oakmont, the Springs, and/or Sonoma?
13. Having seen multiple evacuations since 2017, it is typical that state and local police routinely force traffic to go ONLY in the evacuating direction. Was this included in the two utilized evacuation scenarios?
14. If such police action was not simulated, then how are your time results changed by such an addition of forced traffic directions?
15. All such evacuation/traffic computer codes require benchmark testing to establish their credibility. What benchmark evacuation was utilized to confirm your code's credibility?

C76-4

- **You have multiple individual experiences from the Nun's Fire of Oct. 8, 2017 that cascaded through Glen Ellen at 11:30PM. Participants can tell you exactly how long they took to evacuate. (Most times were in the hour range, not minutes as you O**

16. Why did you not use the Nun's fire as your benchmarking calculation?
17. What results would you get, if you ran your calculation for Glen Ellen at 11:30PM at night?

C76-5

- On Aug. 17, 2022 the Board of Forestry approved the updated Minimum Fire Safe Regulations, applicable state-wide.

15. How will the new regulations impact SDC Specific Plan housing density, road configurations, road widths, dead-end roads, etc. to maintain consistency with the new rules?

- Cal Fire Hazard Zone maps were last published in 2007. New maps are being redrawn to account for the many wildfires beginning in 2017 that are largely the result of a warming, drier climate. The map changes are mostly going from lower hazard levels to higher hazard levels and are expected to be published during the Fall 2022.

16. Did estimates of fire susceptibility of the SDC area take such changes into consideration?
17. Did estimates of fire susceptibility of the SDC area account for the wildfires of 2017 that penetrated Glen Ellen? Did they account for the multitude of wildfires in Sonoma County during 2018-2021?

C76-6

AIR QUALITY

- SDC DEIR p. 183 uses the same tired argument that since the Specific Plan VMT adds only 1.1% to the whole of Sonoma County, that thus its contribution is Less than Significant. This absurd argument is deafened by the observation that most auto trips are less than 5 miles in length, and thus the correct VMT for comparison is the local VMT, not the County VMT.

18. **Why did this calculation not compare the VMT added from the Specific Plan to that of existing Glen Ellen, where in fact this traffic will reside?**

C76-7

POPULATION AND HOUSING

- (p. 364 of DEIR) Sonoma County appealed its original RHNA for the unincorporated County, of which the Springs Specific Plan is a part. HCD did not accept the appeal and kept the RHNA at 3881 new dwelling units during 2023-2031. Within the RHNA Appeal Request, Sonoma County accepted the 7% growth estimate which has no factual basis. The HCD uses Population Projection data from the Dept of Finance Demographics Research Unit (DRU), whose data is presented below for Sonoma County:

C76-8

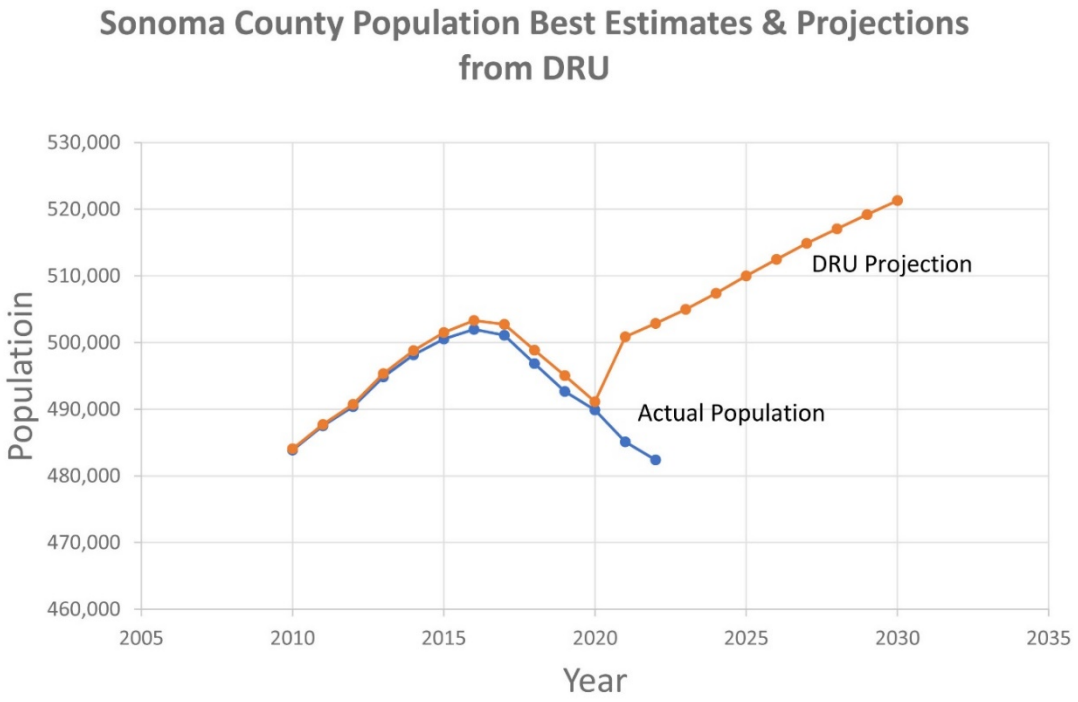


Figure 1

These data come directly from both DRU Estimates (actual census data plus births, deaths, DMV registrations, and more), and DRU Projections (based upon decades of prior history plus demographics). Their spreadsheets are available to all online from the Dept. of Finance and are attached to this email. Note the great difference between the speculation of the DRU Projection, when compared to the Actual DRU Population Estimates. The actual population of Sonoma County has been decreasing since 2016, continuously decreasing, and NOT INCREASING. Thus the push for added market-rate housing to accommodate a growing population is an unsupportable assumption. This DEIR on p. 364 blindly accepts their projections for population growth. Clearly the writers of this EIR did not read the source DRU data.

C76-8

19. Why did the DEIR accept the 9% growth rate, since County population has been decreasing from 2017 through Jan. 2022, based upon Dept. of Finance DRU data, and since there is no factual basis upon which to base the Projection?

20. How could the County rewrite the SDC Specific Plan to demonstrate the greater likelihood that County population will be static or slightly decreasing?

21. On p. 367 the SDC DEIR acknowledges that from 2010 to 2020 the Sonoma County total population increased by only 1.3% (also seen in plotted data above), however, they then, without evidence, presume that the total County population will INCREASE by 9% during 2020-2040. Since the actual on-the-ground evidence is that Sonoma County's population has been continuously decreasing, how does this DEIR justify its supposed population increase?

C76-8

22. Did the writers of this DEIR look at the <u>actual</u> County population data before writing this section on Population and Housing?

Table 1: E-4 Population Estimates for Counties and State 2021-2022 with 2020 Benchmark

COUNTY	4/1/2020	1/1/2021	1/1/2022
Alameda	1,682,353	1,662,370	1,651,979
Alpine	1,204	1,195	1,200
Amador	40,474	40,287	40,297
Butte	211,632	206,640	201,608
Calaveras	45,292	45,250	45,049
Colusa	21,839	21,773	21,807
Contra Costa	1,165,927	1,161,324	1,156,555
Del Norte	27,743	27,593	27,218
El Dorado	191,185	191,054	190,465
Fresno	1,008,654	1,009,231	1,011,273
Glenn	28,917	28,788	28,750
Humboldt	136,463	135,553	135,168
Imperial	179,702	179,488	179,329
Inyo	19,016	18,982	18,978
Kern	909,235	907,324	909,813
Kings	152,486	151,059	152,023
Lake	68,163	67,651	67,407
Lassen	32,730	31,132	30,274
Los Angeles	10,014,009	9,931,338	9,861,224
Madera	156,255	156,385	157,396
Marin	262,321	259,512	257,135
Mariposa	17,131	17,066	17,045
Mendocino	91,601	90,669	89,999
Merced	281,202	281,874	284,338
Modoc	8,700	8,606	8,690
Mono	13,195	13,299	13,379
Monterey	439,035	435,721	433,716
Napa	138,019	137,518	136,179
Nevada	102,241	101,919	101,242
Orange	3,186,989	3,169,542	3,162,245
Placer	404,739	407,517	409,025
Plumas	19,790	19,574	18,942
Riverside	2,418,185	2,424,587	2,435,525
Sacramento	1,585,055	1,580,624	1,576,618
San Benito	64,209	64,769	65,479
San Bernardino	2,181,654	2,182,343	2,187,665
San Diego	3,298,634	3,288,503	3,287,306
San Francisco	873,965	849,475	842,754
San Joaquin	779,233	782,372	784,298
San Luis Obispo	282,424	279,710	280,721
San Mateo	764,442	751,596	744,662
Santa Barbara	448,229	443,674	445,164
Santa Clara	1,936,259	1,907,693	1,894,783
Santa Cruz	270,861	266,553	266,564
Shasta	182,155	182,020	180,531
Sierra	3,236	3,225	3,229
Siskiyou	44,076	43,931	43,830
Solano	453,491	449,964	447,241
Sonoma	488,863	484,674	482,404
Stanislaus	552,878	551,737	549,466
Sutter	99,633	98,908	99,145
Tehama	65,829	65,374	65,052
Trinity	16,112	16,050	16,023
Tulare	473,117	474,032	475,014
Tuolumne	55,620	54,791	55,291
Ventura	843,843	840,093	833,652
Yolo	216,403	217,237	221,165
Yuba	81,575	81,988	82,275
State Total	39,538,223	39,303,157	39,185,605

California Department of Finance
Demographic Research Unit
Report E-5
Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2020, with 2010 Benchmark

Released: May 7, 2021

Note: Data in this report have not been adjusted for differences between the Demographic Research Unit's estimates on April 1, 2020 and census counts of the same day. Further information is needed from the 2020 Census Detailed Demographic and Housing Characteristic file to be released in mid-2023.

For more information:

DRU Cities, Counties, and the State Population Estimates

Data Prepared by:

Demographic Research Unit
California Department of Finance
e-mail: ficalpop@dof.ca.gov
phone: 916-323-4086

Report P-2A: Total Estimated and Projected Population for California and Counties:

Geography	Estimates				
	2010	2011	2012	2013	2014
California	37,366,938	37,721,468	38,088,009	38,389,174	38,705,642
Alameda County	1,516,721	1,533,933	1,557,015	1,578,702	1,601,584
Alpine County	1,175	1,170	1,166	1,164	1,161
Amador County	37,678	36,944	36,582	36,098	36,324
Butte County	220,359	220,862	221,996	222,194	223,449
Calaveras County	45,542	45,399	45,296	45,117	45,014
Colusa County	21,330	21,392	21,471	21,557	21,536
Contra Costa County	1,052,554	1,065,922	1,078,172	1,091,909	1,104,505
Del Norte County	28,409	28,196	27,921	27,420	27,039
El Dorado County	181,151	180,909	181,117	182,162	182,156
Fresno County	933,249	943,807	952,995	960,712	969,839
Glenn County	28,233	28,285	28,128	28,185	28,298
Humboldt County	135,102	135,383	134,730	134,562	134,252
Imperial County	175,401	177,931	179,294	180,066	182,565
Inyo County	18,547	18,559	18,584	18,591	18,650
Kern County	842,069	850,777	859,630	868,744	875,136
Kings County	152,398	151,701	150,150	150,219	149,214
Lake County	65,056	64,921	64,976	64,900	65,073
Lassen County	34,789	34,370	32,736	31,888	31,219
Los Angeles County	9,845,931	9,910,160	9,999,902	10,054,919	10,107,698
Madera County	150,182	151,629	150,810	151,989	153,597
Marin County	252,655	254,925	256,578	259,376	261,672
Mariposa County	18,245	18,241	18,224	18,157	18,135
Mendocino County	87,755	87,319	88,021	88,024	88,379
Merced County	256,785	260,096	263,018	264,353	266,898
Modoc County	9,688	9,682	9,633	9,610	9,585
Mono County	14,020	14,289	14,065	13,843	13,872
Monterey County	416,005	420,485	424,867	426,959	429,418
Napa County	136,587	137,560	139,026	139,617	140,772
Nevada County	98,709	98,592	98,129	97,752	98,223
Orange County	3,016,796	3,052,320	3,086,559	3,110,857	3,132,650
Placer County	350,664	356,423	360,938	365,273	368,808
Plumas County	19,969	19,817	19,334	18,806	18,513
Riverside County	2,198,479	2,231,323	2,254,977	2,276,536	2,302,308
Sacramento County	1,422,960	1,435,731	1,446,890	1,456,539	1,473,337
San Benito County	55,527	56,081	56,726	57,254	57,892
San Bernardino County	2,044,890	2,065,910	2,076,228	2,087,639	2,103,161
San Diego County	3,104,732	3,141,469	3,179,970	3,212,923	3,248,917
San Francisco County	810,504	821,955	836,474	847,529	857,901
San Joaquin County	688,464	695,133	700,882	705,941	716,383
San Luis Obispo County	269,450	270,909	273,283	273,973	276,210
San Mateo County	721,354	730,476	742,440	750,593	758,083
Santa Barbara County	424,109	425,981	430,791	435,222	439,463
Santa Clara County	1,791,215	1,817,135	1,845,959	1,872,615	1,897,429
Santa Cruz County	262,813	265,851	268,379	271,105	272,102

Shasta County	177,376	177,779	178,323	178,832	179,127
Sierra County	3,233	3,223	3,208	3,192	3,171
Siskiyou County	44,855	44,885	44,861	44,750	44,709
Solano County	412,862	415,230	417,926	421,173	425,377
Sonoma County	484,055	487,722	490,740	495,339	498,782
Stanislaus County	516,583	519,563	524,239	527,585	531,075
Sutter County	94,888	94,747	95,211	96,477	95,959
Tehama County	63,380	63,220	63,136	62,939	63,053
Trinity County	13,798	13,732	13,731	13,685	13,626
Tulare County	442,517	448,129	452,660	455,992	459,464
Tuolumne County	55,240	54,980	53,965	54,349	53,823
Ventura County	824,935	832,155	836,627	841,744	845,608
Yolo County	202,619	203,324	206,166	208,205	209,643
Yuba County	72,346	72,826	73,154	73,318	73,805

Projections Prepared by Demographic Research Unit, California Department of Finance, July 2021

July 1, 2010 to 2060

						Projections
2015	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
39,007,121	39,254,339	39,488,430	39,670,349	39,761,195	39,782,419	39,953,269
1,622,375	1,638,966	1,650,752	1,660,097	1,668,965	1,671,855	1,678,334
1,154	1,151	1,146	1,135	1,123	1,115	1,133
36,168	36,634	37,125	37,775	37,724	37,577	37,986
224,023	224,386	225,834	226,440	214,532	206,362	226,910
44,907	44,763	44,656	44,572	44,403	44,286	44,153
21,612	21,870	22,021	21,958	22,045	22,075	22,786
1,118,662	1,130,529	1,137,047	1,144,318	1,147,269	1,149,800	1,159,507
26,847	26,761	26,545	27,116	27,207	27,193	26,840
182,583	183,444	185,442	187,911	188,818	192,012	189,089
979,625	988,106	998,099	1,008,758	1,018,437	1,026,358	1,021,649
28,286	28,352	28,481	28,614	29,072	29,507	29,185
134,596	135,300	135,141	134,819	133,820	132,706	134,214
184,460	185,711	186,968	187,942	188,962	188,090	191,619
18,635	18,628	18,565	18,521	18,463	18,429	18,172
881,129	884,612	892,933	901,403	909,697	912,975	920,651
149,455	148,774	150,300	152,647	153,522	154,745	155,100
64,690	64,343	64,627	64,590	64,080	63,771	64,174
30,200	29,756	29,756	29,693	28,972	28,872	29,965
10,155,982	10,190,115	10,222,857	10,226,503	10,210,966	10,171,593	10,198,389
154,166	154,691	156,077	157,602	157,686	158,794	161,121
262,041	263,010	262,313	262,234	260,969	258,956	258,165
18,086	18,066	17,992	17,903	17,842	17,778	17,571
88,091	88,536	88,749	88,493	88,125	87,491	88,297
268,843	270,860	275,186	277,910	281,592	284,761	285,801
9,542	9,502	9,480	9,488	9,458	9,416	9,384
13,744	13,627	13,634	13,546	13,585	13,447	13,838
434,604	438,591	439,822	441,764	443,397	441,290	445,181
141,390	141,649	140,986	140,361	139,874	138,711	139,369
97,836	97,828	97,821	97,892	97,808	97,439	98,017
3,154,363	3,169,925	3,188,779	3,195,455	3,195,197	3,190,832	3,209,272
371,896	376,991	383,058	389,435	394,626	397,469	396,376
18,225	18,399	18,369	18,323	18,450	18,246	19,124
2,327,112	2,355,098	2,382,791	2,408,532	2,428,464	2,449,299	2,477,971
1,488,917	1,504,354	1,518,307	1,534,274	1,548,760	1,562,242	1,558,537
58,464	59,207	59,737	60,781	62,051	62,789	61,719
2,118,684	2,131,737	2,147,398	2,160,791	2,176,150	2,184,112	2,200,340
3,275,036	3,296,528	3,315,358	3,338,877	3,346,937	3,352,145	3,343,827
869,403	878,993	887,383	893,733	897,114	899,891	892,429
727,038	737,230	747,517	756,749	767,935	776,068	775,350
276,584	277,937	277,821	278,177	277,276	276,151	278,574
765,820	769,722	772,567	774,822	776,002	775,132	774,990
443,640	446,157	448,099	450,444	452,066	451,329	453,498
1,924,097	1,939,104	1,949,735	1,958,640	1,960,932	1,962,251	1,974,827
274,514	275,247	274,574	273,426	272,185	270,067	275,023

178,496	177,581	177,998	178,002	177,620	177,692	176,451
3,152	3,147	3,149	3,136	3,127	3,117	3,098
44,540	44,418	44,233	44,127	44,000	43,792	43,315
428,906	433,020	436,316	438,535	439,990	440,198	445,326
501,512	503,322	502,758	498,849	495,058	491,134	500,879
536,530	542,234	548,252	551,901	554,212	555,955	561,951
96,796	97,666	99,130	100,859	102,808	101,160	99,210
63,396	63,882	64,020	64,442	65,163	65,266	63,950
13,556	13,489	13,454	13,385	13,374	13,291	13,180
463,671	466,775	470,746	473,928	477,731	480,788	481,649
53,531	53,291	52,862	52,843	52,557	52,353	51,732
848,687	848,858	848,624	848,214	844,213	841,439	850,054
212,374	216,215	218,617	220,565	220,723	221,718	225,894
74,449	75,251	76,423	77,099	78,061	79,089	78,123

2022	2023	2024	2025	2026	2027	2028
40,146,003	40,354,217	40,574,215	40,808,001	41,028,749	41,245,009	41,456,075
1,689,538	1,701,203	1,713,352	1,725,911	1,737,897	1,750,185	1,762,278
1,139	1,154	1,147	1,153	1,169	1,172	1,168
38,161	38,325	38,505	38,679	38,858	38,969	39,177
227,736	228,623	229,680	230,691	231,850	233,054	234,252
44,150	44,222	44,325	44,443	44,551	44,677	44,824
22,872	22,958	23,061	23,163	23,262	23,368	23,442
1,168,294	1,177,674	1,187,319	1,197,341	1,207,010	1,216,561	1,225,927
26,792	26,750	26,711	26,754	26,743	26,746	26,753
190,012	191,185	192,321	193,540	194,767	196,048	197,342
1,029,118	1,036,949	1,045,168	1,053,955	1,062,455	1,071,030	1,079,374
29,212	29,310	29,405	29,510	29,628	29,733	29,849
134,138	134,132	134,066	134,057	134,060	134,048	133,983
192,960	194,510	196,081	197,859	199,616	201,258	202,982
18,142	18,094	18,065	18,055	18,053	18,029	18,029
929,851	939,622	950,312	961,629	973,008	984,466	995,947
156,164	157,316	158,508	159,733	160,975	162,152	163,383
64,138	64,123	64,175	64,259	64,326	64,445	64,586
29,842	29,724	29,643	29,526	29,424	29,327	29,161
10,208,717	10,222,748	10,239,018	10,258,572	10,274,982	10,289,079	10,301,702
162,722	164,472	166,348	168,293	170,225	172,067	174,013
257,795	257,610	257,485	257,394	257,286	257,241	257,248
17,556	17,518	17,531	17,574	17,554	17,576	17,596
88,353	88,463	88,602	88,746	88,918	89,008	89,122
288,601	291,616	294,870	298,184	301,452	304,946	308,224
9,374	9,376	9,313	9,320	9,307	9,283	9,249
13,898	13,929	13,959	13,985	14,011	14,053	14,077
447,300	449,346	451,660	453,956	456,120	458,172	460,271
139,518	139,854	140,302	140,748	141,194	141,767	142,259
98,157	98,438	98,702	99,131	99,536	99,946	100,254
3,218,111	3,227,671	3,238,007	3,249,431	3,259,465	3,268,633	3,277,260
400,664	405,139	409,745	414,544	419,179	423,871	428,436
19,041	18,977	18,919	18,864	18,806	18,746	18,694
2,506,351	2,535,310	2,564,271	2,593,906	2,622,165	2,649,606	2,676,555
1,571,846	1,586,033	1,600,724	1,615,713	1,630,449	1,644,917	1,659,505
62,124	62,565	63,086	63,604	64,172	64,720	65,247
2,216,865	2,234,540	2,253,485	2,273,291	2,292,597	2,311,663	2,330,747
3,356,185	3,369,636	3,383,663	3,398,922	3,412,460	3,425,725	3,438,361
897,416	902,614	907,825	913,369	918,229	923,210	928,064
783,706	792,428	801,359	810,495	819,449	828,200	836,634
279,268	280,072	280,760	281,643	282,403	283,152	283,837
777,635	780,650	783,809	787,161	790,224	792,889	795,422
455,127	456,844	458,879	460,973	463,045	464,910	466,411
1,987,898	2,001,338	2,015,833	2,030,957	2,045,458	2,060,348	2,075,273
276,024	277,087	278,304	279,617	280,703	281,716	282,692

176,682	177,032	177,468	178,006	178,489	179,002	179,564
3,077	3,081	3,065	3,037	3,010	2,986	2,966
43,169	43,066	43,042	42,979	42,916	42,881	42,780
448,896	452,768	456,654	460,736	464,514	468,424	472,103
502,886	504,996	507,388	509,995	512,497	514,886	517,080
566,365	571,277	576,213	581,308	586,330	591,434	596,470
99,781	100,289	100,941	101,757	102,418	103,114	103,849
64,023	64,160	64,334	64,566	64,773	64,908	65,100
13,156	13,109	13,078	13,041	13,036	12,952	12,919
485,121	488,748	492,670	496,657	500,568	504,618	508,760
51,670	51,631	51,598	51,538	51,540	51,522	51,546
851,620	853,937	856,550	859,528	862,394	865,185	867,887
228,380	230,810	233,218	235,943	238,450	241,088	243,667
78,666	79,165	79,693	80,259	80,773	81,297	81,774

2029	2030	2031	2032	2033	2034	2035
41,660,700	41,860,549	42,050,984	42,231,577	42,403,084	42,565,496	42,718,403
1,774,021	1,785,496	1,796,389	1,806,886	1,817,160	1,826,836	1,836,364
1,170	1,185	1,178	1,178	1,186	1,184	1,171
39,272	39,394	39,484	39,582	39,649	39,709	39,756
235,535	236,874	238,043	239,100	240,138	241,241	242,240
44,877	44,919	45,031	45,085	45,102	45,106	45,087
23,534	23,670	23,790	23,883	23,979	24,068	24,164
1,235,072	1,244,173	1,252,822	1,261,125	1,269,131	1,276,564	1,283,681
26,743	26,750	26,724	26,723	26,707	26,687	26,610
198,682	200,004	201,296	202,556	203,736	204,882	205,978
1,088,052	1,096,638	1,104,788	1,112,625	1,120,478	1,128,083	1,135,837
29,968	30,068	30,190	30,282	30,395	30,473	30,562
133,879	133,738	133,502	133,292	133,013	132,864	132,602
204,734	206,486	208,229	210,005	211,640	213,300	214,817
18,008	18,020	17,944	17,922	17,914	17,902	17,864
1,007,442	1,019,221	1,031,106	1,042,584	1,053,926	1,064,810	1,075,952
164,556	165,752	166,945	168,160	169,215	170,383	171,517
64,650	64,764	64,874	64,977	65,061	65,165	65,237
29,031	28,894	28,768	28,611	28,416	28,269	28,106
10,312,825	10,322,678	10,330,019	10,334,051	10,335,522	10,334,878	10,331,803
176,067	178,070	180,087	182,136	184,114	185,932	187,842
257,126	257,024	256,893	256,760	256,562	256,325	256,131
17,622	17,631	17,629	17,634	17,654	17,655	17,636
89,182	89,232	89,263	89,273	89,200	89,193	89,106
311,449	314,690	318,059	321,257	324,468	327,566	330,805
9,214	9,134	9,080	9,026	9,002	8,946	8,896
14,092	14,118	14,149	14,153	14,146	14,130	14,130
462,250	464,124	465,895	467,370	469,044	470,383	471,901
142,800	143,223	143,762	144,288	144,671	145,086	145,444
100,615	101,004	101,305	101,609	101,850	102,170	102,479
3,285,053	3,291,863	3,298,259	3,303,440	3,307,647	3,311,586	3,314,115
433,069	437,655	441,971	446,459	450,962	455,050	458,999
18,589	18,493	18,422	18,318	18,185	18,080	17,974
2,702,520	2,728,068	2,752,205	2,775,197	2,797,672	2,819,818	2,840,775
1,673,203	1,687,220	1,700,633	1,713,870	1,727,135	1,739,487	1,751,463
65,813	66,355	66,895	67,418	67,935	68,430	68,908
2,349,477	2,368,002	2,386,587	2,404,527	2,422,176	2,439,613	2,456,262
3,450,124	3,461,883	3,472,416	3,482,194	3,491,880	3,500,781	3,508,919
932,479	936,862	941,052	944,955	948,754	952,602	956,232
845,116	853,661	861,873	869,577	877,224	884,613	891,642
284,334	284,729	285,288	285,644	285,792	285,946	285,918
797,884	800,006	801,879	803,806	805,378	806,945	808,253
468,057	469,717	471,199	472,812	474,085	475,093	476,193
2,090,542	2,105,066	2,119,554	2,134,383	2,148,607	2,162,384	2,175,951
283,728	284,670	285,523	286,330	287,041	287,679	288,195

180,027	180,498	181,069	181,570	182,027	182,291	182,530
2,935	2,903	2,898	2,899	2,889	2,878	2,862
42,763	42,707	42,643	42,570	42,441	42,277	42,195
475,787	479,372	482,857	486,522	489,814	493,184	496,286
519,211	521,303	523,211	525,126	526,902	528,363	529,766
601,427	606,128	610,672	615,422	619,726	623,827	627,883
104,491	105,245	106,021	106,714	107,233	107,926	108,595
65,344	65,570	65,769	65,988	66,133	66,341	66,502
12,923	12,890	12,844	12,779	12,758	12,691	12,661
512,863	516,810	520,707	524,449	528,261	531,832	535,463
51,535	51,530	51,512	51,461	51,442	51,387	51,319
870,424	872,856	875,288	877,458	879,453	881,210	882,506
246,271	248,815	251,343	253,962	256,445	259,018	261,579
82,243	82,698	83,150	83,594	84,008	84,374	84,739

2036	2037	2038	2039	2040	2041	2042
42,862,413	42,998,578	43,126,054	43,243,462	43,353,414	43,454,656	43,548,719
1,845,580	1,854,119	1,862,352	1,870,263	1,877,766	1,884,790	1,891,379
1,154	1,157	1,157	1,146	1,135	1,132	1,120
39,772	39,775	39,788	39,761	39,743	39,733	39,696
243,267	244,009	244,839	245,663	246,453	247,009	247,661
45,100	45,057	45,011	44,896	44,860	44,711	44,628
24,247	24,309	24,382	24,436	24,471	24,533	24,566
1,290,333	1,296,655	1,302,419	1,307,663	1,312,536	1,317,066	1,321,303
26,604	26,619	26,561	26,574	26,498	26,448	26,432
206,915	207,843	208,678	209,428	210,196	211,020	211,681
1,143,329	1,150,287	1,157,145	1,163,940	1,170,525	1,176,794	1,182,857
30,643	30,692	30,719	30,754	30,769	30,802	30,837
132,250	131,960	131,545	131,099	130,791	130,432	129,927
216,401	217,837	219,407	220,897	222,307	223,686	225,131
17,843	17,785	17,778	17,610	17,552	17,494	17,438
1,086,939	1,097,529	1,107,667	1,117,647	1,127,781	1,137,676	1,147,276
172,646	173,826	174,833	175,856	176,940	178,085	179,069
65,299	65,348	65,396	65,414	65,505	65,515	65,595
27,905	27,780	27,619	27,469	27,293	27,086	26,930
10,326,562	10,319,773	10,310,942	10,299,452	10,286,350	10,271,162	10,254,276
189,654	191,533	193,416	195,209	197,025	198,803	200,446
255,796	255,365	254,758	254,145	253,549	252,860	252,166
17,650	17,607	17,598	17,519	17,490	17,463	17,435
88,961	88,843	88,600	88,410	88,205	87,988	87,766
333,944	337,125	340,103	343,108	346,085	348,841	351,690
8,850	8,791	8,759	8,666	8,567	8,561	8,523
14,102	14,088	14,068	14,034	14,009	13,992	13,897
473,171	474,504	475,487	476,404	477,265	478,209	479,105
145,689	146,073	146,225	146,518	146,602	146,722	146,742
102,700	102,890	103,011	103,122	103,193	103,306	103,484
3,316,090	3,317,018	3,317,528	3,317,008	3,315,726	3,313,767	3,310,994
462,816	466,436	469,811	473,089	476,434	479,381	482,304
17,864	17,750	17,573	17,449	17,289	17,152	16,941
2,860,864	2,879,929	2,898,485	2,916,191	2,933,038	2,948,870	2,964,079
1,763,272	1,774,777	1,786,340	1,797,296	1,808,307	1,818,580	1,828,375
69,334	69,728	70,105	70,485	70,866	71,169	71,478
2,472,791	2,489,237	2,505,305	2,521,098	2,536,592	2,552,141	2,567,233
3,516,589	3,524,351	3,531,323	3,538,029	3,543,663	3,549,251	3,554,583
959,726	963,251	966,592	969,669	972,787	976,090	979,206
898,296	904,922	911,242	917,320	923,341	928,950	934,256
286,006	285,745	285,465	284,928	284,346	283,704	282,890
809,373	810,641	811,644	812,362	813,098	813,710	814,327
477,040	477,846	478,574	479,160	479,622	480,047	480,387
2,189,406	2,202,687	2,215,970	2,229,086	2,241,634	2,253,525	2,265,499
288,658	289,071	289,413	289,719	289,843	290,092	289,955

182,832	183,050	183,222	183,354	183,482	183,448	183,589
2,848	2,821	2,795	2,789	2,757	2,734	2,721
42,026	41,907	41,748	41,616	41,434	41,256	41,053
499,419	502,382	505,223	507,858	510,412	512,890	515,279
530,896	531,846	532,707	533,223	533,600	533,611	533,614
631,640	635,326	638,830	641,997	645,069	647,913	650,699
109,176	109,681	110,241	110,839	111,246	111,815	112,408
66,584	66,716	66,757	66,821	66,922	67,000	67,064
12,613	12,573	12,510	12,461	12,387	12,371	12,345
538,967	542,129	545,443	548,592	551,563	554,409	557,195
51,216	51,129	51,044	50,947	50,807	50,647	50,492
883,643	884,486	885,185	885,540	885,628	885,454	885,322
264,039	266,517	268,968	271,383	273,739	276,174	278,554
85,083	85,447	85,748	86,050	86,321	86,586	86,821

2043	2044	2045	2046	2047	2048	2049
43,634,900	43,713,905	43,785,947	43,850,633	43,909,258	43,961,292	44,008,766
1,897,799	1,903,489	1,909,308	1,914,540	1,919,711	1,924,414	1,928,883
1,115	1,104	1,115	1,106	1,077	1,068	1,057
39,651	39,608	39,539	39,498	39,458	39,407	39,393
248,205	248,808	249,457	250,161	250,748	251,334	251,936
44,520	44,456	44,368	44,282	44,186	44,102	44,048
24,582	24,620	24,653	24,612	24,620	24,603	24,631
1,324,900	1,328,202	1,331,431	1,334,258	1,336,670	1,338,954	1,340,731
26,361	26,287	26,226	26,193	26,098	26,096	26,022
212,169	212,804	213,236	213,692	214,246	214,697	215,030
1,188,840	1,194,521	1,200,150	1,205,540	1,210,863	1,215,946	1,220,997
30,852	30,854	30,890	30,886	30,862	30,873	30,873
129,346	128,877	128,450	128,021	127,605	127,123	126,699
226,607	227,925	229,206	230,429	231,700	232,953	234,113
17,371	17,308	17,204	17,089	16,985	16,877	16,777
1,156,455	1,165,656	1,174,771	1,183,428	1,192,100	1,200,490	1,208,956
179,950	180,841	181,726	182,661	183,439	184,270	185,072
65,642	65,682	65,769	65,854	65,888	65,989	66,065
26,747	26,569	26,400	26,207	26,026	25,845	25,692
10,236,386	10,216,381	10,193,978	10,170,764	10,146,283	10,118,948	10,092,021
202,255	203,879	205,517	207,038	208,648	210,228	211,847
251,299	250,297	249,270	248,325	247,292	246,221	245,055
17,396	17,358	17,332	17,280	17,252	17,232	17,208
87,497	87,212	86,956	86,689	86,383	86,075	85,847
354,567	357,199	359,888	362,542	365,031	367,655	370,095
8,404	8,355	8,307	8,240	8,162	8,119	8,062
13,845	13,777	13,726	13,670	13,578	13,536	13,431
479,667	480,178	480,694	480,936	481,156	481,319	481,307
146,655	146,632	146,641	146,510	146,537	146,392	146,221
103,555	103,575	103,639	103,623	103,632	103,659	103,695
3,307,827	3,303,878	3,299,179	3,293,948	3,288,325	3,282,194	3,275,598
485,163	487,973	490,609	492,908	495,184	497,353	499,504
16,791	16,753	16,534	16,470	16,352	16,188	16,051
2,978,249	2,991,970	3,004,816	3,016,907	3,028,421	3,039,045	3,049,338
1,838,309	1,848,027	1,857,394	1,866,569	1,875,381	1,884,072	1,893,008
71,800	72,090	72,395	72,658	72,888	73,133	73,362
2,582,287	2,596,969	2,611,160	2,625,811	2,639,957	2,653,877	2,667,937
3,559,642	3,563,986	3,567,892	3,571,952	3,575,240	3,578,745	3,581,511
982,242	985,536	988,709	991,846	995,171	998,319	1,001,572
939,215	944,120	948,975	953,365	957,609	961,616	965,075
282,072	281,127	280,262	279,223	277,983	276,966	275,810
814,578	815,053	815,187	815,407	815,217	815,079	814,738
480,596	480,686	480,831	480,580	480,374	480,119	479,977
2,276,769	2,287,675	2,298,147	2,308,168	2,317,940	2,326,936	2,335,473
289,989	289,987	290,001	289,869	289,632	289,435	289,337

183,580	183,697	183,672	183,877	183,927	183,879	183,964
2,721	2,703	2,673	2,652	2,630	2,617	2,605
40,883	40,742	40,605	40,419	40,273	40,138	40,000
517,554	519,729	521,832	523,586	525,545	527,548	529,122
533,609	533,506	533,191	532,491	531,860	531,131	530,167
653,425	655,915	658,448	660,609	662,609	664,571	666,491
112,760	113,249	113,752	114,217	114,596	115,082	115,461
67,146	67,221	67,274	67,323	67,381	67,463	67,549
12,284	12,269	12,235	12,245	12,192	12,172	12,184
559,910	562,513	565,075	567,383	569,521	571,837	573,615
50,325	50,162	50,015	49,874	49,709	49,589	49,473
884,609	883,500	882,363	880,945	879,429	877,740	875,744
280,876	283,182	285,462	287,668	289,936	292,112	294,287
87,051	87,233	87,412	87,589	87,740	87,911	88,049

2050	2051	2052	2053	2054	2055	2056
44,049,015	44,083,767	44,113,374	44,139,271	44,160,168	44,176,739	44,189,861
1,933,085	1,936,591	1,939,717	1,943,205	1,945,878	1,948,730	1,950,924
1,047	1,035	1,041	1,032	1,023	1,020	1,005
39,360	39,302	39,282	39,286	39,297	39,281	39,321
252,567	253,113	253,709	254,335	254,927	255,389	255,855
43,966	43,941	43,911	43,868	43,837	43,874	43,866
24,635	24,639	24,638	24,627	24,611	24,604	24,623
1,342,620	1,344,253	1,345,247	1,346,569	1,347,195	1,347,877	1,348,754
25,975	25,907	25,921	25,858	25,787	25,747	25,756
215,511	215,915	216,383	216,785	217,317	217,995	218,636
1,226,158	1,230,913	1,235,657	1,240,391	1,245,035	1,249,858	1,254,524
30,881	30,862	30,811	30,834	30,833	30,801	30,788
126,261	125,840	125,449	125,000	124,527	124,054	123,640
235,339	236,471	237,667	238,844	239,886	240,918	241,927
16,671	16,584	16,455	16,352	16,202	16,112	16,029
1,217,086	1,225,116	1,233,197	1,240,949	1,248,990	1,256,599	1,264,112
185,868	186,639	187,457	188,309	189,038	189,652	190,310
66,151	66,162	66,331	66,472	66,623	66,737	66,832
25,569	25,341	25,215	25,084	24,947	24,818	24,639
10,061,774	10,030,622	9,997,512	9,964,011	9,928,491	9,891,603	9,853,666
213,456	214,905	216,464	217,931	219,369	220,790	222,320
243,838	242,534	241,386	240,173	238,735	237,458	236,136
17,199	17,167	17,093	17,057	17,072	17,060	17,043
85,573	85,321	85,056	84,812	84,583	84,360	84,084
372,461	375,026	377,490	380,071	382,252	384,691	386,992
8,028	7,968	7,923	7,909	7,878	7,803	7,768
13,367	13,209	13,137	13,052	13,014	12,871	12,799
481,305	481,075	480,745	480,396	480,251	479,785	479,357
146,050	145,924	145,662	145,394	145,195	144,968	144,793
103,775	103,864	104,079	104,302	104,557	104,905	105,287
3,268,048	3,259,887	3,251,268	3,242,438	3,232,660	3,222,492	3,211,606
501,591	503,777	505,775	507,858	510,049	512,040	514,052
15,924	15,798	15,766	15,662	15,529	15,496	15,440
3,059,095	3,068,091	3,076,669	3,084,584	3,092,479	3,099,770	3,106,499
1,901,507	1,909,932	1,917,948	1,925,704	1,933,612	1,941,201	1,948,824
73,558	73,757	73,976	74,196	74,413	74,607	74,834
2,681,796	2,695,548	2,709,334	2,722,645	2,736,431	2,750,180	2,763,794
3,583,006	3,584,567	3,586,291	3,587,163	3,587,230	3,587,294	3,587,311
1,004,943	1,008,393	1,011,835	1,015,300	1,018,952	1,022,329	1,025,711
968,662	972,105	975,600	978,679	981,751	984,240	986,758
274,677	273,542	272,346	271,251	270,020	268,911	267,839
814,643	814,179	813,485	812,975	812,181	811,379	810,294
479,532	479,028	478,571	478,066	477,445	476,750	476,155
2,343,610	2,351,698	2,359,073	2,365,999	2,372,624	2,378,827	2,385,097
289,138	288,993	288,805	288,583	288,441	288,190	288,070

184,110	184,219	184,253	184,284	184,392	184,511	184,711
2,591	2,546	2,531	2,526	2,521	2,491	2,466
39,874	39,776	39,687	39,574	39,475	39,471	39,416
530,874	532,443	533,818	535,159	536,840	538,355	539,770
529,338	528,381	527,320	526,281	525,298	524,423	523,335
668,224	669,727	671,279	672,645	673,912	675,118	676,166
115,895	116,325	116,723	117,170	117,606	118,068	118,390
67,634	67,709	67,776	67,865	67,953	68,039	68,133
12,180	12,208	12,204	12,233	12,240	12,286	12,287
575,525	577,487	579,190	580,832	582,561	584,163	585,773
49,356	49,296	49,186	49,051	49,025	48,982	48,957
873,594	871,496	869,306	866,808	864,225	861,671	859,085
296,338	298,401	300,395	302,405	304,511	306,651	308,801
88,176	88,219	88,329	88,427	88,442	88,444	88,501

2057	2058	2059	2060
44,200,258	44,210,827	44,220,894	44,228,057
1,953,275	1,955,445	1,957,505	1,959,165
1,009	1,001	1,005	1,006
39,331	39,375	39,430	39,465
256,490	257,142	257,676	258,144
43,911	43,986	44,055	44,106
24,587	24,642	24,669	24,652
1,349,282	1,349,965	1,350,855	1,351,284
25,751	25,717	25,696	25,720
219,375	220,359	221,264	222,219
1,258,943	1,263,380	1,267,826	1,272,559
30,767	30,738	30,729	30,708
123,223	122,782	122,388	121,972
243,001	244,097	245,165	246,235
15,915	15,818	15,745	15,653
1,271,932	1,279,764	1,287,653	1,295,502
190,953	191,628	192,377	192,955
67,015	67,161	67,356	67,561
24,503	24,336	24,228	24,082
9,815,615	9,777,222	9,738,056	9,697,634
223,841	225,409	226,949	228,393
234,848	233,633	232,494	231,338
17,054	17,067	17,055	17,073
83,879	83,670	83,489	83,305
389,386	391,919	394,442	396,956
7,750	7,640	7,607	7,587
12,693	12,593	12,494	12,422
478,753	478,221	477,532	476,734
144,596	144,499	144,388	144,261
105,633	106,072	106,481	106,944
3,200,824	3,189,546	3,177,947	3,166,309
516,182	518,373	520,406	522,567
15,394	15,391	15,338	15,277
3,112,694	3,118,580	3,124,163	3,129,833
1,956,563	1,964,086	1,971,779	1,979,204
75,016	75,188	75,386	75,620
2,776,792	2,790,195	2,804,533	2,818,707
3,586,580	3,585,551	3,584,342	3,583,085
1,029,101	1,032,452	1,036,017	1,039,403
989,186	991,590	993,935	996,241
266,806	265,804	264,700	263,650
809,245	807,907	806,789	805,479
475,334	474,624	473,866	473,067
2,390,867	2,396,532	2,402,449	2,408,169
287,929	287,758	287,641	287,606

184,783	184,900	185,098	185,208
2,450	2,444	2,434	2,456
39,399	39,402	39,332	39,395
541,016	542,431	543,830	545,126
522,357	521,418	520,447	519,518
677,117	678,265	679,175	680,311
118,839	119,306	119,650	120,143
68,248	68,401	68,550	68,705
12,311	12,354	12,427	12,470
587,174	588,536	590,094	591,539
48,883	48,914	48,899	48,911
856,468	854,142	851,714	849,091
310,810	312,810	314,739	316,740
88,579	88,646	88,605	88,592

From:	R THORNTON
To:	Brian Oh
Subject:	Sonoma Developmental Center, Elnoka and housing
Date:	Sunday, September 4, 2022 12:37:00 PM

EXTERNAL

Sent from my iPhone

From: R THORNTON <rthornton@prodigy.net>
Date: September 4, 2022 at 11:47:56 AM PDT
To: brianoh@sonoma-county.org, Susan Gorin <Susan.Gorin@sonoma-county.org>, david.rabbitt@sonoma-county.org, district3@sonoma-county.org, district4@sonoma-county.org, district5@sonoma-county.org, "Rep. Mike Thompson" <RepMikeThompsonCA05@mail.house.gov>
Subject: Sonoma Developmental Center, Elnoka and housing

September 4, 2022

R. Thornton

122 Calistoga Rd. UPS Box 573

Santa Rosa, CA 95409

RE: The Sonoma Developmental Center, Elnoka and Housing

Dear U.S. Congressman, Senators, Sonoma County Planning Manager and Sonoma Board of Supervisors,

I'll get right to it:

Drought:

I am being asked to reduce my water by 20% while you are considering allowing the Sonoma Developmental Center to add hundreds of homes, commercial development and a hotel. You are also considering adding hundreds of new residences on the Elnoka Property next to Oakmont, where my residence is and where I live. The homes, commercial development, landscaping and other water use tells me that you are not drought conscience. Please consider the rest of us who rely on water and stop the development of the Sonoma Developmental Center and Elnoka and save us all water. You can't have it both ways, we are either in a drought and we need to save at least 20% or we aren't and development is OK.

C77-1

Fire Safety:

During the Nuns Fire, I was awakened on October 8, 2017 around 2:30 AM by a neighbor who said "Get out, get out now, a fire is approaching!" You cannot imagine the fear and

C77-2

worry as I got dressed, grabbed my medication and tried to leave my residence in Oakmont. It took 2 hours of trying to drive out and we all felt we were lucky not to burn in our cars. The backup on Highway 12 was miles long. When we finally were able to come home, 3 weeks later, the devastation along Highway 12 with burned out homes, cars, vegetation and anything that was in the fire's wake was horrifying. Oakmont lost 2 homes including Supervisor Susan Gorin's and a lot of vegetation. This is well documented.

On September 27th, 2020, the Glass Fire reared its ugly head and this time we were sent a voluntary evacuation notification and then a mandatory evacuation notification. The backup along Hwy 12 was again miles long even for those of us who evacuated when we got the voluntary notification. It took many of us another 2 hours to get out safely. Nine days later, I came home to 3 homes that burned to the ground within walking distance of me and Oakmont had a triplex that burned to the ground. I had damage as did my neighbors. This is well documented.

C77-2

We have lost hundreds of homes due to these fires along Hwy 12 from Calistoga Rd through Sonoma. I feel that it is irresponsible to build on the Elnoka property, which is right next door to my sub-HOA in Oakmont and to build in the Sonoma Developmental Center due to the amount of traffic just on a normal day/night not to mention in a fire event and water usage.

It appears that widening Highway 12 is not a priority, so then stop more cars from using this highway by not building in this corridor.

Housing:

It is very important to build housing in Sonoma County, in due time. The wrong place to build is in the Valley of The Moon corridor from Elnoka through to Sonoma. Some of the brightest minds live in Sonoma County and I know that they can figure out how to properly balance housing, drought and fire corridors to come up with a better solution. Remember for every gallon of water used in new housing, landscaping and new hotels is one less gallon of water for the rest of us.

C77-3

Sincerely,

cc: U.S Congressman Mike Thompson

State Senator Mike McGuire

State Senator Bill Dodd

brianoh@sonoma-county.org

susan.gorin@sonoma-county.org

david.rabbitt@sonoma-county.org

district3@sonoma-county.org

district4@sonoma-county.org

district5@somoma-county.org

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Robert Holloway
To:	Brian Oh
Cc:	Susan Gorin
Subject:	Formal Comment on SDC Specific Plan and Draft EIR
Date:	Monday, September 12, 2022 5:27:16 PM

EXTERNAL

As a retired professional historic preservationist for the National Park Service, I would like to submit my strong support for the Historic Preservation Alternative outlined in the Executive Summary Section ES.3.3 of the SDC Specific Plan Draft EIR (August 2022).

A loss of 28% of Contributing historic resources, combined with new, dense infill construction of 30' to 45' heights and alteration and reconstruction of remaining Contributing structures within the National & State Register-eligible Historic District is simply too great a loss of historic fabric to retain the district's historic feeling and character. This would cause the property to lose its eligibility for listing in the National and California Registers and as a California Historic Landmark. These impacts are described in the Draft EIR 3.5.3.4 (Impacts) as "significant because they would cause a substantial adverse change to the historical district as defined by CEQA Guidelines Section 15064.5." These Contributing structures provide much of the historic district's sense of place and honor the legacy of the Developmental Center's former uses and staff. The historic story can best be told with as much of the original character as possible, even with re-purposed original buildings.

C78-1

The County's preferred alternative, outlined as the Specific Plan/Public Draft (August 2022), provides some very thoughtful preservation guidelines in the form of Goals and Policies in the Cultural, Historic, and Tribal Cultural Resources Chapter 3.5.3.3 (Relevant Policies and Implementing Actions). However, these don't go far enough to protect important contributing historic resources using words like "to the greatest extent feasible" (Policy 4-23) and "shall seek to avoid demolition" (Policy LU-1). These policies and actions "encourage" but do not guarantee the preservation of the historic character of the Core Campus.

C78-2

I am a strong advocate for the overall project's mandated goal of creating affordable housing and housing for individuals with developmental disabilities, as well as other types of housing but feel that the Draft Specific Plan's proposal to create 1,000 units of housing is way too impactful. I feel the Historic Preservation Alternative's plan for 450 units is much more in keeping with the scale of the adjacent communities and minimizes additional traffic impacts. Likewise, I would like to see the idea of an additional connection to Highway 12 added to the Historic Preservation Alternative as a way of further minimizing traffic impacts. I don't understand why the Highway 12 connector idea wasn't included in the Historic Preservation Alternative as it would be outside the Historic District footprint.

I also feel that the concept of adding a small to medium-sized hotel could be accomplished with architectural sensitivity through the use of rehabilitated existing structures, perhaps the Historic Admin Building, the Sonoma House, or a cluster of the existing cottages. Otherwise, an Agritourism-type hotel could be accomplished as new construction as part of the Specific Plan's Agri-hood concept east of Arnold Drive, allowing its patrons to participate in the Agri-hood goals and practices as part of their stay, learning what makes the Sonoma Valley such a special place.

Thank you in advance for including my comments in the final evaluation for the future plan of the SDC property, a place of unparalleled beauty and historical significance.

Robert Holloway

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Roger Peters
To:	Gina Belforte; Eric Koenigshofer; Shaun McCaffery; Greg Carr
Cc:	Susan Gorin; Brian Oh
Subject:	4 questions re SDC DEIR -hazardous materials, traffic, VMT, cumulative impacts
Date:	Thursday, September 15, 2022 10:08:54 AM

EXTERNAL

Planning Commissioners,

You have a lot coming at you on SDC for today's first meeting.on SDC. Rather adding detailed comments to the input load, I will just frame four questions that I hope you will ask of the DEIR sponsors.

1. Why did you (PS) not do Phase II environmental assessments re hazardous materials and substances in the gap areas of recognized environmental conditions (RECs) identified in the prior Phase I and Limited Phase II investigations?

C79-1

The Valley of the Moon Alliance Alliance (VOTMA) filed comments on the need for further environmental assessment work on March 24, 2022 in response for requests for comments in the NOP for the EIR. Those comments are included in pages 459-464 of the appendix to the DEIR. The DEIR acknowledged those comments on page 236 of Section 3.8 Hazards and Hazardous Waste.

But the subsequent portion of Section 3.8 of the DEIR does not add any new analysis of RECs that VOTMA referenced. Instead, the discussion for the most part addresses hazardous materials and substance issues that were identified as known or likely to exist in the Core Planning Area. The discussion acknowledged that the 2017 Limited Phase II report identified a variety of areas, both in the Core Planning Area (CPA) and in the lands outside of the CPA where "further investigation was needed." (pg DEIR 248; download, pg 425) For reason unexplained, it appears that no such further investigation was undertaken. Deferral of investigation and mitigation are not an allowed strategy under CEQA. The DEIR appears incomplete and defective on this issue.

Since the DEIR indicates at various points that the use of non-Core Planning Areas for agriculture, recreation and other uses is anticipated, it is reasonable to conclude that in developing facilities necessary for and in carrying out operations of that sort there will be the need for grading and other soil

disturbance that would upset and uncover hazardous material and substances. The DEIR's approach to study those situations at some time in the future and if they occur constitutes an inadequate and incomplete DEIR. Since the DIER here is likely intended to serve as the environmental review document that will cover the transfer of the preserved lands outside of the Core Planning Area this gap in analysis is problematic. C79-1

The Planning Commission should ask why no further Phase II (see appendix page 464 for the list of areas that needed further assessment investigation) were undertaken, despite the specific call out in the Limited Phase II assessment for that word as needed.

2. Where is the W-Trans traffic operations analysis that you (PS) suggested in DEIR footnote 118 had been done?

The DEIR analysis of transportation, and specifically traffic issues is inadequate. VMT analysis is great for dense urban projects, but does not capture the nuance of rural transportation impacts. The requirement to use VMT and the adverse impact preclusion of LOS for projects CEQA analysis does no preclude the PC or The Board from requiring a traffic impact analysis to assist decision making for land use policy planning purposes and for assessing fire/flood/earthquake evacuation risk parameters. C79-2

PS recognizes that reality and tries to avoid that issue by implying that W-Trans has done an LOS study. In the text associated and associated footnote 118, PS suggests that it has done a traffic impact analysis. When asked to provide that analysis referenced in fn 118, PS responded that the analysis was in Appendix F of the DEIR appendix. Appendix F at pg 748 consists of a one page set of "Traffic Volume Data."There is no text, no interpretation, no assumptions, no contextual analysis.

PS should explain why it did not use the Sonoma Valley Traffic Study done in connection with the winery events ordinance, and why it did not use the SCTA Traffic Demand Model to assess congestion associated with the preferred project.

3. Where is the stand-alone project specific VMT analysis for this project? C79-3

Perhaps I missed it in the 3534 page appendices, but I did not see a stand-alone

VMT study that could be reviewed for assumptions and whether all the appropriate TAZ had been included, and the overall documents could have been reviewed for completeness. Appendix F is exactly one page and relates to the W-Trans non-analysis of traffic impacts.

The textual analysis in the DEIR itself is full of summary and conclusory statements. On its face the findings 1) on page 442 that traffic from Harney to Glen Ellen would be reduced from peak, 2) on pages 445-446 that household, employment, and total service VMT would be reduced by the project compared to peak, and 3) on page 451 that the project would not result in inadequate emergency access, all seem particularly unsupported, counter-intuitive, and problematic. It would seem relevant in that context for the PC to ask some simple foundational questions like where will the people working at SDC be coming from to work there, where will the people who live at SDC but work off site be traveling to, where would guests at the hotel be coming from, where is the nearest pharmacy, where is the nearest full service affordable market, where are the nearest medical and dental general and specialist services, where is the nearest medical complex, and what will be the impact on Highway 12 traffic of having another traffic signal at the new proposed connector? The answers to those questions are not obvious in the transportation segment of the DEIR.

C79-3

4. Where is the detailed cumulative impact analysis?

The DEIR basically dodges this requirement by saying that the cumulative impacts are already covered in relevant regional analyses.

C79-4

Overall, this is a very strange DEIR. Please require significant revisions and improvements in this DEIR so that community interests and concerns are fully addressed. Hold Permit Sonoma to the same standard of quality that it would hold private parties to meet.

Thank you.

Roger Peters
515 Hoff Rd.

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	mauerhan
To:	Brian Oh
Cc:	gerald.mclaughlin@dgs.ca.gov
Subject:	Draft EIR Comments: SDC Specific Plan
Date:	Saturday, August 20, 2022 2:59:24 PM

EXTERNAL

Sent from my iPad

Dear Sir,

I read that the Draft Environmental Impact Report was released for the Sonoma Developmental Center on 10 August 2022 with a plan for at least 1,000 residential units and extensive commercial development. This report is premature because the State has not yet completed the RFP process. I request that you please wait to further this development until after the completion of the RFP Proposal.

I realize that there is a need for more housing in Sonoma County but, as a resident who has evacuated four times and came close to losing their home during the Tubbs fire I truly hope that the safety and possible evacuation of residents be taken into account. We know that there will be more fires and Highway 12 is just not equipped for the additional people that all of the proposed new developments (Oakmont, Skyhawk, Mahonia Glen etc) plus all of us who already live in this area. It is terrifying to be stuck in traffic when you know that a wildfire is heading towards you and adding so many new homes is nothing short of reckless and will potentially result in loss of life.

C80-1

Add to this the lack of available water for everyone due to the drought and the loss of wildfire habitat I ask that you seriously take all of these issues into account when making future decisions for the Developmental Center - lives will be endangered by poor decisions.

Sincerely,

Sandra Mauerhan

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Sharon Bard
To: Brian Oh
Cc: Gerald.McLaughlin@dgs.ca.gov
Subject: Draft EIR Comments: SDC Specific Plan
Date: Saturday, August 20, 2022 8:58:33 AM

EXTERNAL

Hello Brian,

I am a long-time Sonoma County resident who has been interested in and have been following the history of the Sonoma Development Center and the property it sits on, for decades--way before the sale from the State of California and the beginning of a redevelopment plan for it's new use.

I had understood that the State of California, the former owner of the property, was part of the developmental proposal process and that the sale and purchase of the land was intended to create a plan which would mitigate wildfire, drought and biodiversity loss, huge issues impacting our community currently and even more so in the future. C81-1

I have now learned that you recently released a draft of an Environmental Impact Report and Specific Plan for SDC which has changed the intentions of the original vision to now include more than 1,000 residential units and extensive commercial development. I am very concerned that this recent draft is not aligned with the State's proposal and is not honoring the original intent of the sale and redevelopment plan.

I am asking that you re-draft your plan which was released on August 10, 2022. That you wait until after the State announces their RFP selection which I understand is to take place on October 24, 2022, and then revise your plan to incorporate their findings. And that in your revision, you include a description and an analysis of the impacts of the actual proposal that the State is selecting for this SDC property. From my prospective, it is important that Sonoma County's plans for this somewhat fragile wildlife corridor be aligned with the State's process and that the ultimate goal protects the land as well as serves the human endeavors which benefit from it. C81-2

Thank you for your consideration.

Sincerely,

Sharon Bard

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Sharon Church
To:	Brian Oh; PlanningAgency
Cc:	Susan Gorin; Alice Horowitz
Subject:	Comments on the SDC Specific Plan and DEIR
Date:	Wednesday, September 14, 2022 4:44:10 PM

EXTERNAL

--[if !supportLists]-->• <!--[endif]-->**EVACUATIONS.** Can you certify and provide documentation that the traffic model referenced in the DEIR included the ***cumulative*** impacts of all development (including those not yet built) impacting Highway 12 from Santa Rosa to Sonoma and Arnold Drive, including special events?

Claims that adding up to 1,000 housing units (2,400 residents) with an estimated 2 vehicles per household plus 940 jobs in the commercial area (and special events) would not impact our ability to evacuate during the next emergency are irresponsible. The "models" used defy common sense, ignore the already burdened two lane roads (Highway 12 and Arnold Drive), paint a rosy picture of available public transportation and thus demand for vehicles and are clearly a transparent attempt to move past this life or death matter. The draft EIR clearly has not sufficiently considered the ***cumulative*** impact of development at the SDC, the Highway 12 corridor (from Santa Rosa to Sonoma), and Arnold Drive, including special events, on our ability to evacuate. A Highway 12 connector would only serve to send people toward the fire in a futile circle which could make evacuation even worse and removes an obstacle to growth in protected areas which would further exacerbate our ability to evacuate during a wildfire. ***Note that the Elnoka Senior Community project on Highway 12 in Santa Rosa was recently reduced by 60% (from 676 units to 272 units) to address concerns raised by the community and to address potential traffic impacts.***

C82-1

"Shelter-in-place", seems like a death warrant, given the extreme devastation caused by wildfires. That concept would certainly reduce vehicles exiting for your models and would also likely increase deaths. Why not address this matter honestly now?

--[if !supportLists]-->• <!--[endif]-->**CLIMATE CHANGE**. The Fire Hazard Severity Zone Map referenced in Figure 2.3-1 of the Specific Plan is undated—what is the date of the information you are relying upon?

C82-2

Figure 2.3-1 of Specific Plan in inaccurate. It does not reflect the fire damage along Sonoma Creek to the nursery on Trestle Glen or the loss of a home and other structures along Burbank Drive in the 2017 Nuns Fire.

CalFire is updating the Fire Hazard Severity Zones Maps for the first time since 2007. The

new maps are to be released before the end of the year. Have these been taken into consideration? Climate change is here and affecting us now, with forecasts to get much worse. This must be addressed!

C82-2

How can Risk Factor tell me that properties near Sonoma Creek have a MAJOR risk of flooding which is in direct conflict to the Statement in Section 2.3 of the draft Specific Plan and the 100-year flood plain in Figure 5.3-1 titled "Maximum Heights" that "all 100 year and 500 year floods can be accommodated within the banks of Sonoma Creek without additional flooding". What recent analysis has been performed on flood risk or are you using old data? Last October, per Sonoma Water, an Atmospheric River brought 9" of rain on Sonoma Mountain, causing waste water collections systems to overflow in several locations, including all along Sonoma Creek and notably, at Burbank Drive in Glen Ellen. Is that public health hazard being addressed? The fact that so much water fell at one time is another piece of data pointing to climate change and the potential for flooding along Sonoma Creek.

C82-3

--[if !supportLists]-->• <!--[endif]--><u>**PARKING**</u>. How will you ensure that our Glen Ellen neighborhood on the South side of the SDC will not have to support parking for those seeking free parking not available at the campus?

Parking policy 3-27 in the draft Specific Plan says there will be NO free parking within the campus. Further, the plan is to provide less parking than would typically be required, to encourage biking and walking. What a disaster for the neighborhood to the South! People will park and store vehicles along Martin, Lorna, Cecelia, Burbank, Sonoma Glen Circle and Marty due to lack of parking spaces and to avoid charges. In addition, the concept of shared parking between residential and commercial is not realistic in practice. This will clearly burden an existing neighborhood to allow for increased development and profit for the developer and pretend there are fewer vehicles. Unacceptable!

C82-4

--[if !supportLists]-->• <!--[endif]--><u>**GLEN ELLEN, NOT ELDRIDGE**</u>. PLEASE explain why the Glen Ellen neighborhood South of the SDC continues to be disrespected by calling us Eldridge? Are you unilaterally deciding to change our name from Glen Ellen to Eldridge so you don't have to acknowledge that you are in fact dividing our Glen Ellen community? Reference Table 4.5-1, Summary of Impacts for Alternatives, Page 575, Item 3.9-1 (sic) which

C82-5

is under 3.10 Land Use and Planning.

We are Glen Ellen. Our property tax bills say Glen Ellen, as do our driver's licenses and passports. Eldridge was the SDC campus only and they had their own post office. The SDC and post office are closed. As such, the SDC property is the donut hole of Glen Ellen and should be considered a part of Glen Ellen, not a new town to divide our Glen Ellen community. The development should be in scale that fits the character of the existing community and open space. The proposed scale is simply too much and would be appropriate for San Jose, not Glen Ellen.

C82-5

I participated in the outreach over the years, believing the County was listening to the Community and that the County would embrace a reasonable plan that the Community could support. Instead, you are pushing for the maximum and driving an incompatible plan. Despite pushing an overbuilt plan, you are failing to provide the amount of affordable housing we would support. Clearly there is another agenda which has nothing to do with our Community and affordable housing. I ask that you scale back and restore our faith in our County government.

C82-6

Thank you.

Sharon Church

Proud 30-year resident of Glen Ellen

15241 Marty Drive

Glen Ellen, CA 95442

707-287-5299

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Susan Gorin
To: Brian Oh
Subject: Fwd: SDC Comments
Date: Tuesday, August 23, 2022 8:04:42 AM

Fyi
Susan Gorin | 1st District Sonoma County Supervisor
575 Administration Drive, Room 100A
Santa Rosa, CA. 95403
Office 707-565-2241 | Cell 707-321-2788

From: Susan Gorin <Susan.Gorin@sonoma-county.org>
Sent: Tuesday, August 23, 2022 8:04 AM
To: Sharon Church <vicki-sharon@sbcglobal.net>
Subject: Re: SDC Comments

Thanks Sharon. I will forward your comments to Brian.

Susan Gorin | 1st District Sonoma County Supervisor
575 Administration Drive, Room 100A
Santa Rosa, CA. 95403
Office 707-565-2241 | Cell 707-321-2788

From: Sharon Church <vicki-sharon@sbcglobal.net>
Sent: Monday, August 22, 2022 3:57:35 PM
To: Susan Gorin <Susan.Gorin@sonoma-county.org>
Subject: SDC Comments

EXTERNAL

Susan, some preliminary comments below. We really need you to firmly step up and advocate that the scale of the proposed plan be reduced to something more appropriate for this area. We aren't NIMBY's and sensible development can take place at the SDC; however, there is no need to destroy our community for developer profit. Permit Sonoma is not representing the community.

C83-1

GLEN ELLEN, NOT ELDRIDGE. The area south of the SDC is Glen Ellen, not Eldridge. Eldridge was the SDC only and they had their own post office. The SDC and post office are closed. As such, the SDC property is the donut hole of Glen Ellen and should be considered a part of Glen Ellen, not a new urban area to divide our community. The development should be in scale that fits the character of the existing community and open space. The proposed scale is simply too much.

EVACUATIONS. Claims that adding up to 1,000 housing units (2,400 residents) with an estimated 2 vehicles per household plus 940 jobs in the commercial area would not impact our ability to evacuate during the next emergency are irresponsible. The "models" used defy common sense, ignore the already burdened two lane roads (Highway 12 and Arnold Drive)

C83-2

and are clearly a transparent attempt to move past this life or death matter. The draft EIR has not sufficiently considered the cumulative impact of development at the SDC, the Highway 12 corridor, and Arnold Drive on our ability to evacuate. A highway 12 connector would only serve to send people in a futile circle which could make evacuation even worse. Note that the Elnoka Senior Community project on Highway 12 in Santa Rosa was recently reduced by 60% (from 676 units to 272 units) to address concerns raised by the community and to address potential traffic impacts.

C83-2

CLIMATE CHANGE. CalFire is updating the Fire Hazard Severity Zones Maps for the first time since 2007. The new maps are to be released before the end of the year. Have these been taken into consideration? What analysis has been performed on flood risk? Risk Factor now lists properties near Sonoma Creek as having MAJOR risks of flooding. Last October, per Sonoma Water, 9" of rain fell on Sonoma Mountain, causing waste water collections systems to overflow in several locations, including all along Sonoma Creek and notably, at Burbank Drive in Glen Ellen. Climate change is here and affecting us now, with forecasts to get much worse. This must be addressed!

C83-3

PARKING. Parking policy 3-27 in the draft Specific Plan says there will be NO free parking within the campus. What a disaster for the neighborhood to the South! People will park and store vehicles along Martin, Lorna, Cecelia, Burbank, Sonoma Glen Circle and Marty due to lack of parking spaces and to avoid charges. In addition, the concept of shared parking between residential and commercial is not realistic in practice. This is clearly an attempt to burden an existing neighborhood to allow for increased development and profit for the developer. Unacceptable!

C83-4

Thank you,

Sharon Church
707-287-5299

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Sharon Church
To:	Brian Oh; PlanningAgency
Cc:	Susan Gorin; Alice Horowitz
Subject:	Comments on the SDC Specific Plan and DEIR
Date:	Wednesday, September 14, 2022 4:44:09 PM

EXTERNAL

--[if !supportLists]-->• <!--[endif]--><u>**EVACUATIONS.**</u> Can you certify and provide documentation that the traffic model referenced in the DEIR included the ***cumulative*** impacts of <u>all</u> development (including those not yet built) impacting Highway 12 from Santa Rosa to Sonoma and Arnold Drive, including special events?

Claims that adding up to 1,000 housing units (2,400 residents) with an estimated 2 vehicles per household plus 940 jobs in the commercial area (and special events) would not impact our ability to evacuate during the next emergency are irresponsible. The "models" used defy common sense, ignore the already burdened two lane roads (Highway 12 and Arnold Drive), paint a rosy picture of available public transportation and thus demand for vehicles and are clearly a transparent attempt to move past this life or death matter. The draft EIR clearly has not sufficiently considered the ***cumulative*** impact of development at the SDC, the Highway 12 corridor (from Santa Rosa to Sonoma), and Arnold Drive, including special events, on our ability to evacuate. A Highway 12 connector would only serve to send people toward the fire in a futile circle which could make evacuation even worse and removes an obstacle to growth in protected areas which would further exacerbate our ability to evacuate during a wildfire. ***Note that the Elnoka Senior Community project on Highway 12 in Santa Rosa was recently reduced by 60% (from 676 units to 272 units) to address concerns raised by the community and to address potential traffic impacts.***

C84-1

"Shelter-in-place", seems like a death warrant, given the extreme devastation caused by wildfires. That concept would certainly reduce vehicles exiting for your models and would also likely increase deaths. Why not address this matter honestly now?

--[if !supportLists]-->• <!--[endif]--><u>**CLIMATE CHANGE**</u>. The Fire Hazard Severity Zone Map referenced in Figure 2.3-1 of the Specific Plan is undated—what is the date of the information you are relying upon?

C84-2

<u>Figure 2.3-1 of Specific Plan in inaccurate</u>. It does not reflect the fire damage along Sonoma Creek to the nursery on Trestle Glen or the loss of a home and other structures along Burbank Drive in the 2017 Nuns Fire.

CalFire is updating the Fire Hazard Severity Zones Maps for the first time since 2007. The

new maps are to be released before the end of the year. Have these been taken into consideration? Climate change is here and affecting us now, with forecasts to get much worse. This must be addressed!

C84-2

How can Risk Factor tell me that properties near Sonoma Creek have a MAJOR risk of flooding which is in direct conflict to the Statement in Section 2.3 of the draft Specific Plan and the 100-year flood plain in Figure 5.3-1 titled "Maximum Heights" that "all 100 year and 500 year floods can be accommodated within the banks of Sonoma Creek without additional flooding". What recent analysis has been performed on flood risk or are you using old data? Last October, per Sonoma Water, an Atmospheric River brought 9" of rain on Sonoma Mountain, causing waste water collections systems to overflow in several locations, including all along Sonoma Creek and notably, at Burbank Drive in Glen Ellen. Is that public health hazard being addressed? The fact that so much water fell at one time is another piece of data pointing to climate change and the potential for flooding along Sonoma Creek.

C84-3

--[if !supportLists]-->• <!--[endif]--><u>**PARKING**</u>. How will you ensure that our Glen Ellen neighborhood on the South side of the SDC will not have to support parking for those seeking free parking not available at the campus?

Parking policy 3-27 in the draft Specific Plan says there will be NO free parking within the campus. Further, the plan is to provide less parking than would typically be required, to encourage biking and walking. What a disaster for the neighborhood to the South! People will park and store vehicles along Martin, Lorna, Cecelia, Burbank, Sonoma Glen Circle and Marty due to lack of parking spaces and to avoid charges. In addition, the concept of shared parking between residential and commercial is not realistic in practice. This will clearly burden an existing neighborhood to allow for increased development and profit for the developer and pretend there are fewer vehicles. Unacceptable!

C84-4

--[if !supportLists]-->• <!--[endif]--><u>**GLEN ELLEN, NOT ELDRIDGE**</u>. PLEASE explain why the Glen Ellen neighborhood South of the SDC continues to be disrespected by calling us Eldridge? Are you unilaterally deciding to change our name from Glen Ellen to Eldridge so you don't have to acknowledge that you are in fact dividing our Glen Ellen community? Reference Table 4.5-1, Summary of Impacts for Alternatives, Page 575, Item 3.9-1 (sic) which

C84-5

is under 3.10 Land Use and Planning.

We are Glen Ellen. Our property tax bills say Glen Ellen, as do our driver's licenses and passports. Eldridge was the SDC campus only and they had their own post office. The SDC and post office are closed. As such, the SDC property is the donut hole of Glen Ellen and should be considered a part of Glen Ellen, not a new town to divide our Glen Ellen community. The development should be in scale that fits the character of the existing community and open space. The proposed scale is simply too much and would be appropriate for San Jose, not Glen Ellen.

C84-5

I participated in the outreach over the years, believing the County was listening to the Community and that the County would embrace a reasonable plan that the Community could support. Instead, you are pushing for the maximum and driving an incompatible plan. Despite pushing an overbuilt plan, you are failing to provide the amount of affordable housing we would support. Clearly there is another agenda which has nothing to do with our Community and affordable housing. I ask that you scale back and restore our faith in our County government.

C84-6

Thank you.

Sharon Church

Proud 30-year resident of Glen Ellen

15241 Marty Drive

Glen Ellen, CA 95442

707-287-5299

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Sherry Smith, LCSW
PO Box 157
Glen Ellen, CA 95442
(707) 480-8191 gadfly@sonic.net
September 14, 2022

Brian Oh, Comprehensive Planning Manager
Brian.Oh@sonoma-county.org
Permit Sonoma, County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403

Re: Draft Environmental Impact Report
Sonoma Developmental Center, 15000 Arnold Drive
Eldridge, CA APN: 054-090-001

Dear Mr. Oh,

I was a social worker at Sonoma State Hospital (SDC) from 1979-1981 when over 1,000 employees, including Psychiatric Technicians, worked at least 4 different shifts to provide services and care to over 1,000 residents with developmental disabilities.

I oppose the development of 1,000 new homes and a hotel in Eldridge. I support the transfer of 765 acres for open space conservation to protect the wildlife corridor, historic Eldridge Cemetery, two lakes, and Camp Via. This would help meet both the federal and state goals for land and water protection. Organizations, including the Sonoma Ecology Center and Sonoma Land Trust, have previously discussed concerns about preservation and I believe their experts will further address the issues of aligning the County Specific Plan process and EIR only after the State of California announces the RFP selection. C85-1

The driving force behind the Site Specific Plan is to be "fiscally feasible." (Bradley Dunn, *The Sonoma Index-Tribune*, 8/17/22, page A9) Fiscal feasibility is linked to the State of California's plan to pass along to a developer approximately $100 million in toxic clean-up costs at SDC.

The Site Specific Plan briefly mentions some of the past abuses to clients at SDC. Over 5,400 men, women, and children from ages 7 to 70 were sterilized without their consent. https://ec.ac.lsa.umich.edu The State apologized and offered $25,000 to sterilized victims. https://victims.ca.gov ; https://dredf.org If none of the SDC victims apply for and collect compensation, perhaps because none of them are alive, I suggest that California allocate the $100 million that should have compensated these victims to pay for the toxic clean-up at SDC. I don't know if the State apologized or compensated any clients for other violations of civil and legal rights and abuses at SDC during the past 100+ years. Another option might be to allocate $100 million for affordable and accessible housing and services for people with developmental disabilities at SDC and infill housing in urban areas.

Traffic: The EIR should fully address the impact of increased traffic. I see no reference to traffic patterns when SDC was open. I observed traffic slowdowns on Arnold Drive during shift changes. Stop signs on Arnold Drive and surrounding streets within Eldridge slowed down rush hour traffic. During shifts, most employees walked between buildings. Staff who commuted by bicycle along Arnold Drive to SDC risked getting hit by cars since there were no bicycle lanes. In the past 40 years, though various groups have lobbied for more and better bike lanes, the C85-2

County of Sonoma and Cal Trans haven't significantly improved Arnold Drive for bicyclists traveling between Glen Ellen and Boyes Hot Springs or on Highway 12.

The report recommends installing a new traffic light at Harney and Arnold in Eldridge, which might have reduced congestion during shift changes 40 years ago. Traffic lights are currently located at Arnold Drive and Highway 12 in Glen Ellen and a few miles down the road on Arnold Drive at Boyes Blvd in Boyes Hot Springs. A roundabout was installed at Aqua Caliente Road and Arnold Drive a few years ago. C85-2

During construction of new homes, businesses, etc. there are few mitigation measures suggested. Attached are photos of a construction site of what will be one new home on Chestnut Avenue in Aqua Caliente. Large trucks travel on several different narrow streets during the week. Neighbors hear the noise, dust is a problem, there's increased traffic, and a section of the road has been damaged. Imagine what Arnold Drive will be like if 1,000 homes are built in Eldridge.

3.6 Energy and Greenhouse Gas Emissions: The Summary of Impacts in the Draft EIR claims no mitigation measures are required for increased traffic and heavy equipment during construction, or when new buildings are completed. If each new home includes 1 car, the hotel is filled with over 100 guests, plus employees drive to work at the hotel and new businesses in Eldridge, unless everyone owns an electric vehicle or bicycles to the village, how can "none required" and "not applicable" be listed under the impact and mitigation measures for energy and greenhouse gas emissions? C85-3

3.7-1 Earthquake: "No mitigation measures required." I disagree. The report doesn't discuss the Rodgers Creek Fault in Sonoma County. Refer to https://usgs.gov which details a higher resolution map of this fault within the past few years. They predict a 33% chance of a "6.7 earthquake on the combined Rodgers Creek-Hayward fault system" sometime between now and 2043. p. 25, p. 203

To give an example of what might happen, during the October 17, 1989 Loma Prieta earthquake (magnitude of 6.9), 3,757 people reported injuries, 63 people died, buildings collapsed, infrastructure—pipelines, overpasses, bridges, and roadways—destroyed, and a World Series game stopped. C85-4

3.8-6 Emergency Response or emergency evacuation plan: I disagree that no mitigation measures are required. Eldridge is part of Evacuation Zone SON-6A5. In past public comments, I mentioned that during the Nuns Fire evacuations in 2017, my friends drove for over four hours from Agua Caliente to reach a hotel in Rohnert Park. The drive normally takes between 30-45 minutes. With approximately 2,000+ new residents in Eldridge, it would take more than an extra minute or two for residents and employees to evacuate safely from Arnold Drive north to Highway 12, west to Bennett Valley Road, or south to Highway 161. A new road from Arnold to Highway 12 might not reduce evacuation times since the fires of 1964 (Hanly Fire, Nuns Canyon Fire), 1966 (Cavedale Fire) and 2017 (Tubbs and Nuns Canyon Fires) spread from the hills and the wind blew and spread the fire west. Cal Fire and the County of Sonoma can provide more details on emergency evacuation routes and historical data about past fires. C85-5

3.8-7 Exposure to significant risk of loss, injury or death involving wildland fires
3.16 Wildfire: I disagree that no mitigation measures are required. If there's no risk, then why has my insurance more than tripled since 2017? Will new home owners in Eldridge be able to purchase fire insurance? Even if "affordable homes" are built at Eldridge, the insurance policies may not be affordable because companies, including CSAA, State Farm, etc. are well aware of the future risks of wildland fires to the destruction of homes and property in Eldridge.

C85-6

During the Nuns and Tubb Fires in 2017 and since then, residents have also been exposed to "pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire" each year. Climate change has increased risks throughout Sonoma Valley to the possibility of wildland fires in the future as well as smoke drifting into our region from fires in other areas of California.

3-14 Transportation: The County of Sonoma doesn't plan to increase bus service along Arnold Drive. There's no service overnight. Paratransit is an option for disabled residents, though not at night, on major holidays, and service is limited on other holidays.

C85-7

Any new resident of Eldridge who doesn't have a vehicle would be at increased risk of injury or death during a disaster or evacuation. Many of the residents who died during the Tubbs and Nuns fires were elderly or disabled.

Storm water and storm drain systems page 58: My father was an engineer for the Water Resources Division of the United States Geological Survey. He measured gauges along rivers, streams, and creeks, and was knowledgeable about flooding. When my friend decided to purchase a house in Glen Ellen, he asked my father to give an opinion about the possibility of Sonoma Creek flooding in the future. My dad walked the property and explained where the creek had risen in the past. It was his professional opinion, as a retired engineer, that there wouldn't be a "100 year" storm flooding Sonoma Creek. My father was wrong.

C85-8

In about 1997, Sonoma Creek flooded in Glen Ellen, then a catastrophic flood severely damaged my friend's home on New Year's Eve 2006/2007. He rebuilt. The *Sonoma Index-Tribune* followed the stories about the flooding. Supervisor Valerie Brown knew about this, as did the County of Sonoma Permit and Planning Department.

Any discussion about a possible "100-year storm" and Sonoma Creek not flooding is misguided because of Climate Change and past flooding in the region.

Storm drains are inadequate elsewhere in Sonoma Valley, including on Mountain Avenue. Homes have flooded and excess water pools on the street during heavy rainfall. Adding 1,000 homes, a hotel, and businesses will change both the surface and subsurface water flow in Eldridge. Infrastructure planning and construction needs to mitigate potential problems.

The USGS California Water Science Center and National Weather Service are perhaps the agencies most familiar with stream gauges along Sonoma Creek and the likelihood of flooding in the future.

Historic Properties: I oppose building a hotel on the site. Preserving historic properties at SDC could involve local labor and trade groups and nonprofits in providing Hands-On Preservation Experience (HOPE Crew) to young people interested in learning about preservation and historic trades. https://www.preservationpriorities.org

The Site Specific Plan suggests that the Historic Main Building might be part of a lobby within a new hotel. I doubt a developer would install a plaque on the Historic Main Building/the proposed hotel site explaining how the civil and legal rights of patients at SDC were violated for decades.

C85-9

An example of a historic site transformed into a luxury hotel is the façade of the St. Louis Hotel, built about 1838. A plaque installed at the Omni Royal Orleans Hotel in the French Quarter of New Orleans mentions its historical significance. Black men, women, and children were auctioned on the block in the rotunda at the St. Louis Hotel. I doubt that few Omni Hotel guests today read the plaque or realize what really happened at the site during the 1800s or that newspapers and posters advertised sales of enslaved people every day, except Sunday. The New Orleans Slave Trade Marker and Tour App; https://neworleanshistorical.org.items/show/926

In March 2021, the Glen Ellen Historical Society presented a proposal for an historic center at SDC. They nominated the Sonoma Developmental Center for listing on the National Register of Historic Places. The Adaptive Reuse Potential Evaluation March 2021 Report assessed SDC buildings listed in Appendix C of the Site Specific Plan. The state of Maryland transferred Crownsville State Hospital to Anne Arundel County for preservation. This is one example of how a state, county, nonprofits, and individuals are transforming a former state institution. (refer to National Trust for Historic Preservation. 8/4/22 article attached)

I hope the state, county, nonprofits, Regional Centers, disability rights groups, individuals with developmental disabilities and their families, and other interested organizations and individuals will help transform the SDC site into a place everyone might enjoy in the future.

Sincerely,
Sherry Smith, LCSW

Attachments: Photos of Chestnut Avenue construction site, Evacuation Zone SON-6A5, Vision for Former Crownsville State Hospital Centers Nature and Healing.

cc: Sonoma County Planning Commissioners Carr, Ocana, McCaffery, Koenigshofer, Reed; Gerald McLaughlin, Project Manager, California Department of General Services, Asset Enhancement, Asset Management Branch, Gerald.McLaughlin@dgs.ca.gov; Governor Gavin Newsom; Susan Gorin, District 1, David Rabbitt, District 2, Chris Coursey, District 3, James Gore, District 4, Lynda Hopkins, District 5, Sonoma County Board of Supervisors; Assembly member Cecilia Aguiar-Curry; State Senator Mike McGuire; North Bay Regional Center; Disability Rights California; DREDF; Doug Bosco, California Coastal Conservancy; Sonoma Land Trust; Sonoma Ecology Center; Sonoma City Council; Greg Sarris, Tribal Chairman of the Federated Indians of Graton Rancheria; Leonardo Lobato, Executive Director, La Luz; Sierra Club; Habitat for Humanity; Jack London State Park; Glen Ellen Historical Society; NASW; Justice in Aging

From:	TOM BENTHIN
To:	PlanningAgency; Brian Oh
Cc:	BOS; engage@sdcspecificplan.com; Susan Gorin; district3; district4; David Rabbitt; Lynda Hopkins; senator.dodd@senate.ca.gov; senator.mcguire@senate.ca.gov
Subject:	Our Public Comment on SDC Specific Plan and DEIR – Please SCALE IT BACK
Date:	Thursday, September 15, 2022 11:31:51 AM

EXTERNAL

Dear Sonoma County Planning Commissioners,

We live in Glen Ellen and are asking you to please ***not support the SDC Specific Plan or DEIR as proposed by Permit Sonoma***. Instead, please direct Permit Sonoma to:

1. **Scale Back Size of Development** to 450 or fewer homes and require that most of them be affordable to the majority of people who live in Sonoma Valley. Eliminate the hotel, retail and commercial space that is already provided in Glen Ellen.
2. **Support Historic Preservation Alternative** as it is the most environmentally sound.
3. **Protect Open Space** by providing enforceable timeline, boundaries and actions for permanently preserving open space and keeping it in public hands.
    a. In the DEIR, analyze the impacts of and add enforceable measures to reduce impacts of proposed new uses in the open space including agriculture, agricultural processing, tasting rooms, farm stands, recreation, parking lots, geothermal development and sports facilities (see Table 4-3 of Specific Plan).
    b. Increase setbacks along Sonoma Creek, Riparian areas and the Sonoma Wildlife Corridor to at least 100 feet, instead of inadequate 50 feet as proposed.
4. **Wildfire:** Revise wildfire evacuation impacts to reflect on-the-ground experiences during recent wildfires and new county wildfire risk and hazard maps. Eliminate the shelter-place as there is no evidence it would save lives. Develop and add enforceable Conditions of Approval for Wildfire to reduce and prevent risk as there currently are none.
5. **Climate Crisis:** Given the County's Climate Crisis Resolution and commitments to reduce climate changing emissions (GHGS) from driving and other sources, revise the Specific Plan and DEIR with legally enforceable measures to reduce climate emissions, such as building fewer homes, reusing and demolishing fewer buildings, providing transit.
6. **DEIR is Inadequate** While the so-called self-mitigated Specific Plan contains many general policies, goals and conditions of approval to address environmental impacts, the DEIR falls short of CEQA requirements. The DEIR does not adequately analyze and prevent or reduce environmental impacts in most if not all of the areas studied as evidenced by few actual requirements and many vague words such as "promote" or "encourage" or "if feasible." The DEIR needs to be revised and the Conditions of Approval strengthened and moved into a legally enforceable Mitigation and Monitoring Program.

C86-1

We are asking this as residents whose home burned in the 2017 fires and who have rebuilt. Having had to flee the Nunn Canyon fire, we are intimately aware of the dangers posed by a greatly increased population here to evacuation, since there are only two roads leading out of the Valley to the south and one to the north. We are already concerned about our ability to have adequate water from our well due to the ongoing climate crisis-fueled drought. We are concerned about plans that would massively increase the population and traffic, leading to

C86-2

C86-2

dramatic changes to our town. Imagine if we proposed more than doubling the size of the town *you* lived in. And we are concerned about the ecological impact on our wildlife and watershed area.

Sincerely,

Stephanie, Tom, Julian, and Gioia Benthin

12600 Dunbar Rd
Glen Ellen, CA 95442
cell 707-363-5867

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Steve Sherer
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov
Subject:	Draft EIR Comments: SDC Specific Plan
Date:	Monday, August 22, 2022 5:43:50 PM

EXTERNAL

As a resident of Glen Ellen and, as a result, a neighbor of the Sonoma Development Center, we are writing to express our great concern over the lack of planning for the SDC being transferred from its present configuration and control.

C87-1

In spite of the Board of Supervisor's instructions to have a specific plan with fewer than 1,000 homes, the Drafts propose 1,000 residential units. In addition, substantial commercial development is proposed. Shouldn't we STOP and weigh the consequences of not having all the vital information related to the proposed SDC plan??

We think of the impact of 1,000 homes and commercial development with the potential population increase of between 2,000 and 4,000 people should make you take notice and consider the proposed change in the character of our community. This proposal will change the look and landscape of the entire Sonoma Valley. If this type of population density is permitted, it should take place among the already existing cities in our County.

We would also point out that the size of the proposed population increase would materially increase the traffic on Arnold Drive, downtown Glen Ellen and Highway 12. This could have a very serious impact on the ability of people to get out and emergency vehicles to get in whenever there was a fire or other emergency. I hope you will remember the traffic blockage at Oakmont that prevented people leaving at the time of the big 2017 & 2020 fires.

C87-2

Thank you for considering and passing on our concerns while taking action to prevent irreversible damage to our Sonoma Valley and its residents.

Steve Sherer & Betty B. Sherer
Morningside Mt. Road, Glen Ellen

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: sue rankin
To: Brian Oh
Subject: Sonoma Developmental Center
Date: Monday, September 19, 2022 3:41:09 PM

EXTERNAL

Regarding the Proposal to develop the Sonoma Developmental Center, the following reasons demonstrate why this ill-conceived idea is not feasible:

Sonoma County has become heavily impacted by:

Increased traffic & congestion

Increased traffic violations & accidents – many of which go unnoticed & unprosecuted

Excessive speed & traffic on Hwy 12, Bennett Valley Road, Sonoma Mountain Road, Grange, Pressley Roads

Bikers cannot ride safely on Hwy 12, Bennett Valley Road, Pressley, Grange, Sonoma Mountain Roads – too much speed, too many cars, no enforcement – no one should risk their life on Bennett Valley Road!

Clogged access streets, arteries and highways – causing unsafe situations

Difficulty to access shopping centers, businesses & lack of parking

Inability for first responders to readily access emergencies due to excessive traffic

Inadequate funds for first responders, police, fire to handle the increasing volume of calls - if on the ballot, many people will not even contribute

No, we don't need more traffic lights! They only impede the already slow, congested traffic!

C88-1

More houses?

More high density living?

LESS WATER?? YOU'VE GOT TO BE KIDDING!

- We, in Bennett Valley & Rincon Valley, are already seeing our wells run dry; are being forced to move or drill new, more expensive, deeper wells, spending thousands and thousands of dollars to drill and maintain a small, private well system – while the developers, wineries and commercial growers should be paying their fair share! Talk about unfairness! The county could be making a fortune from those commercial developers and vineyards.. exactly like Sonoma Development Center!
- Where does the county actually think the necessary water supplies will come from by over-populating and over-building?
- Is it not the time to seriosuly prepare for the future?
- Is it not the time to be responsible and prepare for the global warming issues NOW?

C88-2

The excuse for allowing wildlife to more freely is an excuse for the handful of non-profits to channel private funds for collaring mountion lions and watching them roam onto private citizens/rancher properties for a free meal. This “political” issue should not be part of the decision to develop such a high density project. Wildlife management belongs to California Fish & Wildlife, not to those profiting from the wild animals that roam freely in Sonoma County!

As for “historic preservation” or a “more reasonable footprint” that will not provide more open space. Even those developments will clog more streets, highways, require more water and cause more havoc within the county. Look at Fountain Grove and Coffey Park. Those high density houses burned to the ground! They did not reduce wildfire risk at all.. and will not do so in the future.

C88-3

If anyone understands basic psychology, they’d understand that a few rats living in a box can survive.. but when you put far too many rats in a box, they cannot prosper or survive.

To many, this so-called “development” is, again.. all about money for the county and the rich & greedy developers!
The Sonoma Developmental Center will certainly not enhance the lives or happiness of the residents who chose to live here first!

Sincerely,
Sue Rankin

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Sydney Randazzo
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov
Subject:	Draft EIR Comments: SDC Specific Plan
Date:	Saturday, August 20, 2022 1:30:18 PM

EXTERNAL

Dear Mr. Oh—

I sat in on the Zoom calls that were held prior to the development and release of the SDC Specific Plan and Draft Environmental Impact Report.

I appreciate that on the surface it was determined that the major concerns of the Community and the Board of Supervisor's were considered, but not deemed to be in conflict with the Report. However, having lived in this area for 14+ years, traveling on Hwy 12 and/or Arnold daily+, both two-lane "highways," that traffic flow will absolutely be impacted by the increase in of 1,000 homes (with potentially 2.5+ residents per home) —particularly if/when there is need for evacuation

C89-1

This disconnect highlights the inadequacy and inefficiency of our current approach to planning and development. The draft specific plan fails to respond to the challenges of our time—including wildfire, drought, and biodiversity loss.

As a resident I encourage you to:

- Engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022.

C89-2

- Re-draft in meaningful planning for SDC by aligning the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.

Thank you in advance for your consideration.

Sydney Randazzo
310 Trinity Rd.
Glen Ellen, CA 95442

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.

Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Teri Shore
To:	PlanningAgency; Brian Oh
Cc:	Susan Gorin; BOS; Greg Carr; engage@sdcspecificplan.com
Subject:	SDC Specific Plan and DEIR Public Comment Planning Commission 9.15.22
Date:	Thursday, September 8, 2022 6:09:54 PM
Attachments:	TShoreSig.jpg ShoreSDC.SP.DEIR.PC.9.15.22.pdf

EXTERNAL

Dear Planning Commissioners and Brian Oh,

Please distribute these public comments on the SDC Specific Plan and DEIR to all Planning Commissioners for the 9.15.2022 public hearing AND include them in the public administrative record for public comment on both the Specific Plan and the DEIR. It contains both.

Comments are pasted below and attached.

Thank you for your consideration.

Teri Shore
515 Hopkins St.
Sonoma, CA 95476

Teri Shore
Environmentalist
515 Hopkins St.
Sonoma, CA 95476

Sent VIA EMAIL

September 9, 2022

To: Sonoma County Planning Commission, Permit Sonoma and Board of Supervisors

RE: Public Comment on SDC Specific Plan and DEIR – Scale it Back and Protect Open Space!!

Dear Sonoma County Planning Commissioners,

Please do not support the SDC Specific Plan or DEIR as proposed by Permit Sonoma. I will be submitting more detailed comments by the deadline. At this time, I urge you to please direct Permit Sonoma to:

1. **REVISE DEIR TO MEET CEQA**: Revise and strengthen the Draft Environmental Impact Report to meet the requirements of California Environmental Quality Act by analyzing and preventing or reducing all negative environmental impacts by scaling back project, avoiding impacts and providing legally enforceable mitigation measures in **a** Mitigation and Monitoring Program. As drafted the DEIR is not adequate to meet

C90-1

CEQA. It has zero mitigations for any environmental impacts, including two that are "significant and unavoidable:" historic preservation and VMTs.

C90-1

2. **REVISE SELF-MITIGATED SPECIFIC PLAN:** Revise and strengthen the Specific Plan Conditions of Approval to be legally enforceable requirements and recast as mitigation measures in the DEIR, as above. As drafted, the "self-mitigating" Specific Plan does not mitigate significant negative environmental impacts. The Conditions of Approval only apply to half of the environmental areas required for study under CEQA. And there are none for critical issues such as wildfire. Most of the C of As for biological resources apply only to construction, not operations or maintenance, and are based mostly on existing state law or Best Management Practices, which are not in statute.

   All Specific Plan Goals and Policies need to be specific, strong and enforceable. Otherwise, they are practically meaningless. Please remove vague words such as "promote" or "encourage" or "if feasible." Replace with "require", "shall" or "must." These strengthened Goals and Polices then need to be made Conditions of Approval and recast as Mitigations in the DEIR in a Mitigation and Monitoring Program.

C90-2

   If CofAs, policies or goals can't be made specific, then remove them as they do not mitigate environmental impacts. Having a Self-Mitigated Plan is not part of CEQA and does not necessarily meet CEQA; and certainly not in the case of the SDC Specific Plan and DEIR.

3. **SCALE BACK DEVELOPMENT AND CHANGE PREFERRED ALTERNATIVE: Scale back the development** to 450 or fewer homes and require that most of them be affordable to the majority of people who live in Sonoma Valley. Eliminate the hotel, retail and commercial space that is already provided in Glen Ellen. Change the Preferred Alternative to the Historic Preservation Alternative, which is the most environmentally sound.

C90-3

4. **DEVELOP A NEW ALTERNATIVE – Climate and Conservation:** All the alternatives are variations on a major mixed-use development that maximizes urban style use. In response to the public and elected officials, and to avoid and reduce significant environmental impacts per CEQA, the County of Sonoma must provide an alternative focused on keeping the entire property in public lands through donation or transfer to state or county parks, a non-profit, trust or other entity. This alternative would prioritize the permanent protection of the open space and the historic main campus to serve conservation, wildlife movement, natural resource protection, and climate benefits with no housing, no commercial development and no hotel or retail. The Marin Headlands and Presidio Trust are good examples of how public land was repurposed without overdevelopment.

C90-4

5. **PROVIDE SPECIFICS AND ADDRESS IMPACTS TO OPEN SPACE** – The Specific Plan and the DEIR mentions open space protection in general terms in several places, in various ways, but fails to provide a clear definition of "preserved open space," or to give the exact boundaries (other than in one general overlay map), or give details on how or when it will be protected, transferred or managed. Please direct Permit Sonoma to provide those details.

C90-5

   Preserved Open Space and Agriculture: The Specific Plan and DEIR make

sweeping statements about "historic agriculture" but do not explain the extend of past agriculture in terms of types or amount of acreage. The impacts of allowing agriculture on open space that is currently not in agriculture must be analyzed and the environmental impacts avoided or mitigated in the DEIR.

Unacceptable New Uses in Preserved Open Space: Table 4-3 (attached) of the Land Use Section of the Specific Plan outlines many new uses in "preserved open space" including wine tasting rooms, timber conversion, wholesale nurseries, sports facilities and several others that have not been analyzed under CEQA or addressed at all in the goals, policies or C of As of the Specific Plan. These "permitted" new uses in Preserved Open space must be analyzed, avoided or prevented and mitigated as required under CEQA and in my view NOT ALLOWED OR PERMITTED in Preserved Open Space.

SHOULD NOT ALLOW AS PROPOSED THESE USES IN PRESERVED OPEN SPACE TABLE 4-2 SPECIFIC PLAN

Agricultural Crop Production and Cultivation
Agricultural Processing
Animal Keeping: Beekeeping
Animal Keeping: Confined Farm Animals
Animal Keeping: Farm Animals
Animal Keeping: Pet Fancier -
Farm Retail Sales
Farm Stands
Indoor Crop Cultivation
Mushroom Farming
Nursery, Wholesale
Timberland Conversions, Minor
Nursery, Wholesale
Tasting Rooms

C90-5

SHOULD NOT ALLOW AS PROPOSED IN SPECIFIC PLAN WITH CONDITIONAL USE PERMIT
Recreation and Sports Facilities: Recreation Facility, Outdoor
Recreation and Sports Facilities: Rural
Sports and Recreation

6. **SONOMA VALLEY WILDLIRE CORRIDOR AND RIPARIAN SETBACKS:** Increase setbacks along Sonoma Creek, Riparian areas and the Sonoma Wildlife Corridor to at least 100 feet, instead of inadequate 50 feet as proposed.

C90-6

7. **WILDFIRE:** Revise wildfire evacuation impacts to reflect on-the-ground experiences during recent wildfires and new county wildfire risk and hazard maps. Eliminate the shelter-place as there is no evidence it would save lives. Develop and add enforceable Conditions of Approval for Wildfire to reduce and prevent risk as there currently are none.

C90-7

8. **CLIMATE CRISIS:** Given the County's Climate Crisis Resolution and commitments to reduce climate changing emissions (GHGS) from driving and other sources, revise the Specific Plan and DEIR with legally enforceable measures to reduce climate emissions, such as building fewer homes, reusing and demolishing fewer buildings, providing transit. If the county is really serious about the climate emergency, it would not propose building a new town in the middle of open space and a high wildfire area. It should maintain its commitment to city-centered growth and open space protection.

C90-8

9. **STATE STATUTE:** The County of Sonoma needs to revisit its interpretation of the state statute in respect to the Specific Plan and EIR as follows:

Housing: State Statute says the following:
It is the intent of the Legislature that priority be given to affordable housing in the disposition of the Sonoma Developmental Center state real property.
The agreement shall require that housing be a priority in the planning process and that any housing proposal determined to be ***appropriate for the property*** *shall include affordable housing. It is further the intent of the state that priority be given to projects that include housing that* ***is deed restricted to provide housing for individuals with developmental disabilities.***

C90-9

Nowhere does the statute call for maximum urbanization of the SDC nor to create a new town, hotel, commercial or retail. The scale of housing and development is not appropriate for the rural property surrounded by ag land. Therefore, the County of Sonoma's Specific Plan and DEIR are not consistent with and misinterpret the state statute. Both need to be revised to align with state statute and public comment by scaling back the development, eliminating market rate housing and other development, and providing deed-restricted affordable housing to individuals with developmental disabilities.

Open Space: State Statute says the following:

The Department of General Services recognizes the exceptional open-space, natural resources, and wildlife habitat characteristics of the Sonoma Developmental Center.

It is the intent of the Legislature that the lands outside the core developed campus and its related infrastructure be preserved as ***public parkland and open space.***

C90-10

The disposition of the property or property interests shall provide for ***the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible*** *and shall be upon terms and conditions the director deems to* ***be in the best interests of the state.***

The state statute makes clear that the permanent protection of open space lands is for public parkland and natural resources as a public resource. The County's Specific Plan and DEIR are inconsistent with state statute as they propose introducing agriculture, sports fields and other uses without consider the negative environmental impacts of doing so.
However, the state statute also conditions protection of the open space "to the extent feasible" and to "be in the best interests of the state." That is why the county Specific Plan and DEIR must provide details on how, when and with what entities that the open space will be protected. If not, then the state legislature will need to act to ensure the protection of the open

space and that none of it is sold off for development or other inappropriate use.

C90-10

Economic Feasibility: State Statute says the following:

The planning process shall facilitate the disposition of the property by amending the general plan of the county and any appropriate zoning ordinances, completing any environmental review, and ***addressing the economic feasibility of future development****.*

C90-11

The County of Sonoma's entire Specific Plan and DEIR is tied to this one mention of economic feasibility to the exclusion of just about everything else. The state did not mandate that the project be economically feasible or financially feasible but to address it. Economic feasibility changes constantly with market conditions. Specific Plans and General Plans are written for long periods of time when economic feasibility is certain to change. The County is misinterpreting state statute to maximize urban development at the SDC site. The proposal could also be economically feasible if, for example, the state paid to clean up the site, then transferred it to state parks or another public conservation entity. A bond measure or initiative could be written. However, the County looked at only one option or alternative: making profits for a private developer. This lacks vision and is inconsistent with state statute and CEQA

The Planning Commission must direct Permit Sonoma to revise the Specific Plan and DEIR to be consistent with state statute and public comment and provide new alternatives that don't focus entirely on urbanization and developer profits.

Well, that's about it from me for now. Thanks for your consideration.

Sincerely yours,

TShoreSig.jpg

Teri Shore
terishore@gmail.com

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

PUBLIC COMMENT - SDC DEIR AND SELF-MITIGATED SPECIFIC PLAN

Teri Shore – Environmentalist – 515 Hopkins St. Sonoma, CA 95476

August 24, 2022

Combined SVCAC – NVMAC – Springs MAC Special Meeting

Sonoma Developmental Center Draft Environmental Impact Report and Self-Mitigated Specific Plan

ORAL TESTIMONY

As two minutes isn't adequate time to make meaningful comments on the SDC Draft EIR and proposed Self-Mitigated Specific Plan regarding:

the preservation and transfer of the open space,

the proposed overdevelopment of the historic campus

or the significant and unavoidable environmental impacts that will increase driving and exacerbate the climate crisis,

prevent robust historic preservation,

degrade biodiversity and compromise the wildlife corridor,

increase wildfire risk and hazards and

that it will do little to address the housing crisis or increase equity in Sonoma Valley,

I will say that right now we members of the public and the community are overwhelmed and need professional legal advice to help us provide productive and detailed written comments. I urge the county, the city and elected officials to provide pro-bono legal advice now or help us fund raise to hire a legal advisor. I also call on interested members of the public to help us raise funds to hire an attorney with expertise in the California Environmental Quality Act. Please contact me at terishore@gmail.com and I will connect you with our SDC teams.

C91-1

INITIAL DRAFT WRITTEN COMMENTS

EIR MITIGATIONS VERSUS SELF-MITIGATED SPECIFIC PLAN

The County of Sonoma must immediately provide a detailed and legally accurate written explanation, description and rationale for preparing a DEIR with no environmental mitigations at all; and instead relying on a "Self-Mitigating" Specific Plan that contains goals, policies and a few "conditions of approval" that are based almost entirely on existing state laws as "mitigation."

C91-2

The county must explain the legal enforceability of the goals, policies and "conditions of approval."

My primary concern is that the goals and policies along with the Conditions of Approval that serve to "self-mitigate" the project do not meet the same level of legal and enforceable mitigation as in EIR mitigations and required Mitigation Monitoring and Reporting Programs.

A CEQA expert I recently talked to informally indicated no familiarity with the term "self-mitigated" projects under CEQA, and it does not appear in the current CEQA manual.

C91-2

Other comments:

VMTs – Significant and Unavoidable: The DEIR finds that the proposed SDC Specific Plan will undermine local, regional and state policies and commitments to address the climate crisis as it found *significant and unavoidable impacts in the areas of vehicle miles traveled.* That means that there is NO WAY to offset or mitigate the extra driving generated by all the new housing, retail, commercial development proposed at SDC. ***The County must not approve this project as proposed with these impacts if it is serious about addressing the climate crisis.***

C91-3

PRESERVE OPEN SPACE: The DEIR and SDC Specific Plan states that the open space will be preserved in several places; and provides a general overlay map. There are also statements about "working with Sonoma County to preserve the Open Space" and several other general reference. However, it does not provide any specific information on exact open space boundaries or when or through what mechanism the preservation and transfer will occur. ***A timeline and approach for transferring and preserving the open space must be added to the DEIR and Specific Plan Conditions of Approval to ensure that the open space gets transferred to county parks, regional parks and/or a public conservation entity and does not get transferred to a developer or other private owner.***

C91-4

GENERAL PLAN AMENDMENT: If the county moves forward to approve the DEIR and Specific Plan as proposed, it will amend the General Plan to forever change the Zoning at SDC from public facilities to residential, commercial, retail and hotel even if the community opposes it; and even if the state fails to accept the Specific Plan. ***The county should not rezone the SDC lands and its land use and zoning until a final plan for SDC is adopted that is acceptable to the community and/or any lawsuits are resolved.***

C91-5

CONDITIONS OF APPROVAL: The Executive Summary states that the Conditions of Approval are listed in Appendix A. They are not or at least I can't find them with a search for "Conditions of Approval." It appears that they are scattered throughout the DEIR. ***They need to be listed together in one place***. Right now, the COA only apply to a few categories such as Biological Resources, Hazards, Air Quality and Geology. Most are boilerplate text from existing state laws that would be required anyway. That does not seem adequate to address the environmental impacts as required under CEQA.

C91-6

WILDFIRE: There are no conditions of approval for wildfire; and the goals and policies are based on a future Emergency Response Plan that will be developed at some point. The Evacuation Time analysis seems unrealistic as it suggests that "added times" for travel during an evacuation range from 1 or 2 minutes to 37 minutes to get to Napa. It took people HOURS to evacuate from Kenwood and Sonoma Valley during recent fires. Also, the DEIR calls for the "requirement" for a shelter-in-place facility at SDC after 200 homes are built. There is no proven rationale for sheltering in place particularly in a High Fire Risk Area. ***The DEIR and Self-Mitigating SDC Specific Plan do not eliminate risk or wildfire hazard to insignificant levels.***

C91-7

HISTORIC ALTERNATIVE PREFERRED: If I had to choose one of the alternatives, I would choose the Historic Alternative as it is the environmentally preferred alternative.

C91-8

NO PROJECT ALTERNATIVE: ***The DEIR fails to provide a true No Project Alternative which fails to meet CEQA.***

C91-8

From: Terry Harrison
To: PlanningAgency; BOS
Subject: Sonoma Developmental Center
Date: Wednesday, September 14, 2022 4:39:39 PM

EXTERNAL

We keep encouraging more people to come into Sonoma County without any long range plans concerning transit, roads, water, energy and food (as we drive up the price of farmland).

300 new residences is plenty for SDC. Recondition present ones if possible.

C92-1

Regenerative grazing and wild animals and open space are compatible and exist in many parts of the world including the US. The sheep, cows or goats are within enclosed fields rotating from one to another, leaving plenty of open space where grasses and other feed have been consumed without destroying the plants which are recovering and getting ready for the next rotation. The upper part of SDC should be zoned for this.

Terry and Carolyn Harrison

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Wildthyme
To:	Arielle Kubu-Jones; Karina Garcia
Cc:	Brian Oh
Subject:	Comments and Questions regarding the Draft EIR
Date:	Wednesday, August 24, 2022 1:35:54 PM

EXTERNAL

Attention: North Sonoma Valley MAC: Arielle.Kubu-Jones@sonoma-county.org
Springs MAC: karina.garcia@sonoma -county.org
CC Brian.Oh@sonoma-county.org

Comments and Questions regarding the Draft EIR
Water: Water availability concerns are at a crisis level. What exactly is the the water source for 1000 new homes or even for 450 new homes in the draft EIR?
Housing versus Houses: Why is building new houses proposed when the SDC housed 3000 in existing structures? Why not renovate, restore and repurpose the historic, beautiful buildings on the SDC campus before any new construction? The EIR must be modified to insure the first use of existing buildings.
Fire Prevention: New home construction is a magnet for wild fires. What special fire resistant construction will be used if these homes are built? Will this include fire resistant tile roofs and heavy plaster walls like those found on most of the historic buildings which were built to last and have lasted?
Wildlife: The SDC campus is an extension of an important wildlife corridor and passage between Sonoma Mountain and the Mayacamas Range. The area must remain open to wildlife coming through Jack London Park and traveling to the Audubon and Oak Hill preserves. What plans insure wildlife safe passage?
We look forward to hearing your response to our concerns.
Thank you,
The Filipello Family
The Thomsen Family
F. Horne, A. Chavez, J. Hansen

C93-1

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

TCE
ENGINEERING

Investment Securities $ Stocks* $ Agency* & Municipal Bonds**
Real Estate Consulting $ Property Management

154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Formerly NASD Series 7 & 63 Registered Rep, & Series 66 Financial Advisor.
Securities Not Available

Thomas C Ells, RCE 40656
MS Tax, MS Fin, MS Acc
ED, Galen's Gardens/SHS

Permit Sonoma, Mr Brian Oh, Planning Manager, SDC

Regarding: Sonoma Developmental Center (SDC) Specific Plan (SP) & Preliminary EIR (EIR)

Aug 27, 2022

Dear : Too Whom This May Concern; for Preliminary Discussions,

Though Permit Sonoma worked hard, produced >4000pgs, & created many potential alternatives within their Specific Plan/EIR process, they have overshot the mark creating a plan for the past, "fighting the last war" as we often do, and not taking advantage of the opportunity to present a plan for the future.

Why does it appear the SDC EIR and associated Specific Plan (characterized by the County's preferred Proposed Project Alternative) have defined and committed the County of Sonoma, as Lead Agency under CEQA, to a series of specific decisions, plans, and/or alternatives without fully considering other acceptable plans (under legislation 14670.10.5), alternatives, mitigation measures, and the Null Project.

Please explain why the County (Permit Sonoma) has allowed the EIR to be produced which does not address the mitigatable cumulative effects of waste generated by the proposed alternative over the Null Project hypothesis, to the extent where recommended building demolition of ~1.2M sq-ft produces a minimum of 161,000 cy of debris equal to 67 years of operation of the Proposed Project Alternative in addition to the equal amount of debris produced by the eventual demolition of the Proposed 1.2M sq-ft Project (∑=322,000 cy, or 134 years at the rate of the Proposed Project at completion); together with the project waste there will be an average cumulative waste of 19.8 tons/day or 1.5% of daily averages (2016-2020, per SP pg 603) ? Since we are already transferring all our solid waste away from Sonoma County because we do not have local landfill capacity, and our waste charges ($135/ton) are double the charge for Hazardous Waste ($50.97/ton asbestos waste) taken to Kettleman Hills landfill, this must be considered a significant mitigatable impact by Reuse and Historic Preservation of the existing buildings. At the local waste costs, this represents >$960,000/yr = ~$65M over the 67 years, from these 3 sources.

C94-1

Why is no mention made in the EIR or SP of GHG's which were imbedded and carried within the existing constructed buildings which will be released into the atmosphere by their demolition, nor is any mention made of the GHG emissions which are imbedded in the production of the new materials and resources which are expected to replace the demolished SDC buildings, these are significant long term mitigatable cumulative effects? Why has the EIR not addressed either of these cumulative GHG effects, from demolition, neither the before demolition GHG emissions sequestered in the existing buildings which will be released, nor the GHG emissions released in the production of the replacement 1.2M sq-ft of buildings together with their own lifecycle emissions released upon their demolition? These GHG's must be considered a significant mitigatable impact by their Reuse.

C94-2

TCE FINANCIAL 154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Why is no mention made in the EIR or SP of the cumulative effects of the opportunity lost to lead this community and the Global Community in re-visioning the future, from the past that we have, into the future that we need while using the existing buildings and infrastructure you demolish? C94-2

Why is Historic Preservation of the existing buildings considered by the EIR & SP to be financially infeasible and unmitigatable? This is not a fact, nor is it a reasonable conjecture from any basic set of reasonable assumptions, other than a prejudice against Historic Buildings in preference to the Cult-of-the-New. Historical Preservation and Reuse of these buildings is relatively simple. In particular, historic lumber is dimensionally greater and structurally superior, providing more insulative cavity, and other materials were more dense historically. History teaches us that the oldest buildings are the most energy efficient for their locations; such as Kiva & Adobe Structures of the America Southwest are stone or adobe to insulate against the heat, raised pole structures in the Indus Valley Civilization and Mounded Structures of the Mississippian Culture prevent flood inundation, Northern Long Houses of the Iroquois in the East and the Suquamish of the West are large multifamily dwellings and made of wood frames and bark covering to insulate against the cold, even Igloos of the Eskimo. Why have you neglected the consideration that almost every older building uses less energy than that which replaces it, despite the efficiency of the New Building? C94-3

Why is scant consideration, even superficial avoidance, of the topic of Hazardous Materials mitigation and removal given within the EIR and SP as a direct consequence of the building demolition, as opposed to “In-Situ” mitigation in place through reuse and Historic Preservation of the existing buildings; Diesel Tanks, Film Development, Chemical Storage, Paint Shops, Corporate Yards and Transportation buildings, all have significant potential for Hazardous Materials impacts, as well as, the asbestos insulation and lead based paint in the buildings? C94-4

Each of the above considerations, taken individually are significant impacts not covered by the EIR and SP, but there is also a cumulative effect of the above neglectful preparation of the EIR and SP, “a death by 1000 cuts” to the Historic Preservation (stated to be unmitigatable). Why has the cumulative effect of this neglectful preparation not been addressed within the EIR and SP, which then augers for and streamlines the process for replacement by the preferred Proposed Project Alternative as opposed to Historic Preservation? Can you explain how you are mitigating this neglect, in producing a cycle of demolition and reconstruction which has a cumulative effect on the environment due to exploitative expectations, the expectation that ‘everything I have should be new’, ‘we need the new’, ‘I need the new’? Again, why does the EIR and SP neglect the positive environmental impact the development could have by leading, rather than following old worn-out traditions of thinking, that have cumulatively placed us in our Climate Crisis?

Your Humble Servant

Thomas Chase Ells, ED, Galen’s Gardens/Samaritan Housing Society
Anthropologist, RCE 40655, MS Tax Law, MS Fin, MS Acc.
UCI Administrative Law Certificate in Hazardous Materials & Emergency Management

TCE
ENGINEERING

Investment Securities $ Stocks* $ Agency* & Municipal Bonds**
Real Estate Consulting $ Property Management

154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Formerly NASD Series 7 & 63 Registered Rep, & Series 66 Financial Advisor.
Securities Not Available

Thomas C Ells, RCE 40656
MS Tax, MS Fin, MS Acc
ED, Galen's Gardens/SHS

California State Department of General Services

Regarding: Sonoma Developmental Center (SDC) Sale to Galen's Gardens/Samaritan Housing Society

Aug 26, 2022

Dear : Too Whom This May Concern; for Preliminary Discussions,

Galen's Gardens/Samaritan Housing Society's offer [redacted] for "Improvements to the Environment" at Sonoma Developmental Center (SDC) to such an extent as to offset the value & price of any other offer.

The current process has gone off track, while Permit Sonoma's efforts at creating an EIR & Specific Plan process for development of SDC have produced Yeomen's effort of planning & exceptional avenues for creative visioning at SDC, they have shot clear past the demarcations of the community's desires/needs.

Galen's Gardens/Samaritan Housing Society offer is a "Null Hypothesis Project" proposal for "Improvement of the Environment" at SDC and Historic Restoration of the Historic main building ("Professional Education Building/PEC"), which exempts the proposal from CEQA. We in America suffer from a lack of vision, we have been convinced that the proper thing to do is to "Think Globally, but Act Locally" only. This is not correct, this is unscientific, it is anti-scientific and anti-American, we need to "Think Locally, and Act Globally", because that is scientific. What we want locally around us, we should want for all, and similarly with what we don't want near us. We've lost the Public will. See Appendix"A"Term Offer Sheet. C95-1

Our offer is simple: create a Climate Crisis Center; establish a Polytechnic Environmental Institute; reuse as many of the buildings and facilities as possible; prevent waste & GHG emissions in the demolition of the County Proposed Project Alternative (CPPA) of ~161,000 tons waste along with the replacement of these same buildings with another ~161,000 tons of future waste (∑=134yrs waste); establish 6-Agencies with 100units/ each of affordable housing, with each reserving 10 of these units for "short term rentals". We will use Camp Via as an RV site, and re-establish the water & waste treatment systems for wetlands. C95-2

The value of this proposal to the State is [redacted], and we would return all the property to the State at any time they wish (subject to the Housing & School Leases, and [redacted] Rehab Loan). Our only conditions for the creation of the Climate Crisis Center, the Polytechnic Environmental Institute and the affordable housing is [redacted] Endowment from California Coastal Conservancy, [redacted] Operating Budget ([redacted]) for the Polytechnic Institute, and the use of the property until it's return to the State. Please see attached Appendices for details.

Your Humble Servant

Thomas Chase Ells, ED, Galen's Gardens/Samaritan Housing Society
Anthropologist, RCE 40655, MS Tax Law, MS Fin, MS Acc.
UCI Administrative Law Certificate in Hazardous Materials & Emergency Management

TCE
ENGINEERING

Investment Securities $ Stocks* $ Agency* & Municipal Bonds**
Real Estate Consulting $ Property Management

154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Formerly NASD Series 7 & 63 Registered Rep, & Series 66 Financial Advisor.
Securities Not Available

Thomas C Ells, RCE 40656
MS Tax, MS Fin, MS Acc
ED, Galen's Gardens/SHS

Mr Brian Oh, Comprehensive Planning Manager, SDC
Permit Sonoma, County of Sonoma
2550 Ventura Ave.
Santa Rosa, CA 95403

Regarding: Sonoma Developmental Center (SDC) Specific Plan (SP) & Program DraftEIR (EIR) Comments 2

Sept 18, 2022

Dear : Brian Oh, & Too Whom This May Concern;

Why has County Staff/Consultants done the following, and what are your mitigation recommendations?:

The EIR & SP preparation violates BPC6731, without a Civil Engineer in responsible charge of Planning?

The EIR has committed the County to a course of action, new development, prior to EIR's Certification?
Historic Reuse appears proper, yet each price consequence results in expanded project impacts.
What is the economic obsolescence impact to the Springs/Glen Ellen of the proposed project?

The EIR and SP propose demolition of 1.2M sq-ft of buildings, along with the 1M+0.35M gal fresh water tanks, see Figure 4.3-1: "Historic Assets", without reference to local Wildfire protection. Why?

C96-1

The EIR & SP propose demolition of Historic Firehouse (c1932) without wildfire impact consideration?
EIR & SP neglect wildfire consideration, as not "High Fire Risk", though analysis excluded SDC?

Why does EIR & SP use uncalibrated (unrealistic) models, eg without reference to actual fire evacuation?

The EIR develops a series of conclusions as analysis, beginning after point in time of project completion?
The EIR assumes no cumulative effects to the proposed project; eg. GHG's and solid waste, but does not include project specific demolition, nor constructed lifecycle, GHG's & wastes? Why?

C96-2

The EIR assumes no cumulative effects from combining the proposed project wastewater into a down-stream waste treatment facility when a historic facility is located on site to recharge the wetlands/creek.

SDC is an Historic opportunity to propose and develop an integrated environmental & climate protective response to wildfire, in a traumatized and sensitized area, without which this proposal has a significant cumulative negative impact to the local & regional environment due to unrealized wildfire protections.

Why is EIR & SP preparation biased in favor of Standard-Operating-Procedure for new development?
There is, at great expense, no Professional caliber analysis within these documents, explain?

Your Humble Servant

Thomas Chase Ells

Thomas Chase Ells, ED, Galen's Gardens/Samaritan Housing Society
Anthropologist, RCE 40655, MS Tax Law, MS Fin, MS Acc.
UCI Administrative Law Certificate in Hazardous Materials & Emergency Management

TCE
ENGINEERING

Investment Securities $ Stocks* $ Agency* & Municipal Bonds**
Real Estate Consulting $ Property Management

154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Formerly NASD Series 7 & 63 Registered Rep, & Series 66 Financial Advisor.
Securities Not Available

Thomas C Ells, RCE 40656
MS Tax, MS Fin, MS Acc
ED, Galen's Gardens/SHS

Mr Brian Oh, Comprehensive Planning Manager, SDC
Permit Sonoma, County of Sonoma
2550 Ventura Ave.
Santa Rosa, CA 95403

Regarding: Sonoma Developmental Center (SDC) Specific Plan (SP) & Program Draft EIR (EIR)

Sept 18, 2022

Dear : Too Whom This May Concern; for Preliminary Discussions,

Though Permit Sonoma worked hard, produced >4000pgs, & created many potential alternatives within their Specific Plan/EIR process, they have overshot the mark creating a plan for the past, "fighting the last war" as we often do, and not taking advantage of the opportunity to present a plan for the future.

Why does it appear the SDC EIR and associated Specific Plan (characterized by the County's preferred Proposed Project Alternative) have defined and committed the County of Sonoma, as Lead Agency under CEQA, to a series of specific decisions, plans, and/or alternatives without fully considering other acceptable plans (under legislation 14670.10.5), alternatives, mitigation measures, and the Null Project. C97-1

Please explain why the County (Permit Sonoma) has allowed the EIR to be produced which does not address the mitigatable cumulative effects of waste generated by the proposed alternative over the Null Project hypothesis, to the extent where recommended building demolition of ~1.2M sq-ft produces a minimum of 161,000 cy of debris equal to 67 years of operation of the Proposed Project Alternative in addition to the equal amount of debris produced by the eventual demolition of the Proposed 1.2M sq-ft Project (∑=322,000 cy, or 134 years at the rate of the Proposed Project at completion); together with the project waste there will be an average cumulative waste of 19.8 tons/day or 1.5% of daily averages (2016-2020, per SP pg 603) ? Since we are already transferring all our solid waste away from Sonoma County because we do not have local landfill capacity, and our waste charges ($135/ton) are double the charge for Hazardous Waste ($50.97/ton asbestos waste) taken to Kettleman Hills landfill, this must be considered a significant mitigatable impact by Reuse and Historic Preservation of the existing buildings. At the local waste costs, this represents >$960,000/yr = ~$65M over the 67 years, from these 3 sources. C97-2

Why is no mention made in the EIR or SP of GHG's which were imbedded and carried within the existing constructed buildings which will be released into the atmosphere by their demolition, nor is any mention made of the GHG emissions which are imbedded in the production of the new materials and resources which are expected to replace the demolished SDC buildings, these are significant long term mitigatable cumulative effects? Why has the EIR not addressed either of these cumulative GHG effects, from demolition, neither the before demolition GHG emissions sequestered in the existing buildings which will be released, nor the GHG emissions released in the production of the replacement 1.2M sq-ft of buildings together with their own lifecycle emissions released upon their demolition? These GHG's must be considered a significant mitigatable impact by their (building) Reuse. C97-3

TCE ENGINEERING *154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com*

Why is no mention made in the EIR or SP of the cumulative effects of the opportunity lost to lead this community and the Global Community in re-visioning the future, from the past that we have, into the future that we need while using the existing buildings and infrastructure you demolish? C97-3

Why is Historic Preservation of the existing buildings considered by the EIR & SP to be financially infeasible and unmitigatable? This is not a fact, nor is it a reasonable conjecture from any basic set of reasonable assumptions, other than a prejudice against Historic Buildings in preference to the Cult-of-the-New. Historical Preservation and Reuse of these buildings is relatively simple. In particular, historic lumber is dimensionally greater and structurally superior, providing more insulative cavity, and other materials were more dense historically. History teaches us that the oldest buildings are the most energy efficient for their locations; such as Kiva & Adobe Structures of the America Southwest are stone or adobe to insulate against the heat, raised pole structures in the Indus Valley Civilization and Mounded Structures of the Mississippian Culture prevent flood inundation, Northern Long Houses of the Iroquois in the East and the Suquamish of the West are large multifamily dwellings and made of wood frames and bark covering to insulate against the cold, even Igloos of the Eskimo. Why have you neglected the consideration that almost every older building uses less energy than that which replaces it, despite the efficiency of the New Building? C97-4

Why is scant consideration, even superficial avoidance, of the topic of Hazardous Materials mitigation and removal given within the EIR and SP as a direct consequence of the building demolition, as opposed to “In-Situ” mitigation in place through reuse and Historic Preservation of the existing buildings; Diesel Tanks, Film Development, Chemical Storage, Paint Shops, Corporate Yards and Transportation buildings, all have significant potential for Hazardous Materials impacts, as well as, the asbestos insulation and lead based paint in the housing, hospital, and office buildings? Lack of consideration of this impact has direct impacts of needlessly and costly filling existing hazardous waste landfills, both individually and cumulatively, though mitigatable. C97-5

Each of the above considerations, taken individually are significant impacts not covered by the EIR and SP, but there is also a cumulative effect of the above neglectful preparation of the EIR and SP, “a death by 1000 cuts” to the Historic Preservation (stated to be unmitigatable). Why has the cumulative effect of this neglectful preparation not been addressed within the EIR and SP, which then augers for and streamlines the process for replacement by the preferred Proposed Project Alternative as opposed to Historic Preservation (HP)? Can you explain how you are mitigating these neglected impacts which should be further compared to the environmentally preferred HP, in producing a cycle of demolition and reconstruction which has a cumulative effect due to volume of waste, and on the environment due to exploitative expectations, the expectation that ‘everything I have should be new’, ‘we need the new’, ‘I need the new’? Again, why does the EIR and SP neglect the positive environmental impact the development could have by leading, rather than following old worn-out traditions of thinking, that have cumulatively placed us in our Climate Crisis? C97-6

Your Humble Servant

Thomas Chase Ells

Thomas Chase Ells, ED, Galen’s Gardens/Samaritan Housing Society
Anthropologist, RCE 40655, MS Tax Law, MS Fin, MS Acc.
UCI Administrative Law Certificate in Hazardous Materials & Emergency Management

TCE
ENGINEERING

Investment Securities $ Stocks* $ Agency* & Municipal Bonds**
Real Estate Consulting $ Property Management

154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Formerly NASD Series 7 & 63 Registered Rep, & Series 66 Financial Advisor.
Securities Not Available

Thomas C Ells, RCE 40656
MS Tax, MS Fin, MS Acc
ED, Galen's Gardens/SHS

Permit Sonoma, Mr Brian Oh, Planning Manager, SDC

Regarding: Sonoma Developmental Center (SDC) Specific Plan (SP) & Preliminary EIR (EIR) Comments 2

Aug 29, 2022

Dear : Too Whom This May Concern; for Preliminary Discussions,

Why has County Staff/Consultants done the following, and what are your mitigation recommendations?:

C98-1

The EIR & SP preparation violates BPC6731, without a Civil Engineer in responsible charge of Planning?

The EIR has committed the County to a course of action, new development, prior to EIR's Certification?
Historic Reuse appears proper, yet each price consequence results in expanded project impacts.
What is the economic obsolescence impact to the Springs/Glen Ellen of the proposed project?

The EIR and SP propose demolition of 1.2M sq-ft of buildings, along with the 1M+0.35M gal fresh water tanks, see Figure 4.3-1: "Historic Assets", without reference to local Wildfire protection. Why?

The EIR & SP propose demolition of Historic Firehouse (c1932) without wildfire impact consideration?
EIR & SP neglect wildfire consideration, as not "High Fire Risk", though analysis excluded SDC?

Why does EIR & SP use uncalibrated (unrealistic) models, eg without reference to actual fire evacuation?

The EIR develops a series of conclusions as analysis, beginning after point in time of project completion?
The EIR assumes no cumulative effects to the proposed project; eg. GHG's and solid waste, but does not include project specific demolition, nor constructed lifecycle, GHG's & wastes? Why?

C98-2

The EIR assumes no cumulative effects from combining the proposed project wastewater into a down-stream waste treatment facility when a historic facility is located on site to recharge the wetlands/creek.

SDC is an Historic opportunity to propose and develop an integrated environmental & climate protective response to wildfire, in a traumatized and sensitized area, without which this proposal has a significant cumulative negative impact to the local & regional environment due to unrealized wildfire protections.

Why is EIR & SP preparation biased in favor of Standard-Operating-Procedure for new development?
There is, at great expense, no Professional caliber analysis within these documents, explain?

Your Humble Servant

Thomas Chase Ells, ED, Galen's Gardens/Samaritan Housing Society
Anthropologist, RCE 40655, MS Tax Law, MS Fin, MS Acc.
UCI Administrative Law Certificate in Hazardous Materials & Emergency Management

From:	Tim Portwood
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov; Tim Portwood
Subject:	Draft EIR Comments: SDC Specific Plan
Date:	Wednesday, August 24, 2022 4:43:19 PM

EXTERNAL

Dear Mr. Oh,

I am writing to urge you to pause any further review or action on the Specific Plan and EIR for the Sonoma Developmental Center. This is necessary in order to ensure that:

1. The County Specific Plan process is aligned with the State's RFP process (i.e., after the State announces the RFP selection on October 24), and
2. The County Specific Plan and EIR describe and analyze the impacts of the actual proposal that the State selects rather than a hypothetical plan.

C99-1

Even though I live in West Sonoma County, I know that the SDC property is of vital importance as open space and as a critical part of a wildlife corridor, benefitting the entire county, region, and state. It would be disastrous and shameful for Sonoma County and the State of California to rush forward with a development plan that fails to adequately and meaningfully address climate change, wildfire, drought, and biodiversity loss.

Thank you for your consideration of my input.

Respectfully,

Tim Portwood

Tim Portwood
o: 707-865-9353 | c: 415-608-6893

Please consider the environment before printing this email.

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Vicki A. Hill

Land Use and Environmental Planning

3028 Warm Springs Road
Glen Ellen, CA 95442
(707) 935-9496
Email: vicki_hill@comcast.net

September 13, 2022

Sonoma County Planning Commissioners

RE: Preliminary Comments on Draft SDC Specific Plan and Draft EIR for 9/15/22 Meeting

Dear Planning Commissioners,

I am a land use planner and CEQA specialist in Sonoma County and have many concerns regarding the proposed large-scale SDC Specific Plan and the adequacy of the SDC Specific Plan Draft EIR. I am still reviewing the Plan and EIR and will submit detailed comments by the comment due date. However, I wanted to bring to your attention a few of the many issues that need to be addressed. Overall, the DEIR reflects a bias towards the proposed dense development and tends to dismiss the proposed plan's environmental disadvantages when comparing it to other reduced-scale alternatives. Substantial revisions are necessary to the EIR and Specific Plan to make the EIR adequate, under CEQA, and to create a plan that represents sound land use planning. C100-1

Specific Plan Scale

The planning process has failed to result in a plan that even remotely resembles a community-supported alternative. The promised community-driven process has not occurred. Despite widespread, valid public concerns about the proposed high-density plan and the Board of Supervisors direction to evaluate a plan with 450 to 800 residential units, the proposed Specific Plan still includes an extreme amount of development (1000 plus homes, 410,000 square feet of commercial), which is totally out of scale for this location outside of an urban growth boundary and in the middle of the semi-rural village of Glen Ellen. There is no project comparable to this size in the entire Sonoma Valley. This urban sprawl development, including a 120-room hotel and potential conference center, will, in effect, create a new city, in direct conflict with good land use planning principles and County growth policies. Yes, we need and want housing, but there must be a balanced approach that factors in site constraints, impacts, surrounding land uses, historic resource values, and limited transportation network. This balanced approach is even reflected in the plan's guiding principles (see DEIR page 5-6) but the plan fails to conform to these principles. Project objectives to "balance redevelopment with existing land uses" and "balance development with historic resource conservation" have been ignored. C100-2

The Draft EIR identifies significant, unavoidable impacts on historic resources and traffic from the proposed Specific Plan due to its size. There is no mitigation identified for destroying so many historic buildings and converting the site to a new urban development. These issues could be addressed with a smaller alternative.

Environmentally Superior Alternative

DEIR page 570 states: "Overall, the Historic Preservation Alternative is the environmentally superior alternative…" The text goes on to dismiss this alternative and minimize its environmental benefits. To say that the proposed plan's impacts are "largely comparable" to the impacts of smaller alternatives is false and misleading. The types of impacts may be the same, but the magnitude of impacts on traffic, climate change, historic resources, noise, biological resources, public services and land use would be much less with a reduced-scale alternative. The Historic Preservation Alternative is feasible and its size and scale should be pursued as the preferred plan. Some modifications to this alternative could be incorporated to further reduce impacts, such as even more adaptive reuse and more compact development design. It appears that some impact-reducing elements included in the proposed plan were arbitrarily excluded from this alternative (e.g., the road connection to Highway 12 for emergency access), thus making this alternative appear less environmentally advantageous. Also, there is no reason to conclude that this alternative couldn't achieve affordable housing goals. Compared to current and projected high construction costs for new development, adaptive reuse can be an effective strategy to reduce overall project **costs and impacts.**

C100-3

Deferral of Analysis

The Draft EIR defers analysis of impacts on some resources to a future time when individual projects are proposed. However, most if not all future projects will be exempt from CEQA under permit streamlining legislation so there will be no means to limit full buildout or implement much-needed future mitigation measures.

C100-4

Specific Plan Phasing

SDC Planning Advisory Team (PAT) members and public comments stressed the importance of project phasing to reduce impacts on the environment and on the community. There is only one requirement for phasing (Policy 4-3, which requires completion of at least 10,000 square feet of retail businesses and at least 200 housing units west of Arnold Drive before beginning construction of any housing east of Arnold Drive) and this policy does not reduce any environmental impacts. The Specific Plan itself has a section on "Recommended Phasing" but these provisions are advisory and not mandatory. The EIR must identify phasing as mitigation to help further reduce traffic and other impacts.

C100-5

Need for Performance Standards

Project phasing should be based on performance standards adopted for each environmental issue area. In this way, impacts can be monitored and additional mitigation measures developed, as needed. For example, there is no certainty that massive demolition and construction activities, as well as the introduction of a large mobile population to the site, will not dramatically affect the surrounding open space resources. Before proceeding with full buildout, it should be proven that the site can actually accommodate the projected buildout.

C100-6

Specific Plan Policy Language and Enforceability

Many of the policies in the proposed plan are intended to reduce/avoid impacts but the wording is such that it is not mandatory and many policies are not carried forward to Appendix A, Standard Conditions of Approval.

C100-7

Thus, these policies cannot be relied on to be implemented and fully mitigate impacts. Any policy that does not have a strong "shall" statement is not enforceable. C100-7

Jobs/Housing Growth (DEIR Section 5.1.1.2)

It is completely inaccurate to say that the proposed job growth of 940 jobs outside of an urban growth boundary is a "modest" number. The number of jobs cannot be compared to the county-wide number – this methodology purposefully minimizes the impact. Compared to the rest of Sonoma Valley, which is a distinct planning region, the addition of 940 jobs is significant and is growth-inducing. Also, there is no documentation of the need for these jobs in Sonoma Valley. The market study conducted as part of the Specific Plan alternatives report (November 2021, see sdcspecificplan.com/documents) determined that non-residential development did not generate overall revenues and did not contribute to financial feasibility. The alternatives report states: "Commercial and industrial uses may support building construction costs but are unlikely to have a significantly positive impact on overall development feasibility." Also, the EIR (page 11) states: "…the market demand for non-residential uses (with the exception of a hotel) is limited and higher employment levels will reduce financial feasibility." C100-8

While there is a large demand for affordable housing in Sonoma Valley, creating over 700 market-rate homes is definitely a significant growth-inducing impact because there is no existing demand for this high number. These housing units will not serve the existing Sonoma Valley population – they will attract people from outside the valley and outside of Sonoma County.

Comparison to Previous Institutional Use

The EIR analysis, including the growth-inducing section as well as other sections, attempts to justify the large-scale plan by erroneously comparing the proposed plan population and employee growth to the previous institutional use and number of clients/employees. This comparison is invalid and should not be used as a basis for over-developing the site due to the fact that: C100-9

- As an institution, SDC tread very lightly on the environment and adjacent community. At its most populous, most of the residents of SDC did not leave the property. They did not drive cars, they didn't go offsite to schools, doctors, restaurants, etc.
- Vehicle trips were primarily limited to employees divided into three shifts so that traffic was spread out, rather than concentrated at peak hours. There were no retail commercial uses or a hotel to generate trips.
- Because of the limited outdoor activities and absence of constant vehicle traffic onsite, people and cars did not interfere with wildlife movement; the campus was open, peaceful, and not occupied with uses that generated a substantial amount of traffic (e.g., hotel, restaurants, etc.).
- Employment and resident numbers at SDC reached a peak during a time over 50 years ago when there was very little cumulative growth in Sonoma Valley and both Arnold Drive and Highway 12 were still well-functioning roadways.

Nor is it valid to compare existing building square footage to proposed square footage in an attempt to minimize impacts, as it is the proposed **use** of the buildings that drives most of the impacts.

EIR Traffic Assumptions

There is no guarantee that people who live onsite will work there. That cannot be assumed for purposes of analyzing traffic impacts. Also, it cannot be assumed that the roadway connection to Highway 12 will be developed. Therefore, the traffic impacts are substantially underestimated in the EIR. C100-10

Wildlife Corridor Impacts

Despite many scoping comments, impacts on wildlife movement **through** the campus are not addressed in the EIR. The campus itself is part of the wildlife corridor and must be acknowledged as such. Furthermore, there is no overall prohibition or restrictions on fencing within the campus (only prohibition on wooden fences) so wildlife will likely be blocked from movement through the campus . There will be significant impacts on wildlife movement from the introduction of thousands of people and vehicles, as well as fences. C100-11

No Project Alternative Definition

Under the No Project alternative, it cannot be assumed that the state will take control of the site and that the county will have no land use authority. If the state proceeds with sale of the property, any private developer would be subject to county land use controls. The RFP issued by the State clearly states that the property is being offered for sale. The RFP contains no reference to the possibility for a long-term ground lease with private developers. Therefore, this is not a reasonable assumption. C100-12

Financial Feasibility

Despite making references to financial considerations, there is no definition or accurate assessment of the financial feasibility of the proposed plan or alternatives. While financial feasibility is required, there is no mandate to maximize revenues at the cost of other resources and values, or at the cost of reasonable land use planning. C100-13

Thank you for considering my comments. Please feel free to contact me if you have any questions or need clarification on any of these comments.
Regards,



Vicki Hill, MPA

I previously sent you some excerpts from the body and Appendix of the DEIR regarding the treatment of the water situation (attached). The reason for my interest in this specific topic is 2-fold:

1. We are in a severe and long-term drought environment due to increasing temperature and climate changes
2. SDC is blessed with an abundance of water resources which is highly unusual for any new development.

The language in the water section uses term "assumes". You cannot assume anything about utility services. Without all clear & adequate utility services development is challenged.

Buried in the appendix is a definitive statement that VOMWD can serve the full buildout over the next 25 years so why is the Department not being crystal clear about this in the water section?

The bulk of the Water Study (Appendix and paid for by the State) concerns obtaining the State Water rights and the existing water facilities (reservoirs & presumably pipes/pumps) which have held 800 ac feet or more every year since records have been recorded. SDC needs only 340 at full build out so there is a surplus available for the district to mitigate the long-term drought scenarios. This benefits the whole County.

C101-1

Now I understand that the water facilities are "off-site" and not part of the core campus DEIR discussion so I think a declarative paragraph should state that rather than mixing up the "surface water" discussion between off-site and on-site is required.

There is no discussion of what it would take financially and personnel wise to operate the Water Treatment Plant ("WTP") so use of the actual water resources is still a very open question. As it stands publicly there are no plans to turn all that water into a potable resource for the district. If true, that should be stated.

It is just the weirdest discussion of a major utility for a major development that I have ever read so being clear and straightforward about it will aid the defense of the document and better inform the public.

Just one last thought: I wrote a letter to the editor of the Sonoma Index Tribune that was published this Wednesday that might interest you.

DEIR SDC Specific Plan

Pg. 465

The District's most recently adopted Urban Water Management Plan (UWMP) acknowledges the District's plans to annex and serve the Proposed Project site**. It is assumed the Planning Area will be served by local, on-site surface water sources, and the District will be the water service provider.**122

122 Water Supply Assessment for the SDC Specific Plan. EKI / VOTMWD July 2022.

C101-2

Pg 466

All riparian water rights shall remain with the property. The state owns riparian water rights and pre-1914 and post-1914 appropriative water rights and owns and operates a municipal water supply, treatment, and distribution system on the property**. These rights may be held by the state for existing and future domestic uses on the property.**

Pg 467

Raw water transmission lines from the Sonoma Creek diversion and pump house to Suttonfield Lake, the lakes to the treatment plant, and water transmission lines between transfer tanks may need to be replaced based on the age of the piping, however an assessment of their condition is needed to determine if they can continue to be used to serve the Planning Area. **The water treatment plant will be evaluated for re-use by the water system operator.**

Water Supply Assessment Sonoma Developmental Center Specific Plan Valley of the Moon Water District – July,2022

However, details of the Proposed Project were not known at the time that the 2020 UWMP was published, and thus the Proposed Project was not included in the 2020 UWMP demand and supply analyses. It **is assume**d that the Proposed Project will be served by local, on-site surface water sources, and VOMWD will be the water supplier for the Proposed Project.

C101-3

This WSA concludes that, provided that all surface water rights associated with the SDC Property are available to be utilized by VOMWD to serve the Proposed Project, the Proposed Project will not adversely affect water supply reliability within the VOMWD Service Area. Based on currently available information and conservative estimates of projected demand, the VOMWD expects to be able to meet all future demands within its existing service area, inclusive of the Proposed Project in normal and multiple dry hydrologic years from 2025 through 2045. The shortfalls that are currently projected during single dry years will be addressed through planned implementation of the VOMWD Water Shortage Contingency Plan (WSCP).

Specific Plan

6.2

it is anticipated that following the adoption of this Specific Plan the site will be served by the Valley of the Moon Water District (VOMWD). The majority of water distribution pipes in the Core Campus will need to be replaced, a cost assumed to be borne by the development

C101-4

6.3

The existing infrastructure is primarily located outside of the Core Campus, so determining the ongoing operations and ownership of the assets will be a critical discussion between the State, County, and eventual master developer or developers.

The State owns a variety of water rights associated with the SDC property, including riparian water rights and pre-1914 and post-1914 appropriative water rights. State legislation mandates that the riparian water rights—rights to the water that physically touches the land, such as from Sonoma Creek—remain with the property and limit water usage to within the site, and that the State may continue to hold the other rights for existing and future uses on the property.

Determining the ownership and use of these water rights will be another critical decision for SDC's water supply going forward.

GOALS 6-E Water Supplies:

Safeguard SDC's water supplies and water rights, ensuring adequate availability of water for residents, businesses, fire suppression needs, ecosystem services, and groundwater recharge.

EKI Stud 2207

"This WSA concludes that**, provided that all surface water rights associated with the SDC Property are available to be utilized by VOMWD to serve the Proposed Project, the Proposed Project will not adversely affect water supply reliability within the VOMWD Service Area**. . Based on currently available information and conservative estimates of projected demand, the VOMWD expects to be able to meet all future demands within its existing service area, inclusive of the Proposed Project in normal and multiple dry hydrologic years from 2025 through 2045. The shortfalls that are currently projected during single dry years will be addressed through planned implementation of the VOMWD Water Shortage Contingency Plan (WSCP)." C101-5

6.2.2 Surface Water Rights Associated with the SDC Property The State of California Department of Developmental Services - Sonoma Developmental Center holds several water rights at multiple PODs on the SDC Property. The watercourses and PODs present on the property are identified in Figure 4. As summarized in Table 7, the water rights associated with the SDC Property include two appropriative rights and three combined riparian rights and pre-1914 rights.7 Each water right includes specific temporal and/or volumetric restrictions, described further in Appendix B, which govern diversions at each respective POD. The restrictions associated with the water rights summarized in Table 7 govern how much water can be diverted from each POD on the Proposed Project site, when it can be diverted, and how the water can be beneficially used. The statements on the Hill/Mill Creek, Roulette Springs, and Asbury Creek (Applications #S019164, #S019167, #S019167) have claims to both riparian and pre-1914 use. The pre-1914 claim is currently being used to divert from Hill/Mill Creek and Asbury Creek to Fern Lake for regional fire storage. The other two sources are used pursuant to appropriative water rights (License #3082 and #2451). By actively managing the on-site water rights, the SDC has historically been able to provide reliable year-round domestic water supply to serve all uses on the SDC site at least up to the recorded peak historical demand of 1,143 AFY (Appendix A). In 2019, the State of California enacted Government Code Section 14670.10.5 (SDC Legislation) that outlines the State's goals and objectives for the SDC Property, including the language pertaining to the existing water rights. Paragraph (f) states the following: (f) All riparian water rights shall remain with the property. The state owns riparian water rights and pre-1914 and post-1914 appropriative water rights and owns and operates a municipal water supply, treatment, and distribution system on the property. These rights may be held by the state for existing and future domestic uses on the property. **Based on the SDC Legislation, this WSA assumes that the water rights associated with the SDC Property and associated water supply infrastructure will be available to be utilized by VOMWD to serve water demands associated with the Proposed Project** C101-6

As discussed above, this WSA assumes that all existing water rights and water supply infrastructure associated with the SDC Property will be available for use by VOMWD to serve the Proposed Project demands on the occasion that the SDC Property is annexed into VOMWD's service area. Given that the total annual water demand for the Proposed Project at full buildout and occupancy is estimated to be 342 AFY, it is assumed that the local surface water supplies at the SDC Property will be sufficient to meet the demands associated with the Proposed Project under all conditions (i.e., current and projected, and for normal, single dry, and multiple dry years including a five-year drought period) based on the estimated 100% reliable yield of 356 AFY

C101-7

6.6

Thus, this WSA assumes that all existing water rights associated with the SDC will be available to be utilized by the VOMWD to serve the Proposed Project on the occasion that the SDC Property is annexed by the VOMWD. As discussed in Section 6.2.3, the available volume of local surface water is conservatively estimated to be 356 AFY in all year types, which is assumed to be supplemental to the VOMWD's collective supply portfolio for purposes of serving the Proposed Project. VOMWD has no current plans to develop groundwater supplies on the SDC Property.

Table 11

Projected **Normal Year** Water Supply and Demand (Scenario C) Sonoma Developmental Center Specific Plan, Sonoma County, California Scenario C: Inclusive of Local SDC Supplies and Proposed Project Demands

Table 12

Comparison of **Single Dry Year** Water Supply and Demand (Scenario C) Sonoma Developmental Center Specific Plan, Sonoma County, California Scenario C: Inclusive of Local SDC Supplies and Proposed Project Demand

From: gonzy52@comcast.net
To: Brian Oh
Subject: SDC - DEIR Comment
Date: Monday, August 29, 2022 9:02:05 AM
Attachments: DEIR SDC Specific Plan Water Notes.docx

EXTERNAL

Brian you requested comments on the DEIR and I focused on what I believe to the one on the most important topics that is treated in a casual and unclear way. Attached are sections of the water discussion that requires clarification:

1. If Valley of the Moon Water District is committed to serving and capable of serving the full buildout of the Specific plan that should be clearly stated rather than being buried in the Appendix of a recent report.
2. "**. It is assumed the Planning Area will be served by local, on-site surface water sources, and the District will be the water service provider."**
    a. This is the wariest and vaguest statement I have ever read in in an EIR on such an important topic. EIR cannot "assume" utility services for a development site.
    b. What does "on-site water source's" mean? Are these sources limited to the project area – the 200-acre campus? If so, there are no such sources. If it means the 800+ acre feet stored off campus and the water rights that provide that water than that should be made clear that VOM is committed to develop that tremendous source of water.
        i. To me the later should happen: 1/3rd of the stored water can be sold to the core campus customers and 1/3 can be sold to existing customers leaving 1/3 to in reserve. This would decrease the burden on the SCWA aqueduct which provides most of VOM's water currently.
        ii. Utility District's can float revenue anticipation bonds for the upfront costs and after that it is long term revenue and a proven long-term source of water.
    c. The conclusion from the water discussion is that the treatment plant and transfer pipes/pumps are to be abandoned and possibly those reservoirs will be drained or left to silt up. If so be clear about it.
        i. There is no estimate of the cost to repair the treatment plant or distribution system outside of the core campus.
        ii. The likelihood that that the ultimate developer will be about to take on that responsibility is not discussed and probably unrealistic
    d. If as the State says that the water rights go with the "land" which land do they mean: core campus or future park property.
        i. I do not believe that any park district is going to want the responsibility of 2 reservoirs and certainly are not in the water rights business so why can this not be made clearer? So why not be clear or describe the options for any future buyer.
3. On the "straight face" test when the district report of July, 2022 says that they can serve the

C102-1

C102-2

C102-3

campus for the next 25 years I would appreciate it if I did not get threatening letters from them about the dire need to cut back irrigation to 3 days a week and only after midnight. Everybody knows we are going to have decades of drought going forward so this statement does not pass the “straight face” test unless SCWA steps ups and backs it up…

C102-3

My 2 cents.

Victor Gonzalez
38 Don Timoteo Ct.
Sonoma, CA 95476

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Vivien MacDonald
To:	Brian Oh
Subject:	Comments on the Proposed plans for the Sonoma Developmental Center
Date:	Thursday, September 15, 2022 5:17:43 PM

EXTERNAL

I am STRONGLY opposed to the selling of the Sonoma developmental Center to a developer. The land must be contributed to state or county Parks and protected for the public enjoyment and for a wildlife corridor.
The housing should be appropriate for a rural village setting with the smallest number of houses possible. I believe there is one proposal for 450 houses. The county roads CANNOT support the amount of traffic that will be generated by more housing.
I live on Bennett Valley Rd and there is already a dangerous amount of fast moving traffic and MANY accidents a year as you perfectly well know. The more traffic, the more deaths and they will be on your and the other officials that approve an out-scaled plan's hands. Your traffic analysis does not even include BVR which shows it's inadequacy because cars heading into Santa Rosa will divert onto BVR to avoid the traffic build up elsewhere.
The voices of the community must be heard.
Thank you

C103-1

Vivien MacDonald
415-793-3117
bebemacd@aol.com
5525 Bennett Valley Rd.

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Will Shonbrun
To: Brian Oh; PlanningAgency
Subject: SDC Public Zoom Meeting: Comments on the DEIR
Date: Monday, September 12, 2022 2:06:52 PM

In its official Specific Plan/ DEIR, Permit Sonoma is proposing the building of 1000 houses, plus a hotel, plus an indeterminate number of businesses at the former Sonoma Developmental Center. This means anywhere from 2500 to 3000 people living there. All these people will be using cars. All these people will be needing goods & services. How many of these commercial businesses will also be on the SDC land or travelled to by homeowners daily? Many of these people will have pets. I'd like to know how all these fine folks and their adorable animals will safely evacuate their homes at SDC? **In the 2017 wildfire in the City of Sonoma and its environs it took an hour and a half to two hours to go a few miles on Hwy. 12 and Arnold Drive (the *only* roads going south in and out of Sonoma Valley). That's not anecdotal, that's a plain fact.** In this same Specific Plan, it boldly states that these additional 3000 folks and their cars will add 1 to 2 minutes travel time in that evacuation from a raging wildfire.

C104-1

When questioned in a previous meeting about its projections about fire evacuation from the new town the county is proposing on Sonoma Mountain, its planners, Permit Sonoma, cite that its numbers and conclusions are all based on statistics they've compiled, regardless of the reality we have all experienced. So how does one logically argue with this?

This begs the question ... **why should we, the public, accept at face value anything stated in this Specific Plan, including their data regarding environmental impacts on the wildlife corridor, the traffic studies, the re-use of many buildings and the preservation of 750 acres of open space from future development?** In addition, how are our schools going to absorb another thousand or so students?

Will Shonbrun, Boyes Springs, 996-9678

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Bill Hirsch
To:	Brian Oh
Cc:	Susan Gorin; district3; David Rabbitt; district4; district5
Subject:	SDC DEIR
Date:	Tuesday, August 23, 2022 11:02:55 AM

EXTERNAL

Dear Brian Oh

I live on Arnold Drive, just below the church. I have now read the SDC Specific Plan Draft Environmental Impact Report and am quite disturbed by many of the assumptions and conclusions included in the report. I was initially struck by how little the authors understood the impact this project will have on the community, by the cavalier statements about how this plan would "benefit local communities and residents." The authors disengenuously make claims about consulting the community to "better understand community priorities," but in fact little regard was given to the overarching concerns of most community members that this plan will adversely impact the character of the community and, more importantly, the safety of the residents due to the monumental scope of the proposed project. Although I am appalled by the thought of creating a new town at the SDC site that dwarfs Glen Ellen and rivals Sonoma itself, my chief concerns are how that new town will impact traffic, wildlife, water, and most importantly, fire evacuation plans. C105-1

The Vision and Guiding Principles are full of references to "well-planned evacuation routes" and "proactively planning for community safety in natural disasters," but in fact they somehow conclude that pouring a couple of thousand cars onto Arnold Drive in the event of a disastrous fire will somehow not have a significant impact on emergency evacuation plans. Oddly, the analysis of traffic during a massive explosive fire emergency focuses only on daily traffic patterns and employees and residents of the new town, but ignores the significantly increased volume of traffic that would occur from all the other residents of Glen Ellen and along Arnold Drive. The DEIR also does not take into account the guests at the proposed 120 room hotel or the visitors to the new commercial and recreational space they seek to build. I take little comfort in their conclusion that only 25% of the residents will flee when they get the first alert - it seems risky and irresponsible to bet the lives of so many people on that assumption, rather than assuming that there will most likely be widespread panic if disaster strikes, especially now that we all know about what happened in Paradise and other communities. C105-2

Despite these unrealistic assumptions, the authors conclude that travel time in the event of an evacuation will increase by only 1.2 minutes - actually, in my experience, even during normal traffic, sometimes it takes several minutes before I can even get onto Arnold Drive, so it seems unlikely that a huge influx of traffic C105-3

will delay me, and many others, no more than a minute. It seems that the DEIR overlooks the basic fact that Arnold Drive is a two lane country road with hundreds if not thousands of residents on either side if the road with no other escape route. The authors' decision to ignore the fire danger from the west is also hard to understand, since even the lower likelihood of a fire coming from the west is based on historical records that are less and less relevant given the impact of climate change. A fire from the west, through Jack London Park and down Sonoma Mountain, would hit the SDC with devastating force.

C105-3

Finally, the issue is not how the project impacts an approved Emergency Response Plan, but how it impacts the safety of the entire community in the event of a fire emergency and evacuation. All this is to say that this DEIR should not be approved until there is a serious evidentiary based Emergency Response Plan in place and only after there has been a comprehensive and objective study of how this project will impact public safety and traffic conditions on Arnold Drive during a fire emergency. Moreover, to save time and resources, the entire process should be delayed until the State of California completes its RFP and chooses a development proposal - the DEIR and the Specific Plan should then be aligned with the State's development plan,

C105-4

I have other concerns with the proposed plan, and seek specific details about the preservation of open space, more realistic analysis of water resources during times of ongoing drought, and serious consideration of the overall environmental impact due to increased VMT. I am especially concerned about the questionable conclusion that a smaller, less grandiose project would not be economically feasible. That is a highly dubious assumption, which seems to be self-serving and reductive. The various alternative plans - with reduced housing, lodging and commercial space - need to be more carefully analyzed and considered in light of the constant threat of a devastating fire and the public's need for a sensible and workable evacuation plan on Arnold Drive.

Thank you for your consideration of these comments.

Sincerely,

William B Hirsch
16528 Arnold Drive

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: andrew harper
To: PlanningAgency
Subject: Proposed plan at SDC
Date: Wednesday, September 14, 2022 9:04:23 AM

EXTERNAL

ar Sonoma County Planning Commissioners,

Please do not support the SDC Specific Plan or DEIR as proposed by Permit Sonoma. Instead, please direct Permit Sonoma to:

1. **Scale Back Size of Development** to 450 or fewer homes and require that most of them be affordable to the majority of people who live in Sonoma Valley. Eliminate the hotel, retail and commercial space that is already provided in Glen Ellen.
2. **Support Historic Preservation Alternative** as it is the most environmentally sound.
3. **Protect Open Space** by providing enforceable timeline, boundaries and actions for permanently preserving open space and keeping it in public hands.
    a. In the DEIR, analyze the impacts of and add enforceable measures to reduce impacts of proposed new uses in the open space including agriculture, agricultural processing, tasting rooms, farm stands, recreation, parking lots, geothermal development and sports facilities (see Table 4-3 of Specific Plan).
    b. Increase setbacks along Sonoma Creek, Riparian areas and the Sonoma Wildlife Corridor to at least 100 feet, instead of inadequate 50 feet as proposed.
4. **Wildfire:** Revise wildfire evacuation impacts to reflect on-the-ground experiences during recent wildfires and new county wildfire risk and hazard maps. Eliminate the shelter-place as there is no evidence it would save lives. Develop and add enforceable Conditions of Approval for Wildfire to reduce and prevent risk as there currently are none.
5. **Climate Crisis:** Given the County's Climate Crisis Resolution and commitments to reduce climate changing emissions (GHGS) from driving and other sources, revise the Specific Plan and DEIR with legally enforceable measures to reduce climate emissions, such as building fewer homes, reusing and demolishing fewer buildings, providing transit.
6. **DEIR is Inadequate** While the so-called self-mitigated Specific Plan contains many general policies, goals and conditions of approval to address environmental impacts, the DEIR falls short of CEQA requirements. The DEIR does not adequately analyze and prevent or reduce environmental impacts in most if not all of the areas studied as evidenced by few actual requirements and many vague words such as "promote" or "encourage" or "if feasible." The DEIR needs to be revised

C106-1

C106-1

C106-2

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected, do not click any web links, attachments, and never give out your user ID or password.

and the Conditions of Approval strengthened and moved into a legally enforceable Mitigation and Monitoring Program.

C106-2

On a personal note, this place is special to my family, as we have enjoyed hiking in the area and love all the nature. Please don't spoil this pristine space!
Signed,

Andrew Harper

1217 Tamalpais Street

Napa, Ca 94558

Arthur Dawson
5082 Warm Springs Rd
Glen Ellen, CA 95442

September 13, 2022

Mr. Brian Oh, Comprehensive Planning Manager
Permit Sonoma
County of Sonoma
2550 Ventura Avenue, Santa Rosa, CA 95403
Brian.Oh@sonoma-county.org

SENT VIA EMAIL

Re: Sonoma Developmental Center Specific Plan Draft Environmental Impact Report

Dear Mr. Oh,

I am a thirty-three year resident of Glen Ellen and the owner of a small business. My wife Jill grew up in Glen Ellen and is a teacher. Together we raised our two children here. We lost our home in the 2017 fire and have subsequently rebuilt. I currently serve as the Chair of the North Sonoma Valley Municipal Advisory Council as well as the Vice Chair of Sonoma Mountain Preservation, a local non-profit.

C107-1

Despite their daunting page count, I believe the Draft Environmental Impact Report (DEIR) and Specific Plan for the redevelopment of Sonoma Developmental Center (SDC) are inadequate. They fail to fully evaluate and reasonably describe the severity and extent of impacts from the proposed project. Many of the DEIR's conclusions lack factual support and many of the Specific Plan policies intended to serve as mitigation measures are deferred and not enforceable.

In spite of soliciting extensive input, Permit Sonoma and the consultants have continued to push a proposal that does not have broad support in the community and ignores the well-documented preference of the public for a smaller project. This public recognizes the many significant site constraints on the development at SDC, including: the wildlife corridor, traffic, cultural resources, population, wildfire hazards and others.

Before commenting on specific aspects of the DEIR, I would like to make a request and an observation:

> I encourage Permit Sonoma and/or the Planning Commission to revise the DEIR and Specific Plan to **create a multi-phased project with a mitigation monitoring program**. The Specific Plan touches briefly on this idea (SP 4-22): of completing "at least 200 housing units west of Arnold Drive before beginning construction of any housing east of Arnold Drive." No other phases are mentioned and there is no mention at all of a mitigation monitoring program. The DEIR analysis points to a lot of uncertainty in the impacts, making the proposed mitigations uncertain as well. Such uncertainty suggests the need for a robust monitoring program.
>
> **Downsizing provides the most obvious mitigation.** Impacts from wildfire hazards, traffic, the wildlife corridor and other issues are all improved with a smaller project. The DEIR states that "the Historic Preservation Alternative is the environmentally superior alternative." This was also the smallest project analyzed in the DEIR.

C107-2

Given time limitations, I will restrict my comments and questions to a few specific aspects of the DEIR and Specific Plan:

Project Description: 2.1.1 Regional Location

C107-3

It goes without saying that an Environmental Impact Report is site specific. A project's location is fundamental to the analysis of its impacts. A poorly framed site location potentially skews the impacts identified and analyzed in the EIR. This is as true for a site's human geography as it is for biological and other aspects.

Local residents have repeatedly affirmed the Planning Area analyzed in the Draft Environmental Impact Report (DEIR) is in the middle of Glen Ellen and completely surrounded by that community. Based on our shared geography, history and common interests, Glen Ellen as a 'place' forms a cohesive part of our community identity. Local citizens have supported this identification through numerous public comments and a petition circulated during the Specific Plan process. In response to the concerns of our citizens, the North Sonoma Valley Municipal Advisory Council (NSVMAC) passed a "Declaration of Glen Ellen Boundaries" in April of this year, affirming our historic and commonly recognized boundaries, which include the Planning Area.

The U.S. Census Bureau recognizes and supports this viewpoint, stating, "a commonly used community name and the geographic extent of its use by local residents is often the best identifier of the extent of a place." https://www.govinfo.gov/content/pkg/FR-2008-02-13/pdf/E8-2667.pdf

The DEIR consistently misplaces the project's location as "between the unincorporated communities of Glen Ellen and Eldridge" (e.g. Section 2.1.1, page 51). Eldridge is a 'census-designated place' (CDP) but does not exist as a community according to the Census definition. Glen Ellen is also the name of a CDP, but that CDP is only a small part of the much larger Glen Ellen community, as defined by local residents.

The Census Bureau defines CDPs as "statistical geographic entities" and, as stated above, leaves the question of the extent of named places to local citizens rather than to government agencies. It should "not be a name developed solely for planning or other purposes." https://www.federalregister.gov/documents/2018/11/13/2018-24571/census-designated-places-cdps-for-the-2020-census-final-criteria.

1. Why were the requests of citizens pertaining to the project's location, given in public comments, letters, a petition and a declaration by the Municipal Advisory Council, not incorporated into the Planning Area description in the Draft Environmental Impact Report?
2. Why was the more accurate term 'census-designated place' not used in the EIR? Why was this term replaced with the word 'community'?
3. Placing the project "between communities" suggests it is outside of an existing community. Did you make this assumption? If so, how did it affect the DEIR's analysis? If not, how did you avoid this bias in your analysis?

I strongly request that the project's location be accurately and consistently described in the Final EIR as: "Surrounded by the existing community of Glen Ellen as defined by local residents."

2.3.1.1 Vision Statement

C107-4

This section states that "New development complements" the surrounding community of Glen Ellen (p. 64). In this context, 'complement' appears to mean "adding to something in a way that enhances or improves it."

1. How was the 'complementary' nature of the new development evaluated? Please provide details about how this development will enhance or improve the existing local community.
2. What evidence (or metrics) on population, housing density, and community scale are being used to back up this statement?

3.16.1.2.2 Wildfire Hazards

The assessment of wildfire hazards in the DEIR appears to have a number of errors and omissions, the most serious of which lead to unwarranted conclusions that underestimate this hazard ("Impact 3.8-7 Implementation of the Proposed Plan would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. (Less than Significant)" p. 268).

Page 503: "Primary responsibility for preventing and suppressing wildland fires in Sonoma County is divided between local firefighting agencies and the State of California, Department of Forestry and Fire Protection. The SDC Planning Area is currently located in an area identified as a State Responsibility Area (SRA)."

1. The Planning Area "includes the approximately 180-acre SDC Core Campus…" (DEIR, pg. 51) According to the State Fire Marshall's map: https://osfm.fire.ca.gov/media/6822/fhszs_map49.pdf, the Core Campus is within a Local Responsibility Area (map on following page), not the State's. Is this correct?

C107-5

Page 503: "Under the Fire and Resources Assessment Program (FRAP) "the Planning Area…includes areas of high to very high Fire Hazard Severity Zones west of Highway 12, areas of high fire hazard severity in the hills, and areas of moderate fire hazards severity zones in the vicinity of Suttonfield Lake and Fern Lake (Figure 3.16-2). The Core Campus is not included in any of these FHSZs "

While it is true that "The Core Campus is not included in any of these FHSZs," the State Fire Marshall's final map is not intended to show moderate and high FHSZs within the Local Responsibility Area. The State's draft map (next page), however does show moderate and high FHSZs covering a substantial portion of the Core Campus. While not finalized, this appears to be the best available fire risk data for the Planning Area.

Goal PS-3 from the Sonoma County General Plan 2020 (DEIR, page 497), reads: "Prevent unnecessary exposure of people and property to risks of damage or injury from wildland and structural fires," with Objective PS-3.1 stating, "Continue to use complete data on wildland and urban fire hazards."

2. The Sonoma County General Plan How was the data gap between the SRA and the LRA within the Planning Area addressed during the DEIR's analysis of wildfire threat? What evidence was the statement about the Core Campus (DEIR, pg 503. See above) based on? Was this conclusion reached because there is data showing low fire risk there or because lack of data was equated with low risk?

C107-6

3. The Fire Constraints map (13.16-2) shows the Core Campus being almost entirely outside of any Fire Severity Hazard Zones. How would the Fire Severity Hazard data for the Core Campus, shown in the State's draft map, change the analysis of fire hazards there? Does this change the calculus for significance under 16.1.3.1 Criterion 2: "Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire."?
4. In addition, the Sonoma County Community Wildfire Protection Plan Update 2022 states that: "Wildland fires that start in the woods and spread into adjacent areas with relatively dense housing often result in the greatest losses of property and life. Efforts to save lives and property will take precedence over losses of wildland resources, so firefighters' response must focus on protecting populated areas rather than fighting a fire in the most efficient way."
   Even if we assume there are no FHSZs within the Core Campus, this suggests that building dense housing at SDC adjacent to wildlands could result in high "losses of property and life."

Responding to such a fire might prevent firefighters from efficiently working to prevent further fire spread. How was this scenario taken into account during the DEIR analysis?

C107-6

3.16.1.3.4. Wildfire Evacuation

The two scenarios chosen for evaluation accurately represent historical fire patterns.

However, the goals stated on page 507 include "Provide protections at the site against the growing risk of climate change exacerbated wildfire hazards and limit the potential impacts of wildfire to development through intelligent site and building design, and open space management."

If the 2017 Nunn's Fire (and other recent wildfires) is an indication, predicting future fire patterns is highly uncertain, given that many homes in moderate FHSZs (including my own), in places with no recorded history of wildfire, burned in that conflagration.

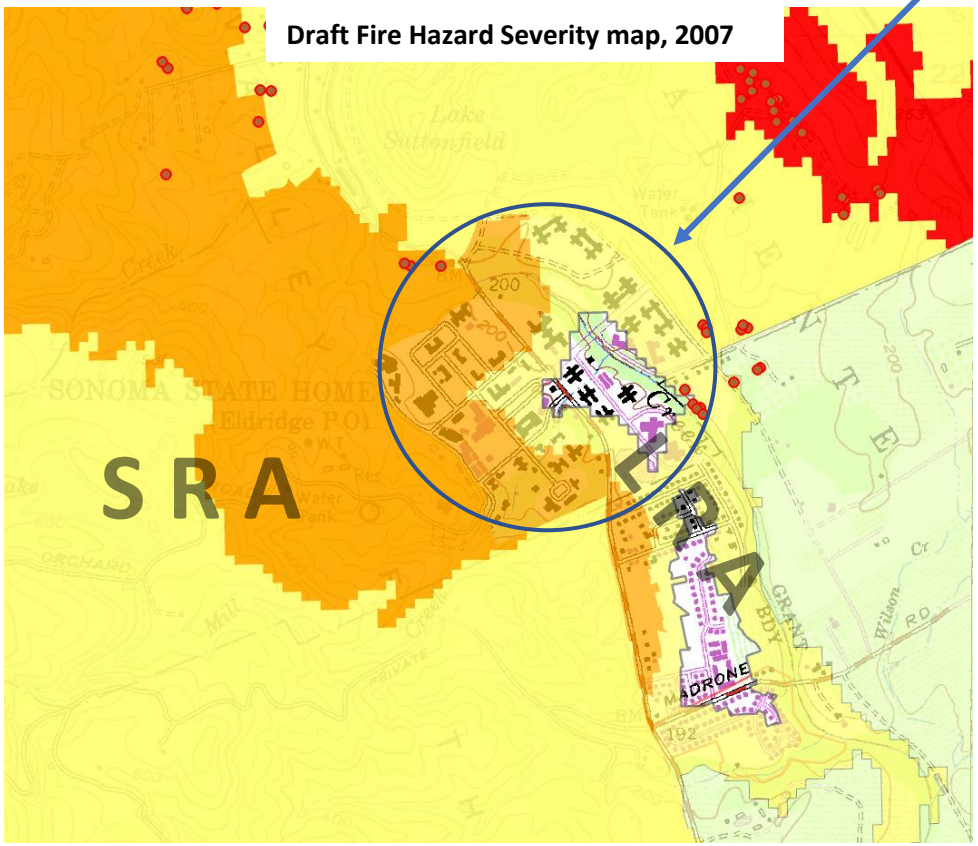
C107-7

1. How would a third scenario, with a fire starting in the Planning Area near the Core Campus, change the calculus for wildfire risk and evacuation? How would this change the calculus for wildfire risk and evacuation for the neighborhood between the Core Campus and Madrone Road, and the Rancho Madrone neighborhood (south of Madrone)?
2. Wildfire ignitions are known to increase with the size of a population. How was this relationship evaluated in the calculation of fire risk in the Planning Area?

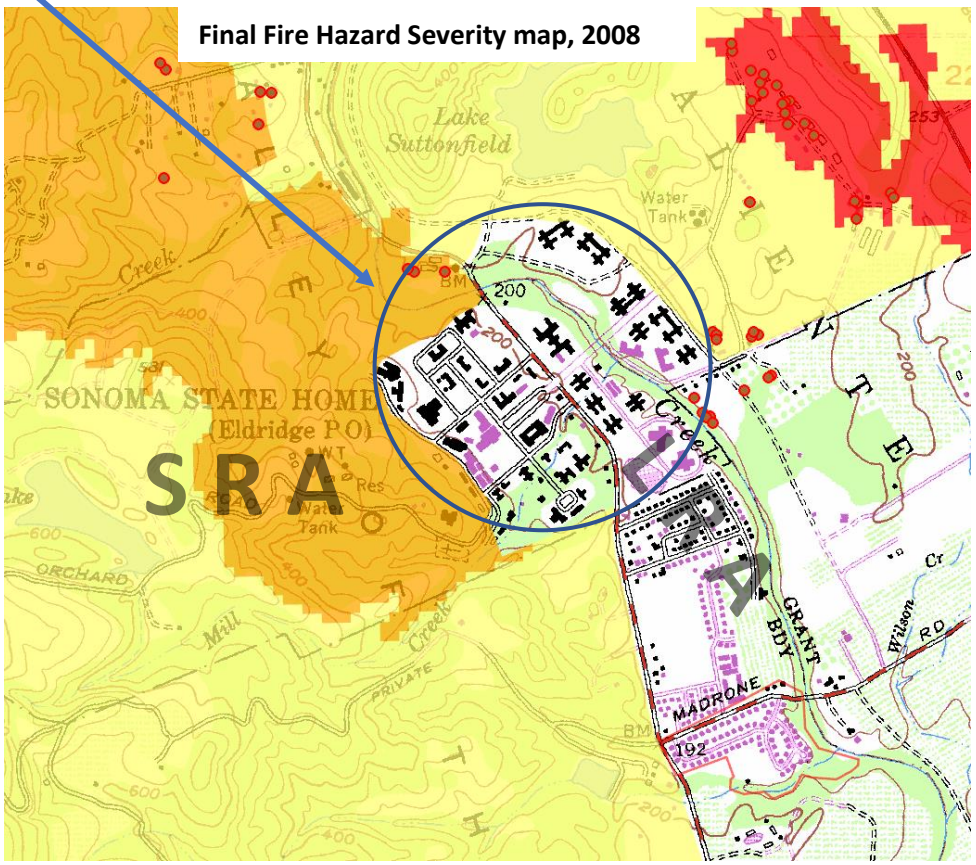
Hazard zones below are from the State Fire Marshall's office: https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/

HAZARD ZONES: Yellow = moderate Orange = high Red = very high Dots = structures burned in 2017 (Sonoma County GIS)

CORE CAMPUS



Colored Overlay = State Responsibility Area (SRA) and some Local Responsibility Area (LRA)



Colored Overlay = State Responsibility Area (SRA)

Transparent = Local Responsibility Area (LRA)

Thank you for the opportunity to provide comments on the Sonoma Developmental Center Specific Plan Draft Environmental Impact Report. I look forward to your response.

Sincerely,

Arthur Dawson

Arthur Dawson
5082 Warm Springs Rd
Glen Ellen, CA 95442

From:	Karen D
To:	Alex Krem
Cc:	Brian Oh
Subject:	Re: Sonoma Development Center Draft EIR Comments Deadline Mon. 9/26 at 5 PM
Date:	Sunday, September 25, 2022 5:22:27 PM
Attachments:	image001.png image001.png

EXTERNAL

Dear Alex,

Thank you for cc-ing me on this excellent letter. I'm so glad that you are doing this.

Will we see you at the SF Autism conference in Palo Also in October?

Karen

On Sat, Sep 24, 2022, 12:48 PM Alex Krem <alex@living-unlimited.org> wrote:

> Dear Mr. Oh:
>
> You have invited comments from the public on the future of the Sonoma Development Center, with a deadline of Monday 9/25 at 5pm.
>
> I write as a person with more than 60 years professional and personal experience with the developmentally disabled.
>
> My views follow:
>
> 1. SDC was created for the benefit of the vulnerable and should remain so.
>
> There was a time when State legislators saw their duty to protect the vulnerable. Frank Lanterman was a visionary in this regard. Now, it seems that Susan Gorin is the rare leader who understands the original purpose and true value of the Sonoma Development Center. She was joined by the SDC's Parent Hospital Association which fought to keep the center open, and by many others who are able to understand that there truly are people whose intellectual or developmental condition requires full time care.

C108-1

It should be clear to fair-minded people that this beautiful property was intended for the benefit of people with intellectual or developmental disabilities, or (at the least) retained for similar charitable purposes: housing for the homeless, for battered women, for our disabled veterans, for the mentally ill or for others in need. These vulnerable populations have been disenfranchised and ignored. C108-1

The property is now at risk of being carved up by hungry property developers. I view the current potential transformation of Sonoma Development Center as a land grab that would make Christopher Columbus or Andrew Jackson proud.

This should outrage everyone.

2. Safe places for our must vulnerable

The word “institution” means a respected place that meets the needs of society. Universities are institutions. Courts of law are institutions. Somehow the meaning has changed when applied to institutions which house intellectually, developmentally or physically or mentally ill people. Such institutions are now seen differently. Robert Kennedy, who carried his own tragic understanding, described Willowbrook in New York as a "snake pit" because … it was. Smart solution to fix it? Fund it fully and staff it generously. Dumb solution? Close it and wishfully assume the residents have another place to go. We went dumb. Since the Nixon era, institutional care of the severely disabled has been steadily eliminated. C108-2

Dark Joke:

Q. What were California’s homeless called before Ronald Reagan was Governor?

A. Patients!

Ha ha. Not funny. But, sadly, true.

And, as the joke says, the prior patients are now homeless. Estimates hold that 40% of the homeless are intellectually or developmentally disabled. People now living in the beautiful modern property development where Agnews Development Center once stood in San Jose, witness disoriented people with special needs occasionally wandering the streets looking for the home they once shared with others like them. These are the lucky ones. Those who are men are less likely to be raped each night than the women. They are alive and out of jail. A tragic fact is that jails have become warehouses for the mentally disabled and vulnerable.

As tragically, a significant portion of those killed by police – perhaps as many as one-quarter -- are people with intellectual or developmental disabilities, the very people once safely housed at SDC and other similar places. They are simply unable to read body language or respond appropriately to police demands. A young man with disabilities was recently confronted by a policeman who ordered him to raise his hands. The policeman squatted in a shooter's stance. The boy imitated him. The policeman wrongly assumed that the unarmed simple-minded boy was about to shoot… and shot him. Another was at the movies and tried to sneak into another multiplex theater, ignored requests to leave and was strangled to death by the security guard in the ensuing struggle (despite the fact that the boy's caregiver was there unsuccessfully attempting to intercede). The cold, mean streets of America are no place for such innocents – mature men and women with minds of three-year old's. The current concept that they can be better cared for on a one-on-one basis is simply not true – even if we could afford it, and even if there were sufficient numbers of trained caregivers.

C108-3

Frank Lanterman understood this and managed to get enough of his colleagues to agree to create the wonderful laws we now have that distinguish us (as do our universities) from the rest of the US.

Question: Does beautiful Sonoma County really need more McMansions, more nice shopping arcades, more golf courses? Or does it need a safe place for its vulnerable?

The answer seems easy. Doesn't it?

3. Babies and bathwater

Swept up with the noble but misguided believe that institutions were *per* se bad, California closed its Sonoma Development Center at the end of 2018. No longer would SDC provide shelter to the disabled. More than 300 residents were forced to leave. Food, clothing, care and comfort would be provided by the cold, cruel free market. Fat chance! Reliable estimates indicate that the mortality rate among medically fragile residents increased 500% once they left SDC. The babies were thrown out with the bathwater. The reality that many with I/DD were incapable of caring for themselves is clearly not understood by well-meaning people who have no direct experience with the severely disabled. *Post hoc* eugenics are now in play.

C108-4

How do we protect and care for our disabled? Civilizations have grappled with these issues since towns were first formed in the mists of pre-history. The intellectually, developmentally and physically disabled, the mentally ill, the dangerous, the walking wounded our many wars have produced, the old, the demented all need care. The way we care for our vulnerable, like our support for the arts, is the true measure of our civilization. California normally gets high marks.

Until recently, institutional settings were identified as ideal solutions to protect the vulnerable. These institutions provided a place for birds of a feather to flock together, impressive economies of scale, the ability to concentrate experts and the opportunity to create pleasant, comfortable, safe places for our vulnerable.

Families with disabled children once had the choice of caring for these vulnerable children as long as they could and then rely on friends or relatives or the state to take the job – or placing these children as wards of the court in fine, well established and well-run institutions like the Sonoma Development Center.

No longer! Using examples of bad apples (and there were plenty) to spoil the barrel (mostly good apples), California accepted the flawed thinking that institutions are pariah. Agnews Developmental Center serving people with developmental disabilities since1965 was closed in 2011. SDC has followed suit.

4. Brief history

C108-5

In 1883, the California Home for the Care and Training of Feeble Minded Children was established at White Sulphur Springs, near Vallejo. After a short stay in Alameda and then Santa Clara counties, the home moved to its current location in Eldridge in 1891. It became the Sonoma State Home in 1909, the Sonoma State Hospital in 1953and was finally rebranded as the Sonoma Developmental Center in 1986. I first visited it in 1960 and several times thereafter to meet the residents and give them presents collected from well-wishers in Alameda County. It was a nice place then. Residents were cared for by professionals. They were healthy, happy, fed, clothed, warm, safe and loved. Now all is changed. The zeitgeist no longer allows such safe places.

The Lanterman Developmental Disabilities Services Act was passed in 1969. This visionary California law establishes a service system to meet the needs of developmentally and intellectually disabled people (and their families). No other state in America has such a generous and comprehensive system; one that should make all Californians proud. For our brightest, our public and private university system is the best in the world. For our disabled, too, we have ourselves proud.

C108-5

Assembly member Frank D. Lanterman was a visionary. Would that we had more like him in Sacramento. His Mental Retardation Services Act (AB 225) became law in 1969 and mandated services and supports for individual with intellectual or developmental disabilities. This was followed by Lanterman Developmental Disabilities Act (AB 846) initially proposed in 1973 and passed in 1977. The Lanterman Act declares that persons with developmental disabilities(expanded to include persons with cerebral palsy, epilepsy, autism) are protected. "The State of California accepts a responsibility for persons with developmental disabilities and an obligation to them which it must discharge." Section 4501.

Susan Gorin, County Supervisor of District 1 where SDC is located, did her best to stop the Land Grab. She voted to keep SDC open. But she was out-voted. Public hearings have been few and far between. My efforts to reach appropriate state officials we ignored. I personally made numerous attempts to identify the time and location of public hearings, without success. I can provide numerous examples of my emails, most of which were not answered – except by others as frustrated as I am that this process was happening behind closed doors.

C108-6

5. Recommendations

A. Preserve this beautiful property for its intended use as a “home for life” for the vulnerable. Ensure permanent housing for those with I/DD (at a minimum), and possibly extended to include other vulnerable people who require housing and care (battered women, homeless, disabled veterans, mentally ill, etc.).

C108-6

B. If the Land Grabbing momentum is inexorable, then (at a minimum) reserve a significant portion of the property for its intended population, a large portion also for affordable housing in general, some for other civic uses, then retain title to the remaining property and lease it to commercial groups at a rate that provides full financial support to those with disability.

As Jack London, who knew the Sonoma State Home well and knew politics even better, once wrote: ***“An institution like this oughtn't to be run on politics.”***

With respect and a sense of urgency,

Alex Krem

Chair

Living Unlimited, Inc

510 610 3555

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

September 26, 2022

Via Email Only

Mr. Brian Oh, Comprehensive Planning Manager
Permit Sonoma County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403

Brian.Oh@sonoma-county.org

Dear Mr. Oh:

I have been asked to review and comment on the Sonoma Developmental Center (SDC) Specific Plan and associated Draft Environmental Impact Report (DEIR). I write this as a research scientist who has spent more than two decades studying wildfire science and fire ecology, global change, and conservation biology. From this perspective, I appreciate the intention to balance human welfare and economic development with plans for preservation of historical and natural resources in the area. Nevertheless, my review of the plan and DEIR have led me to conclude that many issues relative to wildfire risk have been overlooked. C109-1

The discussion of fire risk in the DEIR reflects several misconceptions concerning fire ecology, fire history, and the consequences and effectiveness of different fire mitigation strategies. The SDC property is situated within a highly fire-prone landscape, and based on evidence from the scientific literature, the Proposed Plan has high potential to significantly increase fire risk even further to new and existing structures at the SDC property as well as to the surrounding communities. A rise in human-caused ignitions due to increased population growth and expansion of human infrastructure could increase fire frequency to the point that wildfire would significantly affects public health, ecological functioning, and provision of ecological services (e.g., erosion and flood control). Unfortunately, research on recent destructive fires shows that the proposed mitigation strategies to reduce fire risk are unlikely to eliminate these significant impacts.

Below please find an explanation for my conclusions summarized in three main points.

RELIANCE UPON FIRE HAZARD SEVERITY ZONES IS INAPPROPRIATE FOR CONCLUDING THERE IS NO FIRE RISK.

The reliance upon existing Fire Hazard Severity Zones as the basis of the findings reflects a misunderstanding of the purpose of the maps, their scale of accuracy, and their potential for uncertainty at specific locations. They are also out of date. The Cal Fire maps were not designed with the intention of indicating precisely where structures are most at risk for wildfire. Instead, the objective for these maps is for use in *general* planning and policy guidance. For example, defensible space practices are only enforceable within high hazard zones; homeowners are required to disclose upon sale whether the property is in a in high hazard zone; and county governments can use the zones to enforce building codes or other fire safety measures. The maps C109-2

were developed in 2007 using a simple set of variables, map overlays, and general assumptions to delineate the relative degree of fire hazard across the landscape – that is, areas where fire behavior is likely to become extreme given a fire occurs.

In other words, the hazard areas shown on Fire Hazard Severity Zones are delineated in very broad classes and have limited precision. Given the uncertainty and coarse scale of these maps, they are not appropriate for predicting where buildings are likely to be destroyed. This is something that Cal Fire has been transparent about (Sapsis 2018), as the appropriate use of these maps has been misinterpreted elsewhere. C109-2

Part of the reason they are inappropriate to predict structure loss is that the location and behavior of fire is stochastic and unpredictable at any given time or location. Fire occurrence, behavior, spread, and eventual destruction of a house depends upon a large suite of random factors, such as where and when an ignition occurs; what the fire weather at the time of ignition is; what direction the wind is blowing; what the fuel and topography conditions are at the point of ignition; what kind of housing density and arrangement are in the surrounding area; whether any other fires are burning and the availability of firefighters, etc. This does not mean that the maps of fire hazard are useless. It means that they need to be interpreted with an understanding of what they can or cannot do; and that they are not completely accurate. C109-3

This is true of fire mapping in general. For example, a map delineating probability of ignition will look completely different than a map delineating probability of a large fire (e.g., Syphard et al. 2019). Unlike the Cal Fire maps, some maps are designed with the specific objective of delineating fire risk to structures (e.g. Syphard et al. 2012), but even these maps have substantial uncertainty given the random nature of wildfire. A study comparing maps of fire risk to structures in southern California with the Cal Fire maps in the same regions found significant differences in the areas mapped as high risk, and the Cal Fire maps performed poorly compared to the other maps (Syphard et al. 2012).

Another source of uncertainty in the Cal Fire maps is the assumption that hazard is likely to be governed by the same factors in the same way across the state. Science shows that the relative weighting and direction of variables that influence the locations of fire occurrence, size, and risk vary from region to region (e.g., Syphard et al. 2019). Therefore, accuracy of the Cal Fire maps is likely to vary from place to place, and there is no guarantee that the maps near the SDC are accurate, even in a general sense or for their intended purpose. There are examples of recent highly destructive fires where substantial structure loss occurred in areas not mapped as high risk in the Cal Fire maps (e.g., Coffee Park in the Tubbs Fire, Malibu City in the Woolsey Fire). This should serve as an important illustration of why the maps should not be the final word in a conclusion about fire risk to structures. C109-4

An important point is that the current maps - the ones used for the DEIR - were developed in 2007. The current landscape reflects very different environmental and housing conditions than those that were there 15 years ago. The factors used to create the 2007 the maps, such as fuel type, fire history, and housing, have all changed substantially. Cal Fire has been putting significant effort into updating their maps with new variables and assumptions, and these may be

more appropriate for future decisions. However, those maps are not available yet - and maps developed in 2007 should not be trusted to assess the fire risk for a development to be constructed after 2022.

C109-4

The Proposed Plan Is Likely To Increase Regional Fire Risk

Although the DEIR acknowledges that the location of the proposed development is in a fire-prone part of the landscape, it does not thoroughly establish the baseline conditions that this is an area with a long history of wildfires that have already resulted in serious impacts. It was only a few years ago that structures were destroyed by wildfire at this very site and many more structures were destroyed nearby. Even without the new residents and visitors proposed for the site, the evacuation situation has apparently been extremely problematical in recent fires - and evacuation is often the time when people lose their lives to wildfires. These baseline conditions have not been adequately described in the DEIR despite the need to establish them before assessing the impact of the project.

C109-5

Based on data regarding repeat fires in the same locations, there is reason to believe that the area proposed for development on the SDC site is susceptible to more wildfires in the future. There is also reason to believe that the SDC development will lead to an increase in the number of wildfires in the region, not only due to the potential for climate change to exacerbate fire risk, but also because of the probable increase in human-caused ignitions. In addition, the DEIR lacks a description of how the Proposed Project will not only be impacted by fire, but also how it will impact fire in the vicinity in the future.

As evidenced by the almost perfect overlap of the nearby 2017 Tubbs fire with the 1964 Hanley Fire (Keeley and Syphard 2020), fires often recur in the same locations. This is because certain locations are more fire-prone than others given their topography, location within a wind corridor, climate, and vegetation. Research on structure loss in California has demonstrated that structures located in areas with a history of recurring fire are among those that are most likely to be destroyed by fire (Syphard et al. 2012). Although the 1964 Hanley Fire occurred in nearly the same location as the 2017 Tubbs Fire, there were only about 100 structures lost, and there were no fatalities. However, in 2017, more than 5500 structures were destroyed and 22 people lost their lives. The difference is the rapid growth of human population and housing in the footprint of the fire during the interim.

C109-6

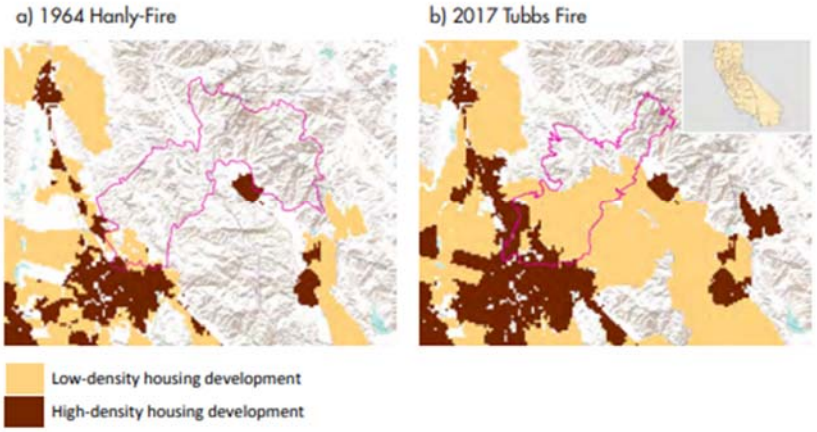


Figure 10. a) 1964 Hanly Fire perimeter in pink, and b) 2017 Tubbs Fire perimeter in pink, with changes in low density and high density housing *(from Keeley and Syphard 2019).*

The placement of new housing in fire-prone locations, like the proposed Project, not only increases the exposure of those structures to wildfire, but it also increases the likelihood of more fire occurring in the surrounding region due to human-caused ignitions. As recognized in the DEIR, humans cause more than 95% of the fire ignitions in Sonoma County, and studies repeatedly show that fire frequency is highest in low-intermediate-density development patterns, particularly when surrounded by wildland vegetation (i.e., the Wildland Urban Interface) (Syphard et al. 2007, Syphard et al. 2019, Radeloff et al. 2018). This is because, as low-medium density housing development expands (the kind proposed for this development), there is an increase in the number of people and opportunities for fires to ignite; and there is still ample continuous vegetation in the surrounding landscape for wildfires to spread. Larger numbers of people also increase the odds of fires starting during severe fire-weather conditions that lead to the most catastrophic outcomes. Recent research shows that human-caused ignitions are the top-ranking reason for area burned in Santa Ana wind-driven fires; and that human-caused fires have worse outcomes than lightning-caused fires.

C109-7

Extensive research also shows that the location of human ignitions tends to occur closest to roads and human infrastructure (Syphard et al. 2008, Molina et al. 2019, Chen and Jin 2022). Therefore, the addition of people coming into and out of the region because of the new development increases the likelihood of more fires starting near the area. The lack of public transport is a concern not only in terms of greenhouse gas emissions, but also in terms of ignitions and increasing fire risk. Given that the most likely form of transportation to and from the development is via automobiles, many more people will be on the roadways, and thus, many more opportunities will arise for fire ignitions to occur. The increased access to open space areas also would provide more opportunities for humans to unintentionally start fires.

C109-8

In turn, the type of low-medium density development proposed in the plan is not only where fire frequency tends to be highest, but this is also where structures are most likely to be destroyed by fire (Syphard et al. 2012, 2019, Kramer et al. 2018). Also, it is not just housing location and density that drives risk exposure; it is the overall location and pattern of development (Syphard

et al. 2012). Isolated or remote clusters of development are particularly vulnerable (Syphard et al. 2013).

In other words, fire risk is a multi-scale issue (Syphard and Keeley 2021), and the landscape context is critical. Developments surrounded by large amounts of continuous wildland vegetation, such as is the case here, are particularly dangerous because they are exposed to potential fire on all sides. This scenario is similar to what happened in the town of Paradise in the 2018 Camp Fire. To that end, "community separation" of urban areas seems like a risky design strategy in the proposed plan - that adds edge between development and wildland. As acknowledged in the EIR, the potential for destructive wildfires is increasing in many parts of California due to climate change. Recent research also shows that proximity to the WUI is the top explanation for why fires have become destructive in the project region (Syphard et al. 2022). C109-8

Policies For Mitigation Do Not Eliminate Fire Risk

Although studies show that community planning and fire-safe design and landscaping can significantly enhance fire resilience, statistics from recent wildfires indicate that these actions are not guaranteed to reduce impacts to less than significant levels (Syphard and Keeley 2019, Baylis and Boomhower 2022). While having a strong and well-enforced community wildfire resilience plan is critically important for reducing fire risk to the largest extent possible, constructing a significant number of residences and businesses will add more frequent ignitions to an already highly fire-prone region. This will exacerbate fire risk in the region regardless of the mitigation policies put in place. Therefore, although the DEIR relies on policies and mitigation measures to conclude that the project would not exacerbate wildfire risk, the initiation and enforcement of these measures do not ensure that significant impacts would be sufficiently mitigated. C109-9

Vegetation Management

One of the measures that the DEIR relies upon to claim no significant wildfire impacts is vegetation management to reduce fire risk. Vegetation management includes mechanical fuel breaks surrounding the development, clearance of woody shrublands or understory woody trees, defensible space, and controlled burning of vegetation. There are several common misconceptions about, and overestimations of the relative effectiveness of, these measures for reducing structure loss, especially during severe fire weather when most structures are destroyed. Fuel reduction through vegetation management is often viewed as a means of stopping or slowing the spread of fire; however, treatments typically only do this under mild weather conditions. In severe fire weather, with strong winds, vegetation treatments generally do not prevent or stop fires on their own. C109-10

Policy 2-31 would require construction and maintenance of a managed landscape buffer along western and eastern edges of the Core Campus to aid in fire defense, consisting of a shaded fuel break in wooded areas and grazed or mown grassland. The construction of these types of fuel breaks can be helpful for protecting communities, when done strategically, by providing safe fire-fighter access. They may also slow fire spread enough to buy time for defensive activities

(Syphard et al. 2011). Despite these benefits, the big issue with placing too much trust in fuel breaks and other forms of vegetation management is that most structures are destroyed because they are exposed to the millions of wind-borne embers that are generated during severe fire-weather. Although woody vegetation is the primary source of firebrands, wind-borne embers are known to fly kilometers ahead of a fire front, crossing vegetation treatments, and landing on or near structures. In fact, wind-borne embers often jump California's widest freeways. Therefore, although fuel breaks can facilitate safe firefighter access in some circumstances, they cannot prevent embers from flying past them. Furthermore, despite the role of fuel breaks for providing safe firefighter access, it is often unsafe for firefighters to be present during the worst fire-weather conditions. In a historical survey of fires and fuel breaks in southern California national forests, 22- 47% of fires stopped at fuel breaks when they encountered them (Syphard et al. 2011).

C109-11

The creation of defensible space around structures at the parcel level, as suggested in policies 2-34 and 2-36, is a mitigating policy proposed for the DEIR, and I concur that this should be implemented to increase community resilience. Studies show that properly created defensible space (https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/) can significantly reduce the probability of a structure being destroyed in a fire (although there is no additional benefit to extending the distance of defensible space beyond 100 feet (Syphard et al. 2014, Miner 2014)). Nevertheless, as with other vegetation treatments, defensible space should not be considered as something that can definitively prevent structure loss. Many embers directly penetrate a structure without vegetation playing a role, and many structures with well-designed defensible space have been destroyed in recent wildfires.

C109-12

If embers land near the property, they may ignite new fires depending upon the flammability of the surroundings. While the recommended reduction of biomass near the property lowers flame lengths and enhances firefighter safety, the fuel moisture of the vegetation in the vicinity of structures is often more important than the amount of vegetation. Evergreen shrubs and trees are often referred to as "ember catchers" because of this – because the embers may be extinguished if they land on green vegetation. This argues for retaining some green vegetation near the structure and across the landscape.

Research in Australia also shows significant protective effects of irrigated land (Gibbons et al. 2018). Thus, a concern I have about the vegetation management approach described in the DEIR is the proposal to remove chaparral and other woody shrublands and to allow establishment and expansion of grass. Although fire in grass has lower flame lengths, grass is the most flammable and easily ignitable vegetation type in California (Syphard and Schwartz 2021, Syphard et al. 2022). Grass is dryer for a much longer period in the year than chaparral, and when it does ignite, it is the fastest spreading vegetation type. Most firefighters who lose their lives in fires have been killed in grass fires. Therefore, while the practice of mowing or grazing grass can enhance fire safety (if mowing does not occur during severe fire weather), removing shrublands and converting them to grass is likely to make the landscape more flammable.

C109-13

Compliance With Fire-safe Building Codes

In addition to defensible space, the DEIR relies upon class A roof retrofits and the compliance with fire-safe building codes in the construction of new buildings to mitigate fire risk. Although fire-safe building practices, such as those required in new building codes, increase the possibility that structures will survive wildfires (Syphard and Keeley 2019), they also do not guarantee prevention of structure loss. The extent to which enforcement of building codes increases the rate of structure survival in wildfires is yet unknown. For example, one study shows that building codes that enforce fire-safe construction helped to decrease rates of structure loss compared to rates of loss before the codes were enforced (Baylis and Boomhower 2021). On the other hand, an analysis of the Camp Fire, where more than 18,000 structures were destroyed, showed that homes built before and after the enforcement of building codes were destroyed at roughly equal rates (Knapp et al. 2021). Therefore, as with defensible space, many new homes with fire-resilient construction have been destroyed in recent California wildfires.

C109-14

Although fire-safe building practices improve the odds of survival for new homes, these codes do not protect the existing homes at the site and in the surrounding areas. The increase in population and human activity in the region at large increases the odds for more human-caused fires to start, as people will be moving in and out of the area, engaging in more activities that could generate sparks, and spending more time recreating in flammable open-space areas. Given that humans are mobile, ignitions are numerically more likely to occur anywhere in the surrounding area that experiences an increase in human presence and activity, and this exposes more existing structures to wildfires at a landscape scale.

C109-15

In other words, because wildfires occur over large areas, with the most destructive wildfires becoming very large (Syphard et al. 2022), impacts can be expected to occur in areas much larger than the project footprint. Furthermore, new building codes will not benefit the older structures within the project footprint, some of which have significant historical and cultural value. Policy 2-38 suggests retrofits of new roofs, siding, and windows for existing structures, but this is not a complete list of needed retrofits for fire safety, and the details of this policy are vague. Would these retrofits be applied to all existing buildings, even the historical ones? They also would not apply to buildings outside of the SDC site.

Shelter in Place

The DEIR relies in part on proposed Policy 2-54, which requires the Project proponent to build or designate an on-site shelter-in-place facility. DEIR at pages 510 and 511. This alternative of sheltering in place is a dangerous proposition, as evidenced by the Black Saturday Fires in Australia in 2009. In those fires, 173 people lost their lives, and more than half of those people had been sheltering in place.
(https://www.sciencedirect.com/science/article/abs/pii/S221242091730050X). As a result of these fires, the Australians have now shifted thinking away from their stay and defend policy and now have a system in which all residents are encouraged to evacuate when weather conditions meet a “catastrophic threat” level. In short, buildings are replaceable, but human lives are not. While having a shelter-in-place facility may benefit those who are simply unable to evacuate,

C109-16

this should be a last resort, and the SDC project should not rely on this method as mitigation for wildfire risk related impact.

Finally, I question the enforceability and endurability of many of the proposed policies. Who is ultimately responsible for ensuring that the policies are followed? Activities such as fire-safe education, defensible space maintenance, or maintenance of buildings require ongoing, permanent attention. Who will ensure that these activities will continue after the structures have been built? Will a permanent staff position be created to ensure ongoing compliance? In short, people will move in and move out over time, but the houses and the landscape will remain.

C109-16

Conclusion

In conclusion, contrary to the assertions made in the DEIR, there is a strong likelihood that the proposed development, and its alternatives, will have significant impacts relative to wildfire. The potential for increased numbers of wildfires – and more wildfires during severe fire weather - are likely to significantly affect public health and ecological functioning. There are also likely to be increased economic costs for management and suppression, from damage/destruction to human infrastructure or agricultural lands, and from post-event hazards such as mudslides or debris flows. Sufficient homeowners insurance for wildfire, which is becoming increasingly expensive, will also be difficult to attain, particularly for the low-income residents that are supposed to be supported by this plan.

C109-17

Public health may be threatened not only from direct injury and mortality during a fire, but from smoke. The evacuation plans described in the DEIR only account for fires coming in two directions and spreading through other towns before reaching the project site. These analyses should also incorporate scenarios in which fires are spreading directly from the roads east of or from Sonoma Mountain west of the project site. In these cases, if the fire weather is severe and the fires are burning toward the project site, there would likely be less time for residents to evacuate, and this puts human lives at risk. Another potential impact to public health and safety is that, if fire frequency increases regionally due to additional opportunities for human-caused ignitions, secondary hazards may occur post-fire, such as flooding, landslides, runoff, or debris flows. Not only may these secondary events be potentially harmful during the event, but there may be subsequent impacts to water quality.

While my letter is aimed at explaining the wildfire-related potential and costs associated with the project, there are also ecological impacts that may result from the increased fire risk in the area. For example, there are ecological costs associated with vegetation management and construction of fuel breaks. There are also potential ecological impacts that will result from the potential for increased fire frequency in the area. Many vegetation types in the western USA are experiencing fire-driven conversion, often from native vegetation to invasive species (Guiterman et al. 2022). Therefore, the DEIR's conclusion that the project would result in no potential loss of forest is inaccurate because it fails to account for the potential effects of increased wildfire.

C109-18

While the policies to reduce fire risk at the site may work to lessen some of these impacts, the proposed policies are unlikely to offset the increase in fire risk to the property and surrounding area that results from the project. Fire hazards will nevertheless likely be significant.

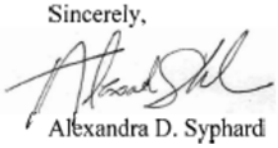
Finally, in my reading of the DEIR, I was unable to understand some of the statements. Therefore, it would be helpful to have additional clarification on the following questions:

1) Why does the plan state that the Historic Preservation Alternative leads to higher fire risk? Based on its reduced population and housing, the Historic Preservation alternative appears to be more fire-safe than the proposed project or its other alternatives.
2) On what basis does the DEIR assume that low-lying creeks and riparian areas would increase fire safety? While these areas are less flammable in general, they do not appear to be close to the proposed housing. Also, when riparian areas dry out, they can burn rapidly at high intensity.
3) On what basis does the DEIR assume that the housing in low-elevation or flat areas would not be at high risk? While it is true that topographically complex areas can often have highly erratic fire behavior, many structures are lost in low-elevation, low-relief areas (Syphard et al. 2021).

C109-19

Thank you for your time in considering my review. Please let me know if you have any questions.

Sincerely,



Alexandra D. Syphard

GLEN ELLEN FORUM

SDC COMMITTEE

Collaborative | Determined | Hopeful

September 26, 2022

VIA ELECTRONIC MAIL to Brian.Oh@sonoma-county.org

Brian Oh
Planning Manager, Permit Sonoma

Re: Specific Plan and DEIR for Sonoma Developmental Center

Dear Mr. Oh:

Participation in the grassroots effort to shape the future of the SDC has opened our eyes to the fact that, like an intricate spiderweb, the strength of our community lies in our interconnectivity. While frame threads connect multiple anchor points and give the spiderweb its shape, it is the radius threads, from center to frame, that hold the web together, give it strength, and make it a home. Like radius threads, every heartfelt action taken to further the cause of protecting the SDC, no matter how small, has made this movement that much stronger and helped define a vision for a future Eldridge that, if realized, we can all be proud of.

C110-1

Unfortunately, given overwhelming community opposition to the inclusion of 1,000 housing units and a boutique hotel in the preferred alternative, Permit Sonoma's proposed SDC Specific Plan including these very things can hardly be seen as an action of which anyone involved in this years-long process can be proud. Furthermore, and continuing with the spiderweb metaphor, the Draft EIR appears to be wielded by Permit Sonoma as if it were a broom with which bureaucrats and planners hope to simply destroy the entire web with one swift stroke: no significant or unavoidable impacts here, let's just sweep this mess away, spiders be damned.

But, like the industrious legion of determined web spinners that we are, Permit Sonoma can rest assured - community opposition to this faulty plan is not going away. We will not scamper for the exits in the face of hollow threats of the State taking over the property and cramming even more housing units down our throats. We will not be mollified by offers of counterintuitive wildfire shelter-in-place facilities. We will not be placated by the touting of low-wage hospitality jobs in a boutique hotel that those hoping to occupy the plan's paltry percentage of affordable housing units could ill afford to book a room. Nor will we be tempted by bright shiny objects such as the

C110-2

grandiose growth-inducing Climate Center for which Permit Sonoma just received a timely $250,000 grant to carve out a space on the SDC core campus. Until Permit Sonoma comes up with a scaled-down plan around which we can all rally, we will continue to spin our web of community opposition, and that is something of which we are and will forever be incredibly proud.

C110-2

We were disheartened to learn that verbal comments submitted during the 8/24/22 special meeting of the NSVMAC, Springs MAC, and SVCAC will not be accepted as comments to which Permit Sonoma is legally obligated to respond in the Final EIR. To that end, it is our understanding that submission of said comments in the form of this link to the digital recording of that meeting, will suffice as official submittal, thus requiring response from Permit Sonoma in the Final EIR: https://www.youtube.com/watch?v=LvE6dSvf9Yg&t=3s

Some key points we would like planners to re-examine:

1) Apply all of the financial tools listed as part of the preferred specific plan to the Historic Preservation alternative, which has been identified as the environmentally superior alternative and most closely resembles the scale of development advocated for by the North Sonoma Valley Municipal Advisory Council and other stakeholders.
2) Fix the Figure 1.1-3 in the preferred Specific Plan document so that it shows the Eldridge Cemetery in the correct location by the curve of Orchard Road near its base, not up by the water treatment facility.
3) Require any developer/property owner, now and in the future, to ensure public access to the surrounding open space both during construction and after.
4) Re-examine the traffic analysis, particularly in view of wildfire evacuation. It makes absolutely no sense that adding 2,000 cars to the property would add only a minute of extra evacuation time. Minimizing the impacts of adding that many vehicles to the roadways no matter a connection between Arnold Drive and Highway 12 is potentially a death sentence and certainly guarantees a good deal of post-traumatic stress, for the people who will be inside those cars as they attempt to flee disaster.

C110-3

We agree with and support the comments submitted by the Sonoma Land Trust (SLT). We also agree with and support the comments identified in the North Sonoma Valley MAC comment letter. In addition to the issues identified in those two letters, we agree with comments identified by Sonoma Mountain Preservation (SMP), the Sonoma County Transportation & Land-Use Coalition (SCTLC) the State Alliance for Firesafe Road Regulations (SAFRR), the Bennet Valley Community Association (BVCA), Vicki Hill (Environmental Land-Use Planner), and Teri Shore (Environmentalist) among others, all of which have been submitted to Permit Sonoma and posted on eldridgeforall.org: https://eldridgeforall.org/?p=%26-deir-talking-points

C110-4

In closing, as our logo proclaims, the Glen Ellen Forum SDC Committee is collaborative, determined, and hopeful. Time and time again, we have shown up, we have participated, and we

have persisted in our efforts to educate and mobilize our community for the creation of an acceptable SDC Specific Plan and to act in good faith for the greater good. We will continue to do so, and we urge Permit Sonoma to commit to doing the same.

C110-4

Sincerely,
Glen Ellen Forum SDC Committee, Co-Chairs

Alice Horowitz, Ph.D

Tracy Salcedo

From: Arthur Dawson
To: PlanningAgency
Cc: Hannah Whitman
Subject: Sonoma Valley Municipal Advisory Council letter to Supervisors
Date: Thursday, September 15, 2022 5:17:27 PM

Dear Planning Commissioners, Addendum:

Note that the MAC letter included with the email below was endorsed by the Sonoma City Council, Sonoma Land Trust, Valley of the Moon Association, Sonoma Valley Citizens Advisory Commission, Sonoma Mountain Preservation, Glen Ellen Historical Society, Painter Preservation, the Oakmont Village Association as well as Steve Akre, Fire Chief, Sonoma Valley District.

C111-1

Arthur Dawson, Chair
North Sonoma Valley Municipal Advisory Council
(707) 509-9427; (707) 996-9967

From: Arthur Dawson <baseline@vom.com>
Sent: Thursday, September 15, 2022 5:08 PM
To: 'PlanningAgency@sonoma-county.org' <PlanningAgency@sonoma-county.org>
Cc: 'Hannah Whitman' <Hannah.Whitman@sonoma-county.org>
Subject: Sonoma Valley Municipal Advisory Council letter to Supervisors

Dear Planning Commissioners,

As Chair of the North Sonoma Valley MAC I'm attaching the letter and appendix that was approved by our council and sent to the Supervisors in January pertaining to SDC. This letter details the community's vision for SDC, which has remained quite consistent since the first large community meeting in 2015 and represents years of thinking and work by hundreds of people. Its broad support has been demonstrated by a petition circulated early in the year, which at the time (January) had been signed by a thousand people, the vast majority in Sonoma Valley and elsewhere in the County. It now has over 2500 signatures.

C111-2

The MAC is intended to serve as our community's voice and this is a strong and clear expression of that voice. Thank you for taking this letter under serious consideration as you deliberate the Sonoma Developmental Center Specific Plan and EIR.

Sincerely,

Arthur Dawson, Chair
North Sonoma Valley Municipal Advisory Council
(707) 509-9427; (707) 996-9967

From: Arthur Dawson <baseline@vom.com>
Sent: Wednesday, September 14, 2022 4:33 PM
To: 'PlanningAgency@sonoma-county.org' <PlanningAgency@sonoma-county.org>
Cc: 'Hannah Whitman' <Hannah.Whitman@sonoma-county.org>
Subject: SDC Draft EIR Response letter; North Sonoma Valley Municipal Advisory Council

Dear Planning Commission,

In view of your meeting on the Sonoma Developmental Center Specific Plan draft EIR tomorrow, I would like to share a link to the comment letter being drafted by the North Sonoma Valley Municipal Advisory Council in response to this document. This is a draft and will be finalized at our next meeting on September 21:

C111-3

https://sonomacounty.ca.gov/Main%20County%20Site/Administrative%20Support%20%26%20Fiscal%20Services/BoS/BCCs/Documents/NSV%20Municipal%20Advisory%20Council/September%202022/NSV-MAC-DEIR-Comment-Letter-Draft4-09-12-22.pdf

Given the timely nature of this letter we wanted to make sure you could review our draft. Once finalized I will submit our letter to Permit Sonoma and include the Planning Commission as a recipient.

Sincerely,

Arthur Dawson, Chair
North Sonoma Valley Municipal Advisory Council
(707) 509-9427; (707) 996-9967

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Arthur Dawson
To:	Brian Oh
Cc:	Susan Gorin; Tennis Wick; rajeev@dyettandbhatia.com; engage@sdcspecificplan.com; Greg Carr; Caitlin Cornwall; Pat Gilardi; Larry Reed; Jacquelynne Ocana; Shaun McCaffery; Belen.Grady@sonoma-county.org; PlanningAgency; "Logan"; Senator.McGuire@senate.ca.gov; Senator.Dodd@senate.ca.gov; "Rebecca"; "Ezrah"; Cecilia.Aguiar-Curry@asm.ca.gov; "Gerald McLaughlin"; district4; James Gore; district5; Susan Gorin; David Rabbitt; Rebecca Hermosillo; "Rep. Mike Thompson"; "Cooper, Kai"
Subject:	North Sonoma Valley Municipal Advisory Council Comment Letter, SDC DEIR
Date:	Friday, September 23, 2022 2:46:29 PM
Attachments:	FINAL_NSV-MAC_DEIRComment-Letter_09-21-22.pdf Addendum NSV MAC Public Comment Received Item 8 9.21.22.pdf

EXTERNAL

Dear Mr. Oh,

On behalf of the North Sonoma Valley Municipal Advisory Council (NSV MAC), I respectfully submit the attached comments pertaining to the Public Review Draft of the Sonoma Developmental Center (SDC) Specific Plan (Proposed Plan) and the SDC Specific Plan Draft Environmental Report (DEIR), issued in August 2022.

As the NSV MAC serves as the voice of the community within county government, we intend this letter to be reflective of community input. However, it is not intended to be exhaustive or to take the place of individual comments from community members and other interested parties.

C112-1

As you will read in the attachments, we do not believe this DEIR adequately and completely evaluates the environmental and safety impacts of the Proposed Plan. Furthermore, we remain committed to the Sonoma Valley community's consistent input calling for both affordable housing and a lower density plan alternative. A plan closer to the Historic Preservation Alternative – determined as "environmentally preferred" in the DEIR analysis – successfully meets the project objectives and the established Guiding Principles for this project and should be given strong consideration.

Thank you for your attention to the issues raised. We look forward to your response.

Sincerely,

Arthur Dawson, Chair
North Sonoma Valley Municipal Advisory Council
(707) 509-9427; (707) 996-9967

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

September 21, 2022

Mr. Brian Oh, Comprehensive Planning Manager
Permit Sonoma County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403

Dear Mr. Oh,

On behalf of the North Sonoma Valley Municipal Advisory Council (NSV MAC), we respectfully submit the following comments pertaining to the Public Review Draft of the Sonoma Developmental Center (SDC) Specific Plan (Proposed Plan) and the SDC Specific Plan Draft Environmental Report (DEIR), as issued by Sonoma County in August 2022. While this letter is reflective of community input, it is not intended to be exhaustive or to take the place of individual comments from community members and other interested parties.

Given the tremendous amount of input from Sonoma Valley residents and business owners concerned about the project size and its impacts, as well as this MAC's own request and the Board of Supervisors' direction to scale back the Specific Plan, it is surprising that the proposed Specific Plan still contains over 1,000 homes and approximately 940 jobs. It appears that the DEIR fails to disclose the full extent of impacts that will result throughout Sonoma Valley from this large-scale development outside of an urban growth area, as is further detailed in this letter. C113-1

The Specific Plan represents one of the largest, if not THE largest, developments in the history of Sonoma Valley and is in conflict with County General Plan policies calling for city-centered growth. Furthermore, the proposed plan is inconsistent with its own guiding principles calling for a balance between redevelopment and historic preservation; the plan will destroy the very qualities that make the historic SDC site unique and its implementation will have far-reaching, significant adverse impacts on Sonoma Valley residents.

With this in mind, we provide the following comments, by general category. Please explain the following inconsistencies in the DEIR:

PROJECT SCALE & HOUSING

Increasing the supply of affordable and workforce housing is broadly supported by the Sonoma Valley Community, but not at any cost to the environment and the health and safety of Sonoma Valley residents. Our understanding is that the DEIR should help the community better understand the scale of the environmental impacts of the Specific Plan, how they will be mitigated, what options were considered, and why these options were dismissed. We do not believe the DEIR has yet met these objectives. C113-2

For example, the DEIR identifies the smaller-scale Historic Preservation Alternative (Historic Alternative) as the environmentally superior alternative. It is not ruled out in the DEIR because it meets the required objectives, but it is dismissed from full consideration. Why?

If this alternative is environmentally superior and substantially reduces impacts of the proposed plan; if it more effectively meets some of the fundamental project objectives as outlined in the Specific Plan guiding principles, including Preservation of Historic Resources and Balancing Redevelopment with Land Use (DEIR pages 5 and 6); if it provides 450 new homes (still the largest project in Sonoma Valley); and meets the state's statutory objectives regarding the disposition of the SDC site, why is this alternative (or a version of it that addresses some of the issues identified) not being put forward as the proposed plan?

C113-3

"Overall, the Historic Preservation Alternative is the environmentally superior alternative, although significant impacts of the Proposed Plan and the two alternatives are largely comparable, and the Historic Preservation Alternative would be less superior in some environmental features such as energy use, biological resources, and wildfire risks. Additionally, this alternative would not support key project objectives related to increased housing supply, varied housing opportunities, community vibrancy, and long-term fiscal stability to the same degree as the Proposed Plan." (DEIR page 14)

We do not find adequate data in the DEIR that supports the "less superior" distinctions above, or any reason why these couldn't be readily addressed. There is no requirement that maximum housing be developed, especially if it means significant impacts in several issue areas. In terms of biological resources, the analyses on page 563 of the DEIR indicates that the Historic Preservation Alternative would be "similar or slightly better" than the Specific Plan. In terms of energy use, the older historic buildings are presumed to be less energy efficient, but it's not clear how the net calculation was made since "energy use" is also cited in conjunction with construction and demolition GHGs, which would be significantly higher in the Specific Plan. The increased wildfire risk with this lower density plan is presumably solely because of the arbitrary exclusion of the Hwy 12 connector road in this alternative. **How would the proposed Specific Plan fare in comparison to the Historic Preservation alternative if it also excluded the Hwy 12 connector road, or if both included the Hwy 12 connection?**

C113-4

Scale is the most obvious way to mitigate impact. While the types of impacts of the Historic and proposed Specific Plans may be the same, they are not equal in magnitude.

FEASIBILITY

If the Historic Preservation alternative was dismissed because of an assumption that feasibility will require higher development densities, **how is a feasibility analysis considered in the DEIR and shouldn't this be more transparently addressed in the Proposed Plan?**

C113-5

Since it's unclear what "economic feasibility" means for the SDC campus at this time, **shouldn't there be an economic feasibility analysis as part of this evaluation process?** The market demand study that was prepared for the alternatives report does not fill this need (and is inconsistent with the Specific Plan in any case in that it reports little demand for non-residential uses).

MITIGATION MONITORING / PERFORMANCE STANDARDS

It's of concern to the community that most of the policies in the proposed Specific Plan are not enforceable, generally because of the use of "should" in the descriptive language rather than "shall" in many instances. Terms such as "if feasible" and "assumed" are also used repeatedly and the DEIR analysis acknowledges considerable uncertainly in the impacts and thus in the mitigation measures as well.

C113-6

Will the policies and conditions of the approval of the Specific Plan be put into a mitigation monitoring plan or program to ensure mitigation compliance for the project?

Given the scale of the proposed Specific Plan and absence of any phasing requirements, it's critical that performance standards be developed and tied into the phasing of the project, especially since the DEIR calls for future studies and mitigations that are not yet identified. **Will performance standards be put into place, potentially to consider impacts that might include Traffic, Wildlife Function, Resources, Noise?**

C113-6

HOUSING NUMBERS

The Specific Plan states that it will result in 1,000 units and the DEIR uses that assumption, but as noted in Specific Plan Table 4.2 more units are suggested, even without likely density bonuses. That means that most of the environmental impacts in the DEIR are underestimated for the number of units permitted. If the analysis is limited to 1,000 units, why is the possibility of 1,100 or more of units included in the Specific Plan?

C113-7

CULTURAL RESOURCES / HISTORIC PRESERVATION

Isn't it true that the Historic Alternative meets the fundamental project objectives listed on pages 5-6 of the DEIR? Isn't it true that the proposed Specific Plan is inconsistent with the fundamental project objective calling for balancing development with historic resource conservation?

Regarding policies and impacts on cultural resources, isn't it true that the DEIR does not specifically address impacts on Contributing Resources. Please amend the EIR to include such impacts in its own section, not embedded in the discussion of impacts on the district as a whole or explain why not. Isn't it violative of CEQA for the EIR to assume that the project will be approved as proposed, without mitigations and alternatives to reduce impacts on historic resources having been determined feasible or infeasible? Wouldn't the loss of eligibility for the National Register of Historic Places remove protections for contributory resources? What environmental impacts would attend such losses of eligibility? What mitigations could avoid that loss? Please consider and analyze the benefits of the pending efforts to list SDC in the National Register.

C113-8

What are the performance-based standards to determine which buildings can feasibly be restored or adaptively reused? How is demolition of any building to be decided? What type of analysis and performance-based standards will be applied to permit demolition under the Specific Plan? Please amend the Specific Plan so that demolition of any qualified historic resource will require a Plan amendment based on codified criteria. If not, why not? Isn't protection of National Register eligibility required by CEQA if feasible?

C113-9

Regarding the Sonoma House and the main building, Specific Plan Policy 2-47 uses terms like "consider" and "if feasible." How will feasibility be determined? In light of significant impacts, why are mitigation measures not identified or analyzed? Doesn't CEQA disallow deferral of analysis and mitigation of the Specific Plan's foreseeable impacts on historic resources? Isn't it true that projects consistent with the Specific Plan, including those involving demolition of currently listed or eligible historic resources will not be subject to discretionary CEQA review? If not, under what circumstances would CEQA review be required?

UTILITY INFRASTRUCTURE

The Valley of the Moon Water District (VOMWD) consistently contacts customers requesting a 20% reduction in water use, further stating that penalties will be assessed if the reduction is not met. Yet, for the purposes of the DEIR and the water assessment section, the DEIR and VOMWD assert they have the resources to serve the SDC project. What assumptions underpin this assertion?

There are contradictions that should be addressed in the DEIR. For example: VOMWD's own estimates for future water deliveries and shortages are based upon single dry years, not the multiple dry year shortfalls we are already experiencing. Additionally, the Sonoma Valley Groundwater Sustainability Agency has made increasing projections for the need for groundwater re-charge throughout the Sonoma Valley, but the VOMWD has not estimated its own required contribution to groundwater re-charge and has maintained an increased groundwater "draw down" in the SDC water assessment report. What are the groundwater re-charge assumptions for the SDC site and are they included in the DEIR? C113-10

Additional areas of the water assessment report that require clarification in the DEIR:

- The report assumes the planning area will be served by local, on-site surface water sources. However, for Fern and Suttonfield Lakes, the treatment plant and the pipes/infrastructure are not a part of the core campus development. For the purposes of the DEIR and water assessment, those resources do not exist.

- What, specifically are the surface water sources the DEIR is stating are available for use?
- What becomes of those "non-available" water sources (the lakes, treatment plant)?
- Who is responsible for the evaluation of the dams that contain all of that water?
- Are the lakes going to be drained, filled in, maintained?

C113-11

- The riparian rights contradict the findings of both the Sonoma Ecology Center and the Sonoma Valley Water Sustainability study that urges an elimination of riparian water rights in order to provide groundwater recharge to diminishing Sonoma Valley aquifers.

- Who maintains the riparian water rights? The VOMWD, the state, the developer?

- The SDC water treatment plan has not been licensed for operation in many years. The DEIR states it will be evaluated for re-use by the water system operator.

- Who will pay for the evaluation? If the plant requires re-construction, or is not salvageable, who pays for these updates?
- Where, on the Specific Plan, will it be located?

ENERGY MICROGRIDS:

The DEIR language is vague in the section that pertains to an electrical microgrid. By definition, a microgrid is a locally controlled and maintained electrical grid with defined electrical boundaries. It is able to operate in both a grid-connected and "island" mode. A stand-alone or isolated microgrid only operates off-the-grid and cannot be connected to a wider electric power system. C113-12

- Which type of system is being proposed, grid-connected or stand alone?

- Will the system have localized generating capacity?
- Where is the dedicated space on the Specific Plan for any proposed generation?
- Who pays for it and maintains it?
- Where is the electrical use projection data for microgrid design?

C113-12

VEHICLE MILES TRAVELED (VMT)

The Specific Plan indicates that there will be no free parking on campus. Has the DEIR studied the VMT and traffic safety impacts of this policy with respect to visitor vehicle trips to find parking off-site; the impacts on the narrow streets in the adjacent neighborhoods, particularly the Glen Ellen streets south of the SDC (Martin, Lorna, Burbank, Sonoma Glen Circle, Marty and Madrone) where parking is free; or the public safety or emergency evacuation impacts of this policy? Has the potential limit on public access been evaluated?

C113-13

In addition, was there analysis done on the safety implications of increased VMT on the routes used by cyclists and commuters to travel from Glen Ellen to other county locations (Santa Rosa and Rohnert Park), specifically Warm Springs and Bennett Valley Roads. These narrow, winding roads are commonly traveled at relatively high speeds; their road shoulders are significantly deteriorated (no shoulder at all for significant portions). The safety implications on these roads due to the increased VMT in the Proposed Plan must be considered in the DEIR.

There is no evidence at this juncture that anyone living on the SDC site will be employed at the site so this cannot be assumed. Has the DEIR considered this in one of its VMT scenarios? On a related note, while it's noted that institutional uses associated with the former SDC have been removed from the SCTM19 model's existing land use database (DEIR page 426), historical VMT numbers are still cited in the Historical Use section (DEIR 427-428) and implied to be relevant. VMT under the Proposed Plan will not be directly comparable to the historic SDC site in terms of either resident (non-driving) or single-employer shift work VMT per capita; any assumptions made pertaining to historical VMT need to be made clearer in the DEIR analysis and narrative. Finally, the DEIR cites a VMT increase of ~631, with the existing VMT at 59,654, and the Proposed Plan VMT at 60,285 in 2040 (DEIR, page 183). How can this be accurate based on the anticipated population and the VMT summaries cited throughout the DEIR?

C113-14

The DEIR's Project trip generation estimate was developed using the SCTM19 travel demand forecasting model maintained by the Sonoma County Transportation Authority (SCTA). The specific trip generation factors are not included in the DEIR. Thus, it is impossible to evaluate the reasonableness of either those factors or the resulting trip generation numbers.

Can the DEIR appropriately consider the completion of the Sonoma Valley Trail multi-use path, connecting the SDC site with Santa Rosa, as part of the SDC site VMT mitigation if this is a Caltrans controlled project?

C113-15

Why is the downscaling or elimination of the hotel not considered part of VMT mitigation? The hotel is no identified as a priority in the state legislation pertaining to the SDC site and will contribute significantly to VMT.

In Table ES-2, the DEIR determines that VMT reduction measures cannot be guaranteed, and they may be insufficient to reduce VMT per capita below the applicable significance threshold or fully offset the effect of induced VMT. "There are no other feasible mitigation measures available." Why is this an allowed conclusion when there are certainly mitigation measures available that might justifiably be

considered, even if reductions might not reduce impacts to levels that are less than significant? Examples of mitigation include a reduced scale alternative or elimination (or reduction of size) of the hotel or other commercial development. C113-15

WILDLIFE CORRIDOR

There is no analysis of the impacts on the wildlife corridor through the campus and no acknowledgement of the fact that animals currently use the campus and will be impacted. Also, there is no assessment of the impacts of fencing on wildlife. (Only wooden fences are prohibited on the campus.) The fencing policies appear to apply only to the open space and human/wildlife interface areas, not the campus. C113-16

LAND USE IMPACTS

The proposed Specific Plan is both inconsistent with several project objectives, as noted above, and inconsistent with existing County General Plan policies encouraging growth in transit-oriented, urban areas. It is also inconsistent with General Plan policies calling for an overall reduction in VMT since it introduces urban uses in a non-urban area; this will necessarily increase vehicle trips to reach services in either Sonoma or Santa Rosa. C113-17

COMMERCIAL SPACE / JOB CREATION

There appears to be no policy saying that the hotel can't be built first. Is there anything in the proposed Specific Plan requiring the developer to build housing first? C113-18

Why is such a large-scale hotel being proposed when it's not a defined project objective, and when VMT is listed as a challenge?

POPULATION and GROWTH ASSUMPTIONS

The DEIR analysis of growth-inducing impacts is based on a comparison of the project size to county-wide population and employment numbers, which is an unrealistic and invalid comparison. As a distinct planning unit, Sonoma Valley should be the region of comparison. Given the relatively small population of Sonoma Valley, the proposed plan represents a substantial growth-inducing project. Alone, it will double (triple?) the community housing numbers and draw population and employees from other parts of the county as well as from outside the county. Given its location away from necessary goods and services, it will generate pressure for additional urban land uses on surrounding and nearby unincorporated lands. This urban sprawl growth scenario is in direct conflict with climate change policies to encourage compact, in-city growth. C113-19

IMPACTS ON NEIGHBORHOODS SOUTH OF SDC

The Glen Ellen neighborhoods adjacent to SDC will take the brunt of both the construction and operation impacts – not to mention the ongoing impacts of traffic and safety related to parking if there is no free parking on the SDC campus. The over 200 apartments and small lot single family homes directly south of the SDC property will be subject to the aggregate effects of noise, traffic, air emissions, and visual effects. These residents' daily routines will be disrupted during a very long-term construction period. This area is home to many low to moderate-income families who have arguably not had an adequate voice in this planning process. C113-20

Has the DEIR adequately studied the effect of the Specific Plan on this neighborhood, to include the narrow Glen Ellen streets from Martin Street south to Madrone Road and along Madrone Road?

CUMULATIVE EFFECTS

There are several foreseeable projects within 15 miles of the SDC site that will contribute to cumulative growth and related impacts, including but not limited to: the Graywood Ranch Hotel, Elnoka Village Senior Citizens housing project, Milestone Siesta Senior Citizens housing project, Donald Street housing development project, Verano hotel and housing project, Hanna Boys Center residential development program, and the proposed ~70% membership license increase at the Sonoma Golf Club.

C113-21

In the Transportation Methodology section (page 432), the DEIR states," The model's 2040 cumulative year includes growth that is consistent with adopted general plans within the County and with regional projections contained in Plan Bay Area 2040." Were the above-mentioned projects, and any additional foreseeable projects, considered either in the general plans or by Plan Bay Area 2040? Is Permit Sonoma able to share what was included in the model?

FIRE / EMERGENCY PREPAREDNESS

The DEIR did not consider a fire scenario in which the fire comes in from the west, down from Sonoma Mountain. "Historically, a fire approaching from the west may be less likely, and therefore did not warrant further specific analysis" (DEIR page 515). We know that fires are now burning in ways that are outside of historical precedent due to climate change and related impacts, and that this area has not burned in recent history. With this in mind, we believe a west-approaching fire scenario west must be considered.

C113-22

Did the DEIR consider an evacuation scenario where broadband and/or cell service is out, or is unreliable, affecting receipt of alerts? This occurred in both the 2017 and 2020 fires – land lines and cell service were knocked out or overloaded and people had limited information to guide evacuation.

In Section 16.1.3.4 (page 511), the DEIR states that to further mitigate potential impacts, Policy 2-54 requires that the project sponsor proactively plan for emergency wildfire safety by building or designating an on-site shelter-in-place facility, to be open to both SDC residents and the general public. In our community conversations to date, Sonoma County fire and emergency experts have not condoned or recommended this as appropriate for the SDC site, so we question this as an appropriate mitigation measure.

The DEIR indicates no significant increases in evacuation times with the Specific Plan. Tables show evacuation times in the order of 15-20 minutes, with and without the proposed project. The Evacuation Time analysis suggests that "added times" for travel during an evacuation range from 1 or 2 minutes to 37 minutes to get to Napa. These hypothetical scenarios defy residents' reality and the actual evacuation times experienced during recent fires: Nuns Canyon fire (2017) resulted in evacuation times out of Sonoma Valley of 1 hour or more; Glass Fire (2020) resulted in evacuation times from nearby Oakmont onto Hwy 12 of one to two hours; evacuations from Kenwood during recent fires took hours, not minutes; adding thousands of vehicles will exacerbate the problem.

C113-23

Page 520 of the DEIR states that, "The additional SR 12 connector road will provide additional fire access and evacuation routes." However, during a wildfire, it's quite possible that residents and workers in the proposed project area will not be able to take this connector route east toward highway 12 due to the high probability of a wildfire advancing from the highway 12 direction (see Specific Plan, figure 2.3-1). Has this possibility been considered in the DEIR analysis of evacuation times? Also, can the analysis

assume the Hwy 12 roadway connection when it will be subject to a separate CalTrans review and approval process and might not be approved?

C113-23

The DEIR indicates that the SDC core campus is in the Local Responsibility Area (LRA) versus the State Responsibility Area (SRA) with respect to fire-related development governance. In Figure 3.16-2, it appears that the LRAs are outside of any fire hazard severity zone. However, given that parts of the LRA are immediately adjacent to medium, high and very high fire hazard severity potential zones (FHSZs), can this be accurate?

The assessment of wildfire hazards in the DEIR appears to have a number of errors and omissions, the most serious of which lead to unwarranted conclusions that underestimate this hazard ("Impact 3.8-7 Implementation of the Proposed Plan would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. (Less than Significant)" p. 268).

C113-24

Page 503: "Primary responsibility for preventing and suppressing wildland fires in Sonoma County is divided between local firefighting agencies and the State of California, Department of Forestry and Fire Protection. The SDC Planning Area is currently located in an area identified as a State Responsibility Area (SRA)."

1. The Planning Area "includes the approximately 180-acre SDC Core Campus…" (DEIR, pg. 51) According to the State Fire Marshall's map: https://osfm.fire.ca.gov/media/6822/fhszs_map49.pdf, the Core Campus is within a Local Responsibility Area (LRA. See map on page 4), not the State's. Is this correct?

Page 503: "Under the Fire and Resources Assessment Program (FRAP) "the Planning Area…includes areas of high to very high Fire Hazard Severity Zones west of Highway 12, areas of high fire hazard severity in the hills, and areas of moderate fire hazards severity zones in the vicinity of Suttonfield Lake and Fern Lake (Figure 3.16-2). The Core Campus is not included in any of these FHSZs. "

The State Fire Marshall's final map is not intended to show moderate and high FHSZs within the Local Responsibility Area. The State's draft map (page 4), however does show moderate and high FHSZs covering a substantial portion of the Core Campus. While not finalized, this appears to be the best available fire risk data for the Planning Area.

Goal PS-3 from the Sonoma County General Plan 2020 (DEIR, page 497), reads: "Prevent unnecessary exposure of people and property to risks of damage or injury from wildland and structural fires," with Objective PS-3.1 stating, "Continue to use complete data on wildland and urban fire hazards."

2. How was the data gap between the SRA and the LRA within the Planning Area addressed during the DEIR's analysis of wildfire threat? What evidence was the statement about the Core Campus (DEIR, pg 503. See above) based on? Was this conclusion reached because there is data showing low fire risk there or because lack of data was equated with low risk?

C113-25

3. The Fire Constraints map (13.16-2) shows the Core Campus being almost entirely outside of any Fire Severity Hazard Zones. How would the Fire Severity Hazard data for the Core Campus, shown in the State's draft map, change the analysis of fire hazards there? Does this change the calculus for significance under 16.1.3.1 Criterion 2: "Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire."?

4. In addition, the Sonoma County Community Wildfire Protection Plan Update 2022 (referenced in the DEIR, 16.1.1.3. Regional and Local Regulations, p. 496) states that: "Wildland fires that start in the woods and spread into adjacent areas with relatively dense housing often result in the greatest losses of property and life. Efforts to save lives and property will take precedence over losses of wildland resources, so firefighters' response must focus on protecting populated areas rather than fighting a fire in the most efficient way."
   Even if we assume there are no FHSZs within the Core Campus, this suggests that building dense housing at SDC adjacent to wildlands could result in high "losses of property and life." Responding to such a fire might prevent firefighters from efficiently working to prevent further fire spread. How was this scenario taken into account during the DEIR analysis?

C113-26

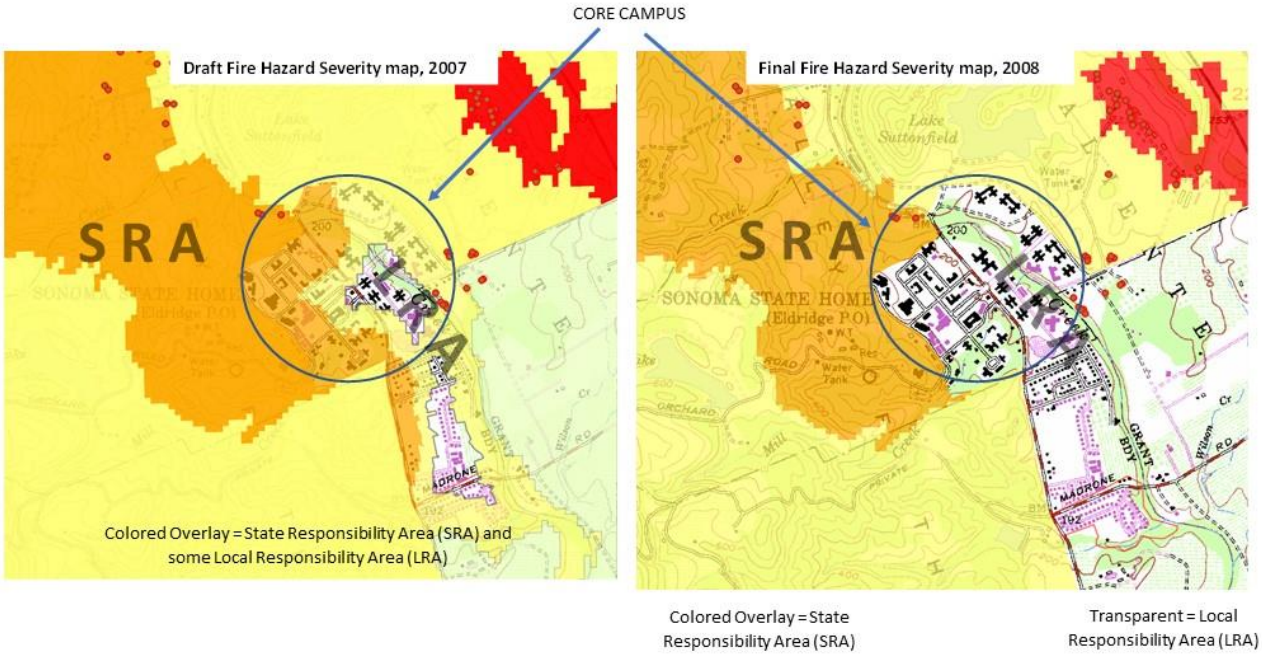
3.16.1.3.4. Wildfire Evacuation

1. Wildfire ignitions are known to increase with the size of a population. How was this relationship evaluated in the calculation of fire risk in the Planning Area?

C113-27

Hazard zones below are from the State Fire Marshall's office: https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/

HAZARD ZONES: Yellow = moderate Orange = high Red = very high Dots = structures burned in 2017 (Sonoma County GIS)



CLOSING COMMENTS

As evidenced through the comments above, we do not believe this DEIR yet adequately and completely evaluates the environmental and safety impacts of the Proposed Plan. Furthermore, we remain committed to the Sonoma Valley community's consistent input calling for both affordable housing and a lower density plan alternative. A plan closer to the Historic Preservation Alternative – determined as "environmentally preferred" in the DEIR analysis – successfully meets the project objectives and the established Guiding Principles for this project and should be given strong consideration.

C113-27

We remain committed to a plan that we can all support and appreciate this opportunity to provide comment. The NSV MAC letter process did not allow to adequately address all topic areas. Please respond to the public comments in the attached addendum that we received in advance of the NSV MAC meeting on 9/21/22, relating to the Specific Plan and the DEIR, which we are incorporating by reference, and give them full consideration.

Sincerely,

Arthur Dawson

Arthur Dawson, Chair
North Sonoma Valley MAC

cc: Susan Gorin
Tennis Wick
Rajeev Bhatia
Sonoma County Planning Commission

From: Thomas Ells
To: Hannah Whitman
Subject: NSV MAC Meeting
Date: Wednesday, September 21, 2022 4:54:46 PM
Attachments: SCD EIR and Specific Plan Process Comments 3 Valley of the Moon.pdf

---

EXTERNAL

Dear Hannah & NVS MAC Members,
Please distribute the attached by email to participants/members of the MAC.
Thank you
Thomas Ells

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

TCE
ENGINEERING

Investment Securities $ Stocks* $ Agency* & Municipal Bonds**
Real Estate Consulting $ Property Management

154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Formerly NASD Series 7 & 63 Registered Rep, & Series 66 Financial Advisor.
Securities Not Available

Thomas C Ells, RCE 40656
MS Tax, MS Fin, MS Acc
ED, Galen's Gardens/SHS

Mr Brian Oh, Comprehensive Planning Manager, SDC
Permit Sonoma, County of Sonoma
2550 Ventura Ave.
Santa Rosa, CA 95403

Regarding: Sonoma Developmental Center (SDC) Specific Plan (SP) & Program DraftEIR (EIR) Comments 2

Sept 18, 2022

County's evidentiary record is anecdotal @best. Sonoma Valley represents a national treasure, as described as, "The Valley of the Moon". Sonoma is the Native Indigenous American name for the valley. When White settlers asked what Sonoma meant, Natives pointed to the trace of the Moon setting and rising behind the eastern ridgetops during certain times of the year, the White's interpretation was that "Sonoma" meant 'the valley that the Moon touches' ("The Valley of the Moon"). My Anthropology studies and linguistic avocation has taught me to hear the phonetic sounds (the basic phonemes), particularly for significant language words, words that have cultural, spiritual, or international usage, such as words which are adopted into a language from another. The basis of this study is Multi-critical analysis as opposed to diacritical analysis. Typically there will be very little understanding of the actual meaning of an adopted word. Then, if it retains a high referential standing, it indicates it's an adopted word, not merely a forgotten word. Typical adopted words with high Referential standing and forgotten meanings are: Alleluia, precious, and Amen.

In this case we have Sonoma: what are the phonemes for "Sonoma", they are "Tsu" (not Tso) & "Noma"; so in this case our supposition is correct, because these are two very important international words. "Tsu" or "Tzu" represents the name given by the Chinese to one of their greatest Philosophers, "LaoTzu" the founder of Taoism (from UCI Anthropology studies "Chinese, Taoism & Confucianism", 1983), "LaoTzu" was originally named "LoTzu", meaning "Man-Master" (Philosopher) and when he was older it was changed to "LaoTzu", meaning "Old-Man-Master" (or Great Philosopher): Therefore "Tzu" means "Master". "Noma" is the Aramaic word for 'name' establishing the identity and essence of a thing and thereby giving man control over the substance, and in the Greek "Nomo" means "law or control", again, in Western parlance the essence is unknowable but the manifestation is controllable by the 'name': so control and name are the same thing, therefore "Noma" means "name" (from participation in Antiochian and Greek culture, which develops from a multi-critical analysis as opposed to diacritical).

"Sonoma" therefore means "The Master's Name", and in a Spiritual sense, it means the highest name above all names. "The Master's Holy Name", in an Eastern Spiritual sense describing God's, the Creator's, or Great Spirit's control over the location by the Moon's contact with the Earth, not Man's control over God by invocation of the Name. This we hear many times from Joseph Campbell, man's search for control vs man's search for God.

Also, in another form of Transcendence, both “Tsu” and “Noma” mean “control”, so they are like conjoined twins, in a simple manifestation of the “Rosetta Stone”. Looked at separately, we call this a “Translation”, but conjoining them is a form of transcendence in the physical plane of existence. The name “Sonoma” appears to be used as a descriptive tool, by connecting physical transcendence (translation of place) with the location of a Spiritual Transcendence (in reference to the verticality of the Moon’s touching the Earth), it again mirrors the “Rosetta Stone” representing two kinds of Transcendence, with the Earthly “T” crossing the Spiritual vertical demarcation.

More than the mere analysis of the word and its application to the space, is the significance of "Sonoma" in the cross-cultural linguistic representation of deification using ancient language references from across the sea, and linked only by many thousands of years. There is no other place name which connects so perfectly the unity of man, the Name itself transcends both the ages and the seas, thus we have the essence of a World Heritage Cultural Site. Like many other UNESCO World Heritage Sites, which are in disrepair and in danger of destruction, Sonoma's "Valley of the Moon" is suffering an existential threat from the Proposed Project Alternative. Located at near the exact geographic center of Sonoma Valley, 10 miles from it's head along Hwy 12, and 12 miles from it's outlet at Skagg's Island. And transected by a vital Wildlife Corridor connecting 2 Mountain Parks: Sugarloaf/Hood and Jack London Parks; no discussion or analysis has been given to the significance of this World Heritage Cultural Site, or the impacts or any mitigation from the significantly new, taller, and dense construction within the Program Draft EIR-SP Project analysis (cursory discussion was given to light pollution, but none to the physicality of the presence of tall, dense, populous village construction in the midst of an Historic Treasure, McDonalds centered in Teotihuacan).

The significance of this Spiritual location was not lost on those who created the Sonoma Developmental Center for a healing center for their developmentally disabled children. We should hope that at this more enlightened time, and consistent with CEQA, the Historical Preservation Act, and the 50th Anniversary of the World Heritage Convention (Sept 17, 2022), we should be prepared to preserve both the content and the context, as much as is physically possible, for this National Treasure, "The Valley of the Moon". Under the UNESCO World Heritage Convention, which the United States was signatory (though withdrawn from 2018), we should "strengthen Credibility of the World Heritage List, ensure Conservation of World Heritage properties, promote Capacity-building measures, increase public awareness, involvement and support for World Heritage, and enhance the role of Communities in implementation of the World Heritage Convention". What has been done here appears to be the opposite, a complete neglect of not only Native American cultural values, but World Heritage Convention values.

TCE ***ENGINEERING*** *154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com*

Analysis of EIR Historical Asset discussion:

The Program Draft EIR is silent on the above discussion, while reporting Environmental Impact Report - County Summary "5.3 Significant and Unavoidable Impacts: According to CEQA Guidelines 15126.2(b), an EIR must discuss any significant environmental impacts that cannot be avoided under full implementation of the proposed program...However the Proposed Plan aims to be self-mitigating. Thus, all proposed policies aim to address environmental impacts (to the, sic) to the greatest extent feasible and no mitigation measures are required. The analysis in Chapter 3 determined that the Proposed Plan would result in significant impacts to the cultural/historic resources and transportation (home-based work trip vehicle miles traveled per capita) that, even with implementation of mitigation measures, would remain significant and unavoidable". This language neglects real analysis of the Null Hypothesis Project, and only considers the Proposed Plan impacts which it states (along with all other alternatives) have similar impacts [without discernment as to avoidable, mitigatable, or unmitigatable], which is entirely untrue in the Null Hypothesis case.

Continuing; "5.3.1 Cultural, Historic, and Tribal Resources: new construction under the Proposed Plan has the potential to disconnect the remaining contributing resources in the Core Campus from those in the Community Separator and Regional Parks lands to the east and west, disrupting the SSHHD's overall integrity to the point that it would no longer be eligible for listing in the National Register of Historic Places, CRHR, or as a California Historic Landmark. This impact, in addition to demolition of the aforementioned resources would result in a substantial adverse change to the significance of the historic district such that the significance of the historic district would be materially impaired pursuant to Section 15064.5. Implementation of goals 2-I and 2-J and policies 4-20 through 4-32 as well as Standard Conditions of Approval (LU1 through LU6) would partially compensate for the impact associated with the demolition of historically contributing resources and physical alteration of the historic district to the maximum extent practicable; however, because these measures would not be enough to avoid or reduce the impact completely, the Proposed Plan's impact would remain significant and unavoidable". No mention is made of the Tribal Resources, because no artifacts remain or they could be recovered in a project excavation, but this does not address the transcendent value of the space and place name as a World Heritage Cultural Site, which can be subsumed in the potential Project construct, where we have heard discussed 2-3Msf of Commercial Construction.

Again, the Program Draft EIR's considerations of the impacts, mitigations, and alternatives appear limited to the Proposed Plan Project Alternative, and do not address the Alternatives, nor the Null Hypothesis Project, continuing a foregone conclusion (see 2-3Msf of Commercial Construction discussed above, is that unmitigatable?).

Please see the following analysis of project conceptual iteration for planning and design.

TCE ***ENGINEERING*** *154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com*

Please see pg4 p3 San Mateo Gardens, re "substantial evidence in the record, is a predominantly factual question...for the agency...drawing on its particular expertise"; here we are bringing your attention to the word “expertise”.

Friends of the College of San Mateo Gardens v. San Mateo County Community College District

https://law.justia.com/cases/california/court-of-appeal/2017/a135892.html

We want to accept the presumption of legal operation, but we must also accept and correct the illegal condition when evidence is presented to the contrary. In a County system, Engineering is not conducted without Accounting. But if the Accounting fails such as for Northwestern Pacific Railroad, the sad evidence must be accepted, and correction immediately made or we suffer the loss of funding or function. No one was there to accept the Trucker's weighmaster's tickets when the washout deliveries were made in the upper NWP line, none could be found, none ever delivered, no NWP.

The reason we approach the initial determination of a project this way, using California Supreme Court’s remand for San Mateo Gardens, is, here we equate the Court EIR analysis process to the Engineering process, in that there are a sequence of iterative steps involved. This process is best exemplified from the CA Supreme Court's remand expressed in San Mateo Gardens, where a series of back-and-forth evaluations and propositions are made in analyzing a project (one such method is CPM,Critical Path Method), which is the same process we use in conceptual design or planning.

A comparison is made by question; does the "initial concept" with its features fit the need and the existing space, then we may have to adjust the concept's features to the needs, or to the space? Conceptual planning designs forward & backward many times.

This comparison is not to decry the effort expended or the information obtained through Planning education or product, but a marathon runner prepares for a marathon, not Law or Engineering. Preparation for a marathon may be great preparation for someone wanting to become a Lawyer, Doctor, or Engineer, but by itself does not make one a Lawyer, Doctor, or Engineer. Nor is an Urban Planner a qualified Civil Engineer, and therefore is unable to make professional judgments in respect to the Planning of "fixed works" identified in BPC 6731.

[See Licensing BPC 6730-6730.2(a); 6731; 6734; 6735(a). See also Administrative Mandamus case, Morris v Harper (2001) 94 Cal.App.4th 52 . “After all, ‘“‘[i]t is the refusal or neglect to perform an act which is enjoined by the law as a present duty that serves as the very foundation for the [mandamus] proceeding.’ ” (Morris v. Harper, supra, at p. 60.)"]

San Mateo Gardens; "Instead of resting on whether a project is new “in an abstract sense,” the “decision to proceed under CEQA’s subsequent review provisions must . . . necessarily rest on a determination—whether implicit or explicit—that the original environmental document retains some informational value.” (Id. at p. 951.) Such an inquiry “is a predominantly factual question . . . for the agency to answer in the first instance, drawing on its particular expertise.” (Id. at p. 953.)"

From where does this “expertise” derive, Planners require no Science education?

The EIR standard is, if/when there are significant environmental impacts, then a review of impacts and mitigations must obtain (other than stating overriding or unmitigatable conditions), and a "judicial review must reflect the exacting standard that an agency must apply". San Mateo (ibid) pg 8.

What this is referring to is, that the evidence must be prepared to a very high standard, from the beginning, in order for it to be considered "substantial evidence in the record". Where is the “exacting Standard” & “expertise”?

According to the National Society of Professional Engineers code of ethics, Professional Engineers may disagree without a single outcome obtained, but must remain decorous.

["The Supreme Court in San Mateo Gardens provided guidance for how to apply the subsequent review provisions. It explained that whether “major revisions” will be

required as a result of project changes “necessarily depends on the nature of the original environmental document,” i.e., whether it was an EIR or a negative declaration. (San Mateo Gardens, supra, 1 Cal.5th at p. 958.) It further explained that the appropriate standard of review also depends on the nature of the original environmental document. Although an agency’s determination of whether major revisions are required is reviewed for substantial evidence, “judicial review must reflect the exacting standard that an agency must apply when changes are made to a project that has been approved via a negative declaration,” as opposed to the deferential standard that applies when the project was originally approved by an EIR. (Id. at p. 953; see Committee for Re-Evaluation of TLine Loop v. San Francisco Municipal Transportation Agency (2016) 6 Cal.App.5th 1237, 1247, 1251-1252 [applying San Mateo Gardens in case where project originally approved by EIR]; Latinos Unidos de Napa v. City of Napa (2013) 221 Cal.App.4th 192,"]

In planning, we have said, the process is intensely exhaustive and iterative, and what is described as the Court EIR review process is also exhaustive and iterative.

The Court ceding competency to the local agency is similar to the process of presenting a case to a Court of Competent Jurisdiction. A Court of Competent Jurisdiction is composed firstly of a trained lawyer, either by a Law School or by preparation and passing the Baby Bar. Then of course, the prospectant Judge must pass the National Bar Exam locally administered, next the Judge must practice law for a minimum of 10 years. At some point the Judge is appointed or runs for election, and finally, the Judge is selected to hear a case by the Chief Judge. The Court itself must also be of Competent Jurisdiction, meaning it is the proper venue, as established by our system of Jurisprudence. These are significant tests.

If someone went to College and studied English or Political Science, they could learn a lot of laws, but they would not be presumed to know how to practice Law,

And they did not go to Law School or pass the Baby Bar, and they have not prepared to be a Lawyer, let alone a Judge.

TCE ***ENGINEERING*** *154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com*

Engineering is one of the most complex problems in supply & demand, as evidenced by the number of divorces in custom home remodeling and construction, and why Public Works requires Licensed Civil Engineers.

Our critique is not meant to characterize the work of any Engineers having completed reports for the SDC EIR-SP, since we do not know what instructions they were given.

But we contend that recommended demolition for over 1.2Msf without analysis of 400,000sf, and recommended demolition of ~75,000sf of Hospital Treatment Building rated at "not requiring any updates", represents an incomplete analysis at best, and certainly a neglect of the impacts on the resources being analyzed.

As we spoke of backward-and-forward analysis in design, this is required in Planning as well, unless a truncated process is employed. It is far easier to make the facts fit the design, than to make the design fit the facts. If your timeline is short, it is far easier for you to establish the Project, and make the analysis fit the Project by not addressing impacts except in a standard way, such as, "(h)owever the Proposed Plan aims to be self-mitigating". “from Program Draft EIR 5.3 Significant and Unavoidable Impacts”

Subsequent to the very specific State Law being passed to sell SDC, incorporating significant intent for community participation, many meetings were held with studied interest and good comments. Comments were sent to Permit Sonoma and the Planners involved in SDC's NOP of Program Draft EIR & SP, but these comments were not incorporated in the evaluation nor in the Proposed Alternative Project SP, nor were they forwarded to the Planning Commission, nor were they provided to other participants or commenters to the EIR & SP.

This is not standard practice, and violates CEQA Code 15300(a)&(b)(1)-(3); “(a) Before granting any approval of a project subject to CEQA, every lead agency or responsible agency shall consider a final EIR or negative declaration or another document authorized by these guidelines…(b) Choosing the precise time for CEQA compliance involves a balancing of competing factors, EIR’s and negative declarations should be prepared as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment.”

(b)(1) "With public projects, at the earliest feasible time, project sponsors shall incorporate environmental considerations into project conceptualization".

The timeframe window for "cumulative impacts" evaluation was limited to after Proposed Alternative Project completion, leaving out the demolition and construction of the entire project, let alone the life cycle embedded costs, GHG’s and energy to be demolished as a consequence from the new construction.

This time frame results in unsubstantiated conclusions for the Proposed Project Alternative in ES.3 Alternatives to the Proposed Plan, “As discussed in Impacts 3.6-2, the Proposed Plan would thus support and reflect the increasingly stringent State and local goals and regulations that seek to increase energy efficiency, reduce energy consumption, and prioritize renewable energy – reinforcing that the Proposed

Plan would not result in cumulatively considerable impact with respect to wasteful, inefficient, or unnecessary consumption of energy resources." They left out 161,000 tons of waste.

15300 (b)(3), "With private projects, the Lead Agency shall encourage the project proponent to incorporate environmental considerations into project conceptualization, design, and planning at the earliest feasible time."

This truncated analysis appears to be the type that establishes priorities, goals, and objectives before the certification of the EIR is complete, therefore "limiting alternatives or mitigation measures".

This truncated analysis would violate CEQA Code 15300 (b)(2), "public agencies shall not undertake actions concerning the proposed public project that would have a significant adverse effect or limit the choice of alternatives or mitigation measures, before completion of CEQA compliance";"and for example, agencies shall not:(b)(2)(B)", "Otherwise take any action which gives impetus to a planned or foreseeable project in a manner that forecloses alternatives or mitigation measures that would ordinarily be part of CEQA review of that public project".

Given that Permit Sonoma will only provide the public's comments to the Planning Commission upon final EIR Certification, and a series of comments have been made to the SDC Comprehensive Planning Manager which has not incorporated the public's comments into the Proposed Project Alternative, "at the earliest feasible time", they appear to have violated Sec's 15300(a)&(b)(1)-(3), inclusive.

What we contend here is, that the proper "back-and-forth" process has not occurred, as within the planning process proper, within the design process proper, within the EIR process, as would be the same within the Court's evaluation of the EIR process itself, from San Mateo Gardens remand from the California State Supreme Court, which constitutes proper Authority to all jurisdictions within California.

We also contend that "particular expertise" and "the exacting standard that an agency must apply" is not available to the review that the "judicial review must reflect", without a Licensed Civil Engineering in Responsible Charge of "Fixed Works" Planning, BPC 6731.

Your Humble Servant Thomas Chase Ells

Thomas Chase Ells, ED, Galen's Gardens/Samaritan Housing Society
Anthropologist, RCE 40655, MS Tax Law, MS Fin, MS Acc.
UCI Administrative Law Certificate in Hazardous Materials & Emergency Management

From:	Teri Shore
To:	Hannah Whitman; Arthur Dawson
Cc:	Angela Nardo-Morgan; Kate Eagles; Susan Gorin
Subject:	NSVMAC - SDC Letter - Open Space Text Addition - Item 8 - 9.21.22 Public comment
Date:	Monday, September 19, 2022 1:30:55 PM
Attachments:	OpenSpacePages from Permitted UsesPages from SDC Public Review Draft Specific PlanLR.pdf NVMACAddShore.docx

---

EXTERNAL

Dear Chair Dawson, NSVMAC, Sup. Gorin and Hannah,

Please consider adding this section on open space to the NSVMAC letter regarding SDC at your September 21, 2022 meeting, Agenda Item 8.

It is important to go on record requesting more details in the DEIR and Specific Plan about the open space, as without it we will face more uncertainty as the SDC project progresses over the years and the players change.

Please see below and attached suggested text.

Thanks for your consideration.

Teri Shore
515 Hopkins St.
Sonoma, CA 95476

SUGGESTED TEXT ADDITION TO NSVMAC LETTER ON SDC

Submitted by Teri Shore

PRESERVED OPEN SPACE/PARKLANDS

While we recognize that it is the intent of the County of Sonoma and the State of California to protect the open space lands around the historic campus at SDC, the DEIR and Specific Plan are inconsistent and inadequate regarding the description, protection and disposition of 755 acres of open space outside the core campus.

Neither the DEIR or Specific Plan gives the exact boundaries (other than in one general overlay map in the Land Use Section of the Specific Plan) or give details on how or when open space lands will be protected, transferred, or managed; or analyze or mitigate the impacts to those lands from the development of the historic campus.

These inadequacies need to be resolved in the DEIR and Specific Plan by adding clear descriptions of the open space lands with exact boundaries; likely mechanisms for transferring the lands and to what possible entities or types of entities; a timeline; and how the lands will be managed and under what authority. Environmental impacts and mitigations for impacts to the open space lands from development of the campus and ongoing operations must be provided.

A major concern is that multiple new agricultural uses including tasting rooms and agricultural processing that have never occurred at SDC are proposed to be permitted in the “Preserved Open Space” in the Land Use Section of the Specific Plan. These as well as new conditional land uses in the open space including geothermal development, sports facilities, and parking

facilities are never mentioned or analyzed in the DEIR. See Table 4.3 of the Specific Plan, attached. The DEIR needs to be revised to eliminate these sues and/or to analyze and mitigate environmental impacts on the open space and natural resource.

Vague Goals and Policies contained the Specific Plan and DEIR do not suffice, such as "*future developers at the site must work with the County to ensure proper management and stewardship*" and "*Work with Sonoma County to dedicate the preserved open space as regional parkland*." Not resolving these issues is likely to create confusion and conflict later for all involved, as elected officials, agency staff and developers change over time.

Lastly, the DEIR and Specific Plan cannot rely on state statute to protect the open space lands as that language is vague, only as "feasible" and in the "best interests of the state."[1]

---

[1] *The disposition of the property or property interests shall provide for* ***the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible*** *and shall be upon terms and conditions the director deems to* ***be in the best interests of the state.***

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

SUGGESTED TEXT ADDITION TO NSVMAC LETTER ON SDC

Submitted by Teri Shore

PRESERVED OPEN SPACE/PARKLANDS

While we recognize that it is the intent of the County of Sonoma and the State of California to protect the open space lands around the historic campus at SDC, the DEIR and Specific Plan are inconsistent and inadequate regarding the description, protection and disposition of 755 acres of open space outside the core campus.

Neither the DEIR or Specific Plan gives the exact boundaries (other than in one general overlay map in the Land Use Section of the Specific Plan) or give details on how or when open space lands will be protected, transferred, or managed; or analyze or mitigate the impacts to those lands from the development of the historic campus.

These inadequacies need to be resolved in the DEIR and Specific Plan by adding clear descriptions of the open space lands with exact boundaries; likely mechanisms for transferring the lands and to what possible entities or types of entities; a timeline; and how the lands will be managed and under what authority. Environmental impacts and mitigations for impacts to the open space lands from development of the campus and ongoing operations must be provided.

A major concern is that multiple new agricultural uses including tasting rooms and agricultural processing that have never occurred at SDC are proposed to be permitted in the "Preserved Open Space" in the Land Use Section of the Specific Plan. These as well as new conditional land uses in the open space including geothermal development, sports facilities, and parking facilities are never mentioned or analyzed in the DEIR. See Table 4.3 of the Specific Plan, attached. The DEIR needs to be revised to eliminate these sues and/or to analyze and mitigate environmental impacts on the open space and natural resource.

Vague Goals and Policies contained the Specific Plan and DEIR do not suffice, such as "*future developers at the site must work with the County to ensure proper management and stewardship*" and "*Work with Sonoma County to dedicate the preserved open space as regional parkland*." Not resolving these issues is likely to create confusion and conflict later for all involved, as elected officials, agency staff and developers change over time.

Lastly, the DEIR and Specific Plan cannot rely on state statute to protect the open space lands as that language is vague, only as "feasible" and in the "best interests of the state."[1]

[1] *The disposition of the property or property interests shall provide for* ***the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible*** *and shall be upon terms and conditions the director deems to* ***be in the best interests of the state.***

Table 4-3: Permitted Uses

Land Use	*Low/Medium Density Residential*	*Medium/Flex Density Residential*	*Flex Zone*	*Institutional*	*Utilities*	*Hotel Overlay*	*Parks and Recreation*	*Buffer Open Space*	*Preserved Open Space*
Agriculture and Resource-Based Land Use									
Agricultural Crop Production and Cultivation	P	P	P	-	-	P	-	P	P
Agricultural Processing	C	C	P	-	-	C	-	P	P
Animal Keeping: Beekeeping	P	P	P	-	-	C	-	P	P
Animal Keeping: Confined Farm Animals	C	-	P	-	-	-	-	-	P
Animal Keeping: Farm Animals	P	P	P	-	-	-	-	P	P
Animal Keeping: Pet Fancier	P	P	P	-	-	-	-	-	-
Farm Retail Sales	C	C	P	-	-	-	-	-	P
Farm Stands	C	C	P	-	-	-	-	-	P
Indoor Crop Cultivation	C	C	P	-	-	-	-	-	P
Mushroom Farming	C	C	P	-	-	-	-	-	P
Nursery, Wholesale	-	-	P	-	-	-	-	-	P
Timberland Conversions, Minor	-	-	P	-	-	-	-	-	P
Nursery, Wholesale	-	-	P	-	-	-	-	-	P
Tasting Rooms	-	-	P	-	-	P	-	-	P
Industrial, Manufacturing, Processing and Storage									
Animal Product Processing	-	-	C	-	-	-	-	-	-
Fertilizer Plants	-	-	C	-	-	-	-	-	-
Laboratories	-	-	C	-	-	-	-	-	-
Laundry Plants	-	-	C	-	-	-	-	-	-
Manufacturing/Processing, Light	-	-	C	-	-	-	-	-	-
Manufacturing/Processing, Medium	-	-	C	-	-	-	-	-	-

P Permitted
- Not Permitted
C Conditional Use Permit

Table 4-3: Permitted Uses

Land Use	*Low/Medium Density Residential*	*Medium/Flex Density Residential*	*Flex Zone*	*Institutional*	*Utilities*	*Hotel Overlay*	*Parks and Recreation*	*Buffer Open Space*	*Preserved Open Space*
Recreation, Education and Public Assembly Land Use Category									
Camp, Organized	-	-	-	-	-	-	C	-	C
Campgrounds	-	-	-	-	-	-	C	-	C
Civic Institution	P	P	P	P	-	P	P	-	-
Community Meeting Facilities	P	P	P	P	-	P	P	-	-
Country Club	-	-	P	-	-	-	-	-	-
Educational Institutions: Colleges and Universities	-	-	-	P	-	-	-	-	-
Educational Institutions: Elementary and Secondary Schools	P	P	P	P	-	P	P	-	-
Educational Institutions: Specialized Education andTraining	-	-	P	P	-	-	C	-	-
Periodic Special Events	-	-	P	P	-	P	P	-	-
Recreation and Sports Facilities: Health/Fitness Facility	-	-	P	P	-	P	C	-	-
Recreation and Sports Facilities: Recreation Facility, Indoor	-	-	P	P	-	P	C	-	-
Recreation and Sports Facilities: Recreation Facility, Outdoor	P	P	P	P	-	P	P	C	C
Recreation and Sports Facilities: Rural Sports and Recreation	P	P	P	P	-	P	P	C	C
Sports and Entertainment Assembly	-	-	P	P	-	P	-	-	-
Studios for Art Crafts, Dance, Music	-	-	P	P	-	P	-	-	-

P Permitted
- Not Permitted
C Conditional Use Permit

Table 4-3: Permitted Uses

Land Use	Low/Medium Density Residential	Medium/Flex Density Residential	Flex Zone	Institutional	Utilities	Hotel Overlay	Parks and Recreation	Buffer Open Space	Preserved Open Space
Services Land Use Category									
Banks and Financial Institutions	-	-	P	-	-	-	-	-	-
Business Support Services	-	-	P	-	-	-	-	-	-
Commercial Kennels	-	-	C	-	-	-	-	-	-
Day Care Center	-	-	C	-	-	-	-	-	-
Cemeteries	-	-	C	-	-	-	-	-	-
Commercial Cannabis Uses	-	-	C	-	-	-	-	-	-
Commerical Horse Facilities	-	-	C	-	-	-	-	-	-
Homeless Shelter, Emergency	-	-	C	-	-	-	-	-	-
Homeless Shelter, Small Scale	-	-	C	-	-	-	-	-	-
Horse Boarding	-	-	C	-	-	-	-	-	-
Lodging: Bed and Breakfast (B&B)	-	-	P	-	-	P	-	-	-
Lodging: Hosted Rental	-	-	P	-	-	P	-	-	-
Lodging: Hotel, Motel, and Resort	-	-	P	-	-	P	-	-	-
Maintenance and Repair Service, Non-Vehicular	-	-	C	-	-	-	-	-	-
Medical Services: Hospitals	-	-	C	P	-	-	-	-	-
Medical Services: Offices and Outpatient Care	-	-	C	P	-	-	-	-	-
Personal Services	-	-	P	-	-	-	-	-	-
Professional Office	-	-	P	P	-	-	-	-	-
Veterinary Clinic	-	-	P	P	-	-	-	-	-
Transportation, Energy, Public Facilities Land Use Category									
Dispatch Facility	-	-	P	P	P	-	-	-	-
LowTemperature Geothermal Resource Development	-	-	-	-	P	-	-	-	P
Parking Facilities	P	P	P	P	P	P	P	P	P
Public Safety Facilities	P	P	P	P	P	-	P	-	-
Public Utility Facilities	-	-	-	-	P	-	P	P	P
Renewable Energy Facilities	P	P	P	P	P	P	P	-	-
Telecommunications Facilities	-	-	-	-	P	-	-	-	-

P Permitted
- Not Permitted
C Conditional Use Permit

From:	Tracy Salcedo
To:	Hannah Whitman; Arielle Kubu-Jones; Karina Garcia
Cc:	Arthur Dawson; Maite Iturri
Subject:	SMP letter re: SDC DEIR and preferred plan
Date:	Wednesday, September 21, 2022 9:42:13 AM
Attachments:	SMP_DEIR letter_FINAL_9-21-22.pdf

EXTERNAL

Hi Hannah, Arielle, and Karina,

I have attached the letter from Sonoma Mountain Preservation addressing the draft environmental impact report and preferred specific plan for the Sonoma Developmental Center. While I apologize for the redundancy, since I've already copied you on the original email with its cc list, I would like to make sure the letter is received by all members of the North Sonoma Valley Municipal Advisory Council, the Springs Advisory Council, and the Sonoma Valley Citizens Advisory Commission.

I appreciate your assistance with this request. Thank you for all you do.

Kindly, Tracy

Tracy Salcedo
Laughingwater Ink
(707) 246-0694
laughingwaterink@gmail.com / laughink@vom.com
laughingwaterink.com

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Sonoma Mountain Preservation

September 21, 2022

Brian Oh
Comprehensive Planning Manager
Permit Sonoma, County of Sonoma
2550 Ventura Avenue
Santa Rosa CA 95403
[via email]

RE: Draft Environmental Impact Report and Preferred Specific Plan for redevelopment of the Sonoma Developmental Center in Glen Ellen

Dear Mr. Oh,

We appreciate this opportunity to comment on the draft environmental impact report (DEIR) and preferred Specific Plan for redevelopment of the Sonoma Developmental Center (SDC).

While we acknowledge the conflicting directives laid out in the legislation authorizing the specific planning process for the property and recognize the difficulty of making meaningful connections with stakeholders in pandemic times, we must express our overall disappointment with the DEIR and Preferred Plan, which do not reflect community input as we've witnessed in public meetings and in letters over the years-long planning process. The scale of proposed redevelopment of the 180-acre core campus is fundamentally incompatible with the rural character of the surrounding community and the north Sonoma Valley, presents a clear danger to the safety of current and future residents of the Valley in the inevitable event of wildfire, and threatens the integrity of Sonoma Mountain's irreplaceable natural resources — habitats for keystone flora and fauna, the health of the Sonoma Valley Wildlife Corridor, water quality, air quality, recreational opportunities, and historic, tribal, and modern cultural values.

The DEIR fails to adequately or clearly describe meaningful, enforceable mitigations for the environmental impacts of redevelopment at the scale proposed, as required by the California Environmental Quality Act (CEQA). It fails to clearly delineate cumulative

impacts. It does not provide sufficient analysis to give decision-makers all the information they need to satisfactorily draw conclusions about the environmental consequences of the Preferred Plan. It is our hope that by addressing the questions that follow, applicable, effective, enforceable mitigations will be identified and instituted that materially decrease or eliminate those impacts.

General concerns/questions

The DEIR indicates that, across the board, the environmental impacts of the Preferred Plan and the Historic Preservation Alternative (HPA), which is acknowledged as environmentally superior per CEQA, are "largely comparable." The DEIR also states that the HPA is less superior in terms of energy use, biological resources, and wildfire risk (ES.4.2). Given the significant differences in scale of the two alternatives — the HPA is half the size of the Preferred Plan — these conclusions defy logic.

1) Please explain how construction of 1,000 homes occupied by 2,500 people has the same environmental impact across virtually every category studied in the DEIR as does providing 450 homes occupied by 1,125 people (a 55% reduction)? Which studies support this finding?

2) Please explain how providing workspace for 900 people has the same environmental impact across virtually every category studied in the DEIR as does providing workspace for 600 people (a 33.3% reduction). Which studies support this finding?

3) Please explain how the HPA—which translates to less demolition through adaptive reuse of historic structures, less construction, fewer vehicle miles traveled, and fewer people on the property—uses more energy, has a greater impact on biological resources, and increases wildfire risk than the Preferred Plan, as stated in the DEIR (ES 4.2). Which studies support this finding?

Impacts specific to Sonoma Mountain

The entire 945-acre SDC property, including the developed core campus, is located within one of the last rural regions on the Sonoma Valley floor, with the mostly undeveloped slopes of Sonoma Mountain forming the entire western boundary and serving as a viewshed/mountain backdrop; as an informal natural reserve/safe haven for native flora and fauna; and as an informal recreational resource for hikers, cyclists, and equestrians from throughout Sonoma County and beyond. Further, historic residential use of the SDC by individuals with developmental disabilities and their caregivers had minimal human-caused environmental impacts on the property's open spaces. Redevelopment at the scale in the Preferred Plan creates an urban footprint within this

historically rural zone, significantly increasing human-caused environmental impacts on a number of areas identified under CEQA (i.e., Aesthetics [3.1]; Biological Resources [3.4], and Public Services and Recreation [3.13], to name a few). To mitigate impacts of any redevelopment on the historic, minimal-impact, rural quality of the property, and to ensure the viewscape is preserved, we request that:

1) The DEIR include mitigation measures to compensate for the loss of the rural attributes of the property at its current baseline, or a baseline that dates back no further than 10 years. Please specify which measures in the current DEIR address these impacts, and which studies support them.

2) Please study, provide mitigation measures, and document how incorporating adaptive reuse of buildings into the HPA proposal, with its smaller human footprint, would impact environmental goals.

3) The SDC's open space currently sees frequent use by recreationalists from all over Sonoma County and beyond. That use increased markedly during the pandemic, despite restrictions on travel. The level of use has remained high as the pandemic has waned. The addition of 2,500 residents, 900 workers, visitors to the proposed hotel and conference center, and their friends and family, as outlined in the Preferred Plan, will add an exponential burden on the property's open space, much of which is on the skirts of Sonoma Mountain. Please analyze what that increase in recreational use means for aesthetics, biological resources, cultural, tribal, and historic resources, and water and air quality, and identify mitigations for those impacts.

4) Please analyze the cumulative impacts and potential degradation of floral and faunal habitats, groundwater supply, and riparian zones across the site, including the 750+ acres identified as open space, caused by the increased housing density, noise, construction, traffic, and demolition proposed under the Preferred Plan. Please provide analysis of the impacts of redevelopment on migratory fish species, such as coho salmon. Please also analyze whether these impacts would be mitigated by a smaller redevelopment such as the HPA.

5) The intent to preserve and protect the 750+ acres of open space surrounding the 180-acre core campus has been codified by the state in its enabling legislation and has been promised by the county in the Preferred Plan. However, neither the Preferred Plan and nor the DEIR delineate clear boundaries for the open space to be transferred, identify a mechanism of transfer, clearly identify the entities that a developer must work with to facilitate transfer, or explicitly require a developer to ensure that redevelopment of the core campus be done in such a way, and with sufficient buffers, as to protect the natural values of the open space. Please add specific, enforceable guidelines for the open space

transfers, specifying acreages and minimum boundaries on both the east and west sides of Arnold Drive, and limiting allowed uses on these acreages to passive recreational uses such as hiking, mountain biking, horseback riding, photography, etc.

6) Agricultural and commercial uses should not be permitted in open space intended to be parkland. Please clarify that uses such as those identified in Table 4.3 will not be permitted in open space identified for transfer to park agencies, and that mitigations for such uses on other open space parcels are identified and enforceable.

Thank you for the time and effort you have put into developing the DEIR and preferred Specific Plan for the property. We look forward to receiving Permit Sonoma's responses to our concerns, and hope the final plan and EIR presented to the Planning Commission for comment and to the Board of Supervisors for approval reflect substantive changes that ensure the integrity of the natural values of Sonoma Mountain, and the communities that surround it, remain intact.

Respectfully,

Meg Beeler, Chairperson
Sonoma Mountain Preservation
Traditional territory of Southern Pomo, Wappo, Patwin, and Coast Miwok

On behalf of Sonoma Mountain Preservation's Board of Directors
Kim Batchelder, Bob Bowler, Arthur Dawson, Avery Hellman, Nancy Kirwan, Larry Modell, Tracy Salcedo, Teri Shore, Helen Bates, Mickey Cooke, Marilyn Goode, David Hansen, and Lucy Kortum

cc:
Senator Mike Thompson, Assembly member Cecilia Aguiar-Curry, Senator Mike McGuire, Senator Bill Dodd, Sonoma County Planning Commission, Sonoma County Board of Supervisors, Springs Municipal Advisory Council, North Sonoma Valley Municipal Advisory Council, Sonoma Valley Citizens Advisory Commission, Sonoma City Council, Permit Sonoma, Department of General Services (Gerald McLaughlin)

From: Jay Gamel
To: Hannah Whitman
Cc: Arthur Dawson
Subject: Re: North Sonoma Valley MAC Materials-9/21/22 Meeting
Date: Wednesday, September 14, 2022 7:36:44 PM
Attachments: NSV-MAC-DEIR-Comment-Letter-Draft4-09-12-22.pdf

EXTERNAL

An excellent start to this response. I have noted a few very small grammatical items; nothing substantive.

jay gamel, kenwood

On Wed, Sep 14, 2022 at 6:06 PM Kathy Pons <282kpons@gmail.com> wrote:

> Draft comment letter on SDC from North SV MAC...
>
> ---------- Forwarded message ---------
> From: **Hannah Whitman** <Hannah.Whitman@sonoma-county.org>
> Date: Wed, Sep 14, 2022 at 11:40 AM
> Subject: North Sonoma Valley MAC Materials-9/21/22 Meeting
> To: Hannah Whitman <Hannah.Whitman@sonoma-county.org>
>
> Greetings,
>
> Attached please find:
>
> - Materials for Item #8 for 9.21.22 NSV MAC Meeting
>
> Best,
>
> Hannah Whitman
>
> Aide to Supervisor Susan Gorin
> Sonoma County Board of Supervisors
> 575 Administration Dr., Room 100A
> Santa Rosa CA, 95403
> Hannah.Whitman@sonoma-county.org
>
> Phone: (707) 565-2241
> Fax: (707) 565-3778

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Draft letter only – Draft to be edited and reviewed for potential approval at the NSV MAC meeting of 9/21/22.

September 13, 2022

Mr. Brian Oh
Permit Sonoma
Address / Email

Dear Mr. Oh,

On behalf of the North Sonoma Valley Municipal Advisory Council (NSV MAC), I respectfully submit the following comments pertaining to the Public Review Draft of the Sonoma Developmental Center (SDC) Specific Plan (Proposed Plan) and the SDC Specific Plan Draft Environmental Report (DEIR), as issued by Sonoma County in August 2022. While this letter is reflective of community input, it is not intended to be exhaustive or to take the place of individual comments from community members and other interested parties.

Given the tremendous amount of input from Sonoma Valley residents and business owners concerned about the project size and its impacts, as well as this MAC's own request and the Board of Supervisors' direction to scale back the Specific Plan, it is surprising that the proposed Specific Plan still contains over 1,000 homes and approximately 940 jobs. It appears that the DEIR fails to disclose the full extent of impacts that will result throughout Sonoma Valley from this large-scale development outside of an urban growth area, as is further detailed in this letter.

The Specific Plan represents one of the largest, if not THE largest, developments in the history of Sonoma Valley and is in conflict with County General Plan policies calling for city-centered growth. Furthermore, the proposed plan is inconsistent with its own guiding principles calling for a balance between redevelopment and historic preservation; the plan will destroy the very qualities that make the historic SDC site unique and its implementation will have far-reaching, significant adverse impacts on Sonoma Valley residents.

With this in mind, we provide the following comments, by general category:

PROJECT SCALE & HOUSING

Increasing the supply of affordable and workforce housing is broadly supported by the Sonoma Valley Community, but not at any cost to the environment and the health and safety of Sonoma Valley residents. Our understanding is that the DEIR should help the community better understand the scale of the environmental impacts of the Specific Plan, how they will be mitigated, what options were considered, and why these options were dismissed. We do not believe the DEIR has yet met these objectives.

For example, the DEIR identifies the smaller-scale Historic Preservation Alternative (Historic Alternative) as the environmentally superior alternative. It is not ruled out in the DEIR because it meets the required objectives, but it is dismissed from full consideration. Why?

DRAFT ONLY

If this alternative is environmentally superior and substantially reduces impacts of the proposed plan; if it more effectively meets some of the fundamental project objectives as outlined in the Specific Plan guiding principles, including Preservation of Historic Resources and Balancing Redevelopment with Land Use (DEIR pages 5 and 6); if it provides 450 new homes (still the largest project in Sonoma Valley); and meets the state's statutory objectives regarding the disposition of the SDC site, why is this alternative (or a version of it that addresses some of the issues identified) not being put forward as the proposed plan?

"Overall, the Historic Preservation Alternative is the environmentally superior alternative, although significant impacts of the Proposed Plan and the two alternatives are largely comparable, and the Historic Preservation Alternative would be less superior in some environmental features such as energy use, biological resources, and wildfire risks. Additionally, this alternative would not support key project objectives related to increased housing supply, varied housing opportunities, community vibrancy, and long-term fiscal stability to the same degree as the Proposed Plan." (DEIR page 14)

We do not find adequate data in the DEIR that supports the "less superior" distinctions above, or any reason why these couldn't be readily addressed. There is no requirement that maximum housing be developed, especially if it means significant impacts in several issue areas. In terms of biological resources, the analyses on page 563 of the DEIR indicates that the Historic Preservation Alternative would be "similar or slightly better" than the Specific Plan. In terms of energy use, the older historic buildings are presumed to be less energy efficient, but it's not clear how the net calculation was made since "energy use" is also cited in conjunction with construction and demolition GHGs, which would be significantly higher in the Specific Plan. The increased wildfire risk with this lower density plan is presumably solely because of the arbitrary exclusion of the Hwy 12 connector road in this alternative. **How would the proposed Specific Plan fare in comparison to the Historic Preservation alternative if it also excluded the Hwy 12 connector road, or if both included the Hwy 12 connection?**

Scale is the most obvious way to mitigate impact. While the types of impacts of the Historic and proposed Specific Plans may be the same, they are not equal in magnitude.

FEASIBILITY

If the Historic Preservation alternative was dismissed because of an assumption that feasibility will require higher development densities, **how is a feasibility analysis considered in the DEIR and shouldn't this be more transparently addressed in the Proposed Plan?**

Since it's unclear what "economic feasibility" means for the SDC campus at this time, **shouldn't there be an economic feasibility analysis as part of this evaluation process?** The market demand study that was prepared for the alternatives report does not fill this need (and is inconsistent with the Specific Plan in any case in that it reports little demand for non-residential uses).

MITIGATION MONITORING / PERFORMANCE STANDARDS

It's of concern to the community that most of the policies in the proposed Specific Plan are not enforceable, generally because of the use of "should" in the descriptive language rather than "shall" in many instances. Terms such as "if feasible" and "assumed" are also used repeatedly and the DEIR analysis acknowledges considerable uncertainly in the impacts and thus in the mitigation measures as well.

DRAFT ONLY

Will the policies and conditions of the approval of the Specific Plan be put into a mitigation monitoring plan or program to ensure mitigation compliance for the project?

Given the scale of the proposed Specific Plan and absence of any phasing requirements, it's critical that performance standards be developed and tied into the phasing of the project, especially since the DEIR calls for future studies and mitigations that are not yet identified. **Will performance standards be put into place, potentially to consider impacts that might include Traffic, Wildlife Function, Resources, Noise?**

HOUSING NUMBERS

The Specific Plan states that it will result in 1,000 units and the DEIR uses that assumption, but as noted in Specific Plan Table 4.2 there could be closer to 1,210 units, even without likely density bonuses. That means that most of the environmental impacts in the DEIR are underestimated for the number of units permitted.

CULTURAL RESOURCES / HISTORIC PRESERVATION

The Historic Alternative meets the fundamental project objectives listed on pages 5-6 of the DEIR, unlike the proposed Specific Plan that is inconsistent with the fundamental project objective calling for balancing development with historic resource conservation.

Regarding policies and impacts on cultural resources, the DEIR does not specifically address impacts on Contributing Resources. This should be its own section, not embedded in the discussion of impacts on the district as a whole. For example, if impacts on the integrity of the historic district are considered unavoidable and this would result in removing its eligibility for the National Historic Register, under CEQA that means there are no contributing resources because there is nothing to contribute to, and that all Conditions of Approval referring to contributing resources are effectively moot and not applicable. This seems to be the rationale used under Policy 4-25, but we'd like further detail as to how this is applied.

What are the criteria to determine which building are saved, reused, or demolished? Criteria and standards are mentioned, but we don't find any specific documentation, policy or analysis to properly guide this determination in the Specific Plan. Also, the loss of eligibility for the National Register listing would have additional significant impacts. *(Detail to be confirmed.)*

Regarding the Sonoma House and the main building, Specific Plan Policy 2-47 uses terms like "consider" and "if feasible." Where is the text describing how these determinations will be applied? Why is this not explained through explicit mitigation measures, of which there are currently none? Analysis of impacts on individually significant historic resources are deferred to a time when individual projects are proposed. However, since many future projects will not be subject to CEQA, doesn't this analysis have to be done as part of the Specific Plan EIR with mitigation measures identified, not deferred?

Neither the proposed Specific Plan nor the Draft EIR acknowledges the community effort to get the SDC listed in the National Register as an Historic District. Why is this not mentioned?

UTILITY INFRASTRUCTURE (Comments to come)

CLIMATE CHANGE Comments to come)

DRAFT ONLY

VEHICLE MILES TRAVELED (VMT)

The Specific Plan indicates that there will be no free parking on campus. Has the DEIR studied the VMT and traffic safety impacts of this policy with respect to visitor vehicle trips to find parking off-site; the impacts on the narrow streets in the adjacent neighborhoods, particularly the Glen Ellen streets south of the SDC (Martin, Lorna, Burbank, Sonoma Glen Circle, Marty and Madrone) where parking is free; or the public safety or emergency evacuation impacts of this policy? Has the potential limit on public access been evaluated?

There is no evidence at this juncture that anyone living on the SDC site will be employed at the site so this cannot be assumed. Has the DEIR considered this in one of its VMT scenarios?

Can the DEIR appropriately consider the completion of the Sonoma Valley Trail multi-use path, connecting the SDC site with Santa Rosa, as part of the SDC site VMT mitigation if this is a Caltrans controlled project?

Why is the downscaling or elimination of the hotel not considered part of VMT mitigation? The hotel is no identified as a priority in the state legislation pertaining to the SDC site and will contribute significantly to VMT.

In Table ES-2, the DEIR determines that VMT reduction measures cannot be guaranteed, and they may be insufficient to reduce VMT per capita below the applicable significance threshold or fully offset the effect of induced VMT. “There are no other feasible mitigation measures available.” Why is this an allowed conclusion when there are certainly mitigation measures available that might justifiably be considered, even if reductions might not reduce impacts to levels that are less than significant? Examples of mitigation include a reduced scale alternative or elimination (or reduction of size) of the hotel or other commercial development.

WILDLIFE CORRIDOR

There is no analysis of the impacts on the wildlife corridor through the campus and no acknowledgement of the fact that animals currently use the campus and will be impacted. Also, there is no assessment of the impacts of fencing on wildlife. (Only wooden fences are prohibited on the campus.) The fencing policies appear to apply only to the open space and human/wildlife interface areas, not the campus.

LAND USE IMPACTS

The proposed Specific Plan is both inconsistent with several project objectives, as noted above, and inconsistent with existing County General Plan policies encouraging growth in transit-oriented, urban areas. It is also inconsistent with General Plan policies calling for an overall reduction in VMT since it introduces urban uses in a non-urban area; this will necessarily increase vehicle trips to reach services in either Sonoma or Santa Rosa.

COMMERCIAL SPACE / JOB CREATION

There appears to be no policy saying that the hotel can’t be built first. Is there anything in the proposed Specific Plan requiring the developer to build housing first?

Why is such a large-scale hotel being proposed when it’s not a defined project objective, and when VMT is listed as a challenge?

DRAFT ONLY

POPULATION and GROWTH ASSUMPTIONS

The DEIR analysis of growth-inducing impacts is based on a comparison of the project size to county-wide population and employment numbers, which is an unrealistic and invalid comparison. As a distinct planning unit, Sonoma Valley should be the region of comparison. Given the relatively small population of Sonoma Valley, the proposed plan represents a substantial growth-inducing project. Alone, it will double (triple?) the community housing numbers and draw population and employees from other parts of the county as well as from outside the county. Given its location away from necessary goods and services, it will generate pressure for additional urban land uses on surrounding and nearby unincorporated lands. This urban sprawl growth scenario is in direct conflict with climate change policies to encourage compact, in-city growth.

IMPACTS ON NEIGHBORHOODS SOUTH OF SDC

The Glen Ellen neighborhoods adjacent to SDC will take the brunt of both the construction and operation impacts – not to mention the ongoing impacts of traffic and safety related to parking if there is no free parking on the SDC campus. The over 200 apartments and small lot single family homes directly south of the SDC property will be subject to the aggregate effects of noise, traffic, air emissions, and visual effects. These residents' daily routines will be disrupted during a very long-term construction period. This area is home to many low to moderate-income families who have arguably not had an adequate voice in this planning process.

Has the DEIR adequately studied the effect of the Specific Plan on this neighborhood, to include the narrow Glen Ellen streets from Martin Street south to Madrone Road and along Madrone Road?

CUMULATIVE EFFECTS

There are several foreseeable projects within 15 miles of the SDC site that will contribute to cumulative growth and related impacts, including but not limited to: the Graywood Ranch Hotel, Elnoka Village Senior Citizens housing project, Milestone Siesta Senior Citizens housing project, Donald Street housing development project, Verano hotel and housing project, Hanna Boys Center residential development program, and the proposed ~70% membership license increase at the Sonoma Golf Club.

In the Transportation Methodology section (page 432), the DEIR states," The model's 2040 cumulative year includes growth that is consistent with adopted general plans within the County and with regional projections contained in Plan Bay Area 2040." Were the above-mentioned projects, and any additional foreseeable projects, considered either in the general plans or by Plan Bay Area 2040? Is Permit Sonoma able to share what was included in the model?

FIRE / EMERGENCY PREPAREDNESS

The DEIR did not consider a fire scenario in which the fire comes in from the west, down from Sonoma Mountain. "Historically, a fire approaching from the west may be less likely, and therefore did not warrant further specific analysis" (DEIR page 515). We know that fires are now burning in ways that are outside of historical precedent due to climate change and related impacts, and that this area has not burned in recent history. With this in mind, we believe a west-approaching fire scenario west must be considered.

Did the DEIR consider an evacuation scenario where broadband and/or cell service is out, or is unreliable, affecting receipt of alerts? This occurred in both the 2017 and 2020 fires – land lines and cell service were knocked out or overloaded and people had limited information to guide evacuation.

DRAFT ONLY

In Section 16.1.3.4 (page 511), the DEIR states that to further mitigate potential impacts, Policy 2-54 requires that the project sponsor proactively plan for emergency wildfire safety by building or designating an on-site shelter-in-place facility, to be open to both SDC residents and the general public. In our community conversations to date, Sonoma County fire and emergency experts have not condoned or recommended this as appropriate for the SDC site, so we question this as an appropriate mitigation measure.

The DEIR indicates no significant increases in evacuation times with the Specific Plan. Tables show evacuation times in the order of 15-20 minutes, with and without the proposed project. The Evacuation Time analysis suggests that "added times" for travel during an evacuation range from 1 or 2 minutes to 37 minutes to get to Napa. These hypothetical scenarios defy residents' reality and the actual evacuation times experienced during recent fires: Nuns Canyon fire (2017) resulted in evacuation times out of Sonoma Valley of 1 hour or more; Glass Fire (2020) resulted in evacuation times from nearby Oakmont onto Hwy 12 of one to two hours; evacuations from Kenwood during recent fires took hours, not minutes; adding thousands of vehicles will exacerbate the problem.

Page 520 of the DEIR states that, "The additional SR 12 connector road will provide additional fire access and evacuation routes." However, during a wildfire, it's quite possible that residents and workers in the proposed project area will not be able to take this connector route east toward highway 12 due to the high probability of a wildfire advancing from the highway 12 direction (see Specific Plan, figure 2.3-1). Has this possibility been considered in the DEIR analysis of evacuation times? Also, can the analysis assume the Hwy 12 roadway connection when it will be subject to a separate CalTrans review and approval process and might not be approved?

The DEIR indicates that the SDC core campus is in the Local Responsibility Area (LRA) versus the State Responsibility Area (SRA) with respect to fire-related development governance. In Figure 3.16-2, it appears that the LRAs are outside of any fire hazard severity zone. However, given that parts of the LRA are immediately adjacent to medium, high and very high fire hazard severity potential zones (FHSZs), can this be accurate?

CLOSING COMMENTS (to come)

Sincerely,
North Sonoma Valley Municipal Advisory Council

cc: Susan Gorin
Tennis Wick
Rajeev Bhatia
(Other tbd at NSV MAC 9/21 meeting)

DRAFT ONLY

From: Josette Brose-Eichar
To: Hannah Whitman
Subject: Re: North Sonoma Valley MAC Materials-9/21/22 Meeting
Date: Wednesday, September 14, 2022 5:12:42 PM

EXTERNAL

Hi Hannah,

Thank you for sending this. I will not be able to attend the North Sonoma Valley MAC meeting on 9-21. But, if you could please pass on to the members of the MAC and Supervisor Gorin, how fabulous I think this letter is. The North Sonoma Valley MAC, has so much technical knowledge and expertise, for which I am so grateful. They have covered all the areas that must be addressed in this very vague and almost useless draft EIR. I fully support everything they have so far and the level of detail is outstanding. As I can not attend the meeting, I urge them to approve the final version and get it to PRMD. I will be attending the PRMD meeting tomorrow and then will work on my own letter, but it will never have the level of detail and understanding of all the issues that this draft letter has.

Thank you and sincerely,

Josette Brose-Eichar

On 9/14/2022 11:39 AM, Hannah Whitman wrote:

> Greetings,
>
> Attached please find:
> - Materials for Item #8 for 9.21.22 NSV MAC Meeting
>
> Best,
>
> Hannah Whitman
> Aide to Supervisor Susan Gorin
> Sonoma County Board of Supervisors
> 575 Administration Dr., Room 100A
> Santa Rosa CA, 95403
> Hannah.Whitman@sonoma-county.org
> Phone: (707) 565-2241
> Fax: (707) 565-3778

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Arthur Dawson
To:	PlanningAgency
Cc:	Hannah Whitman
Subject:	Sonoma Valley Municipal Advisory Council letter to Supervisors
Date:	Thursday, September 15, 2022 5:08:38 PM
Attachments:	0 NSV-MACLettertoBoS_FINAL_01-06-22_signed.pdf 0 APPENDIX-FINAL_01-06-22.pdf

Dear Planning Commissioners,

As Chair of the North Sonoma Valley MAC I'm attaching the letter and appendix that was approved by our council and sent to the Supervisors in January pertaining to SDC. This letter details the community's vision for SDC, which has remained quite consistent since the first large community meeting in 2015 and represents years of thinking and work by hundreds of people. Its broad support has been demonstrated by a petition circulated early in the year, which at the time (January) had been signed by a thousand people, the vast majority in Sonoma Valley and elsewhere in the County. It now has over 2500 signatures.

The MAC is intended to serve as our community's voice and this is a strong and clear expression of that voice. Thank you for taking this letter under serious consideration as you deliberate the Sonoma Developmental Center Specific Plan and EIR.

Sincerely,

Arthur Dawson, Chair
North Sonoma Valley Municipal Advisory Council
(707) 509-9427; (707) 996-9967

From: Arthur Dawson <baseline@vom.com>
Sent: Wednesday, September 14, 2022 4:33 PM
To: 'PlanningAgency@sonoma-county.org' <PlanningAgency@sonoma-county.org>
Cc: 'Hannah Whitman' <Hannah.Whitman@sonoma-county.org>
Subject: SDC Draft EIR Response letter; North Sonoma Valley Municipal Advisory Council

Dear Planning Commission,

In view of your meeting on the Sonoma Developmental Center Specific Plan draft EIR tomorrow, I would like to share a link to the comment letter being drafted by the North Sonoma Valley Municipal Advisory Council in response to this document. This is a draft and will be finalized at our next meeting on September 21:

https://sonomacounty.ca.gov/Main%20County%20Site/Administrative%20Support%20%26%20Fisca

l%20Services/BoS/BCCs/Documents/NSV%20Municipal%20Advisory%20Council/September%202022/NSV-MAC-DEIR-Comment-Letter-Draft4-09-12-22.pdf

Given the timely nature of this letter we wanted to make sure you could review our draft. Once finalized I will submit our letter to Permit Sonoma and include the Planning Commission as a recipient.

Sincerely,

Arthur Dawson, Chair
North Sonoma Valley Municipal Advisory Council
(707) 509-9427; (707) 996-9967

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

January 6, 2022

Sonoma County Board of Supervisors
575 Administration Drive, Room 102A
Santa Rosa, California
Via email:

Dear Sonoma County Board of Supervisors:

The North Sonoma Valley Municipal Advisory Council (NSV MAC) has prepared this letter for consideration by the Board of Supervisors (Board) and Sonoma County planning staff regarding the proposed land use and design alternatives for the SDC Specific Plan. The primary purpose of this letter is to summarize public input received by the NSV MAC in response to the SDC Specific Plan Alternatives Report prepared by Dyett & Bhatia and published by the County in early November 2021.

This letter incorporates the extensive community input from public meetings on November 17, 2021, December 15, 2021 and January 5, 2022, the Sonoma Valley community survey, as well as written correspondence and NSV MAC comments, and synthesizes this information into several main themes to create the framework for a community-supported land use alternative. **The intent of this exercise is to provide sufficient information to enable the Board to direct Permit Sonoma staff to develop a preferred alternative that truly reflects the community vision for SDC as articulated in the January 2021 Draft Vision and Guiding Principles.**

C114-1

As reflected in the hundreds of comments received since publication of the Alternatives Report, the Sonoma Valley community does not support any of the three alternatives proposed by the County; 71% of participants rejected all three alternatives when polled during the SDC Alternatives Workshop on November 13, 2021. We also reference a non-affiliated Sonoma Valley survey (community survey) conducted by Sonoma Valley resident Dr. Shannon Lee, Biology Department Faculty at Sonoma State University in December 2021. The survey received 672 responses, 95% of which were from Sonoma Valley and Sonoma County residents. The SDC is not suitable as an "urban infill site" and the community's rejection of the proposed alternatives reflects the incompatibility of the scale of proposed development with the adjacent Glen Ellen communities and the site's environmental constraints.

C114-2

Request for Community-Driven Process for Preferred Alternative

On behalf of the community, the NSV MAC requests the Board to delay the initiation of the California Environmental Quality Act (CEQA) process to prepare an Environmental Impact Report (EIR) for a preferred alternative until after a new alternative reflective of site constraints and community input is developed as promised in the December 17, 2019 agreement between the State of California and Sonoma County. The NSV MAC requests the Board to direct staff to pursue this new alternative as outlined in this letter.

C114-3

Community Input as Framework for a Preferred Alternative

The community continues to support the January 2021 Vision and Guiding Principles that have underpinned community workshops, Sonoma County requests for proposals for preparation of the Specific Plan, and related efforts during this multi-year SDC redevelopment process. These principles are most recently expressed on pages 10-11 of the Specific Plan Alternatives Report. The community feedback conveyed in this letter reflects these principles through an integrated vision of development at an appropriate scale, with an intention to balance affordable, inclusive housing and related commercial development with the protection of SDC's open space (a California public trust resource), the Sonoma Valley Wildlife Corridor, the historic district portions of the SDC campus, fire safety and climate resiliency, and the rural character of the surrounding region. An alternative with substantially reduced

C114-4

density is necessary to ensure that the negative impacts of development on traffic, public safety, wildlife corridors, water/water treatment, and related issues do not cause environmental and social harm.

The nine community priorities are summarized below and detailed in the Appendix to this letter.
OPEN SPACE. Community input consistently emphasizes the singular opportunity the SDC campus represents in terms of protecting the open space and wildlife corridor in the context of a vibrant, sustainable community. Over 90% of community survey respondents ranked "preservation of open space" as the highest priority; this is consistent with the state's 30x30 goals. C114-5

This concern goes beyond setting aside open space lands and creating creek and sensitive habitat setbacks. The density of development planned within the SDC campus must not exceed the carrying capacity of the site's resources. In other words, it must not result in overuse of open space resources or interference with wildlife movement and permeability.

HOUSING DENSITY. The community unequivocally supports the creation of additional housing on the SDC site, particularly affordable housing, however at a lower density (450 or fewer housing units) than that included in any of the alternatives published to date. Higher housing density will move the surrounding communities from a "rural" to "urban" designation based on current U.S. census definitions (see Appendix) and is a primary driver of unacceptable impacts, including environmental, infrastructure, traffic and related public safety issues. C114-6

AFFORDABLE HOUSING. The community supports a considerably higher percentage of affordable housing than the approximately 25% included in the published alternatives, **with 76% of community survey respondents indicating a preference for 50-75% (or more) affordable units.** Use of available funding mechanisms and incentives—including revisiting the State's obligations for SDC site cleanup and remediation—must be included in the financial feasibility assumptions to maximize the affordable housing percentage (see Site Governance / Funding below). C114-7

ADAPTIVE REUSE OF EXISTING BUILDINGS. Public and NSV MAC member comments indicate that the County should revisit the potential reuse of existing buildings to satisfy some of the housing needs on the East Side of the SDC campus.

UTILITY INFRASTRUCTURE. An energy sustainability plan, including a microgrid design, should accompany any SDC development, as should a thorough review of the potential benefits of an on-site sewage treatment facility in light of the challenges to the existing Sonoma Valley infrastructure.

FIRE SAFETY/ CLIMATE RESILIENCY: Fire safety and climate resiliency will be impacted by the other elements of the site plan—water use/recycling, energy grids, housing density—and their impacts on traffic and public safety. These interconnected factors must be more intentionally considered in any preferred alternative for this site. The Sonoma Valley community has expressed particular concern that fire risk, evacuations and related community preparations have evolved significantly during the course of the SDC re-development process. 71% of community survey respondents indicated that the County has not adequately addressed fire hazard, traffic and other impacts to the community in the proposed alternatives. C114-8

HISTORIC PRESERVATION. The community recognizes the importance of preserving the historic, architectural, and aesthetic character of the SDC campus, and envisions permanent protection, preservation and management of selected buildings and structures within the historic district. More specifically, the community has consistently supported the preservation of an historic district on the C114-9

west side of the SDC campus which could include a museum, library, research hub and visitor center, all of which would be linked with the cemetery and open space.

COMMERCIAL SPACE / JOB CREATION: The community supports innovative use of commercial space (education, training, research) and inclusive job creation at a scale suitable for this semi-rural site. In addition, the community wants to see commercial space set aside for **COMMUNITY**-oriented functions, e.g., a community center or school, and is prepared to explore funding options for these uses. C114-9

SITE GOVERNANCE / FINANCING: Many members of the public have requested consideration of establishing a trust or similar management entity to oversee redevelopment and implementation of the Specific Plan rather than a private developer. A trust mechanism would open opportunities for public financing and site management that would broaden the potential for successful redevelopment AND community compatibility. In fact, the Board's April 2019 resolution "Supporting a Land Use Planning process and considerations for disposition of the Sonoma Developmental Center Site," states:

> *"Be it further resolved that the Board may also consider in the future a Joint Powers Authority, Trust or other mechanism to facilitate the disposition and transition of the site to meet the desired outcomes."*

C114-10

Community members have clearly articulated the conflict inherent in creating a plan that is both appropriate for Sonoma Valley and financially feasible, with these economics driven in large part by the dilapidated infrastructure and environmental cleanup liabilities left by the State. The State must help defray the significant costs to clean up the site that it has left in poor condition to ensure that the plan is not merely driven by economic factors. 89% of community residents surveyed believe that the State should be responsible for clean-up and other remedial maintenance of the site.

Conclusions

The Sonoma Valley community's reasons for rejection of the proposed alternative plans are aligned and consistent. The alternatives do not reflect the themes heard over and over in multiple Valley-wide workshops regarding the appropriate size and scale of development, and adequate protection of the wildlife corridor and surrounding open space. None of the current alternatives reflect the many environmental constraints on the site, nor do any strike a balance between financial interests, affordable housing, and environmental and community well-being. C114-11

The community has spoken clearly. On its behalf, the NSV MAC respectfully reiterates its request that the Sonoma County Board of Supervisors direct staff to work with the community to develop an alternative using the framework as outlined above and detailed in the accompanying Appendix.

Sincerely,

Arthur Dawson

Chair, *North Sonoma Valley Municipal Advisory Council*

cc: Permit Sonoma, Sonoma City Council Mayor Jack Ding, Congressman Thompson, Senator McGuire, Senator Dodd, Gov. Gavin Newsom, Wade Crowfoot, local media, Assemblymember Aguiar-Curry, Springs MAC, SVCAC, Sonoma County Regional Parks, Agricultural Preservation and Open Space District, Sonoma County Historical Society

From:	Arthur Dawson
To:	Brian Oh
Cc:	Susan Gorin; Tennis Wick; rajeev@dyettandbhatia.com; engage@sdcspecificplan.com; Greg Carr; Caitlin Cornwall; Pat Gilardi; Larry Reed; Jacquelynne Ocana; Shaun McCaffery; Belen.Grady@sonoma-county.org; PlanningAgency; "Logan"; Senator.McGuire@senate.ca.gov; Senator.Dodd@senate.ca.gov; "Rebecca"; "Ezrah"; Cecilia.Aguiar-Curry@asm.ca.gov; "Gerald McLaughlin"; district4; James Gore; district5; Susan Gorin; David Rabbitt; Rebecca Hermosillo; "Rep. Mike Thompson"; "Cooper, Kai"
Subject:	North Sonoma Valley Municipal Advisory Council Comment Letter, SDC DEIR
Date:	Friday, September 23, 2022 2:46:26 PM
Attachments:	FINAL_NSV-MAC_DEIRComment-Letter_09-21-22.pdf Addendum NSV MAC Public Comment Received Item 8 9.21.22.pdf

EXTERNAL

Dear Mr. Oh,

On behalf of the North Sonoma Valley Municipal Advisory Council (NSV MAC), I respectfully submit the attached comments pertaining to the Public Review Draft of the Sonoma Developmental Center (SDC) Specific Plan (Proposed Plan) and the SDC Specific Plan Draft Environmental Report (DEIR), issued in August 2022.

As the NSV MAC serves as the voice of the community within county government, we intend this letter to be reflective of community input. However, it is not intended to be exhaustive or to take the place of individual comments from community members and other interested parties.

As you will read in the attachments, we do not believe this DEIR adequately and completely evaluates the environmental and safety impacts of the Proposed Plan. Furthermore, we remain committed to the Sonoma Valley community's consistent input calling for both affordable housing and a lower density plan alternative. A plan closer to the Historic Preservation Alternative – determined as "environmentally preferred" in the DEIR analysis – successfully meets the project objectives and the established Guiding Principles for this project and should be given strong consideration.

Thank you for your attention to the issues raised. We look forward to your response.

Sincerely,

Arthur Dawson, Chair
North Sonoma Valley Municipal Advisory Council
(707) 509-9427; (707) 996-9967

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Barbara Roy
To: Brian Oh; Brian Oh
Subject: SDC Specific Plan and Draft Environmental Impact Report
Date: Sunday, September 25, 2022 10:56:58 PM

EXTERNAL

Dear Mr. Oh:

it is disappointing that in spite of the grave issues for the Glen Ellen community, the DEIR essentially dismisses any creative way to achieve a reasonable balance of additional housing with the rural nature of the area. The majority of residents and Sonoma Valley groups favor a 450 housing unit plan and yet it is tied to the Historic Preservation Alternative which the DEIR rejects, however, no attempt is made to pattern that density with a modified preservation model which could be a reasonable plan. The document is clearly biased toward a plan that has been consistently rejected by the populace. A main tenet when this process began was for it to "complement" the surrounding community. In as much as, according to ABAG, the entire County is to supply 3881 housing units by 2031, it is not reasonable to put 1000 of them in tiny rural Glen Ellen. C115-1

Under Aesthetics 3.1
LU3 is to locate future growth using infill parcels. Building a city in the middle of the Glen Ellen community is not infill.
Table2.5-3 indicates a hotel which has also been soundly rejected by the residents of the Valley as inappropriate and growth inducing.

Biological 3.4
OSRC-7.5 Maintain connectivity between natural habitats. Who bears responsibility in perpetuity for maintaining and enforcing the "mitigating policies" once the units are sold?

Hydrology 3.9
The Plan states it does not use groundwater. How is this possible in that Sonoma Creek does draw groundwater from the Shallow Aquifer and the Plan diverts water from Sonoma Creek? How is it determined that the water rights (to divert water from various creeks) which are sought to be safeguarded are not affecting groundwater gaining into the creeks?
SDC has 4 groundwater wells which are not currently drawing. Where is the guarantee that they will never be reactivated?
3.9.3.3 item 6D and 6E seek to ensure water to the Plan residents and safeguard SDC water rights. What safeguards are in place for the existing residents whose water supply are also tied to creek and stream flow as affected by SDC diversions?
630 says the diversions cannot result in a net increase of withdrawals or diversions from various springs and streams including the four main sources used by SDC during low-flow periods including summer, fall, and drought conditions or as "annual averages". Please define "annual averages" as used here. Averages over drought years differs from non drought years and also years where climate change has caused a heavy but short-lived precipitation that drains away before being absorbed. C115-2

Land Use 3.10
The Plan conflicts with Land Use Policy, which calls for growth utilizing vacant parcels in urban areas. It is a manipulative definition of infill to describe building 100 housing units where few exist, as "infill". Physical Barrier: While it may not be what the DEIR calls a "typical reference", how is building a city in the middle of the Glen Ellen community in its entirety, not, in fact, a "physical barrier"? C115-3

Housing 3.12
Again, it is not against reasonable County Housing Element policy which references "Fair Share" distribution to support 1000 units of the ABAG figure of 3881 units in rural Glen Ellen?
The Plan claims it does not induce substantial population growth. Please explain and justfy how virtually C115-4

doubling by adding 2400 people to a community of 2542 is not inducing substantial population growth. C115-4

Transportation 3.14
The Plan hopes that residents will not use their cars. The Plan hopes that residents will not work off site. How does the Plan justify figures based on hopes?
How will no free parking on site impact existing neighborhood streets and the existing rural Glen Ellen community which the Plan hopes to entice with recreation etc?
Emergency access only addresses emergencies within the site. C115-5

Wildfire 3.16
The DEIR continues to deal with this issue, as with others, as if the SDC core was somehow not in the middle of a rural community and that what happens on site does not impact the surrounding area.
Evacuation Issues. Historical first-hand information from those who have evacuated from multiple wildfires in recent years does not support the time figures used in this report. Again, the planning treats the situation as if only SDC needs to evacuate. Experienced survivors know that 1.2 minutes of extra evacuation time is not realistic. Most evacuees have spent hours on clogged roads. A wildfire evacuation entails residents from all the areas possibly in the shifting track of fire. Furthermore, assumptions seem to be made that everyone in the path gets instant notification, which has not been the case as both land line and cell communications may easily be compromised. As the County knows, wildfire is swift and unpredictable. How are these time frames justified as they do not reflect real time experience? C115-6

Sincerely,
Barbara Roy
1310 Hill Road
Glen Ellen

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Betsy Donnelly
To:	Brian Oh
Cc:	Eamon O'Byrne and John McCaull; johnm@sonomalandtrust.org
Subject:	Comments on SDC Specific Plan Draft EIR
Date:	Thursday, September 22, 2022 8:12:32 AM

EXTERNAL

Hello Mr. Oh,

Thank you for taking the time to read and respond to my comments. I am confused and hope you can help clarify several statements in the EIR that seem contradictory. On the one hand it says there will be no significant impact on wildlife species yet on the other hand for each species and each special project a biologist will do an environmental assessment prior to the start of each special project. Also, no new field studies were done for the EIR because existing resources contained enough detail for a program level environmental assessment and yet the EIR states that operations could result in loss of habitat or harm species if they are present.

C116-1

Another thing I am unclear about, is that I was under the impression that environmental impact was not allowed to be deferred, but relying on the "future studies" seems to be doing just that.

Here are just a handful of the statements in the EIR that seem to contradict each other.

From section 3.4.3.2: No new field studies were conducted for the preparation of this EIR, because existing resources contained information on pertinent aspects of biological resources in the Planning Area at level of detail appropriate for a program level environmental assessment. Future project specific detailed biological surveys will be necessary to confirm presence or absence of sensitive resources on future development sites. Cumulative impacts related to biological resources are discussed in Chapter 5: CEQA Required Conclusions.

C116-2

Page 241-242: In terms of potential operations and maintenance related impacts, some increased risk to special-status species may result from increased vehicular traffic, increased recreational use, and domestic pets. Direct impacts to streams and surrounding habitat could result in the loss of suitable habitat or harm of these species if they are present

Page 221: Lack of information in the CNDDB and other reports about a species or an area does not imply that the species does not occur or that there is a lack of diversity in that area. This lack of information may reflect a lack of Project or reporting more than absence of special-status species. Thus, there may be additional occurrences of special-status species within this area that have not yet been surveyed and/or mapped.

C116-3

BIO-1 Prior to the commencement of the approval of any specific project in the

Proposed Plan area, Project Sponsors shall contract a qualified biologist to conduct studies identifying the presence of special-status species and sensitive habitats at proposed development sites and ensure implementation of appropriate mitigation measures to reduce impacts to sensitive habitat or habitat function to a less than significant level.

C116-4

Thank you again for you time and attention and for working with the community to help reach a solution we can all agree on.

Sincerely,

Betsy Donnelly

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Bonnie Brown
To: Brian Oh
Subject: DEIR Comments/Superior Alternative
Date: Monday, September 26, 2022 1:44:38 PM

EXTERNAL

Comment: The statements underlined in the analysis below do not provide substantial evidence for these statements.
Energy use can be initiated just as well as the Proposed Plan and biological resources preserved as well. No proof of the statements below are included in the analysis.
Wildfires risks would be much less with the Historic Preservation Alternative since 1500 to 1700 less vehicles would be evacuating. The environmental features of wildlife protection would be enhanced with less housing, noise, lights,
intrusion of their habitat.
This analysis of the Historic Preservation Alternative is incomplete and makes unsubstantiated remarks.

C117-1

ES.4.2 Identification of Environmentally Superior Alternative

"Overall, the Historic Preservation Alternative is the environmentally superior alternative, although significant impacts of the Proposed Plan and the two alternatives are largely comparable, and the Historic Preservation Alternative would be less superior in some environmental features such as energy use, biological resources, and wildfire risks."

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Bonnie Brown
To: Brian Oh
Subject: SDC DEIR Comment/Transportation/Historic Alternative
Date: Monday, September 26, 2022 12:41:01 PM

EXTERNAL

Transportation Impact 3.14-2

ES 2.2

"This EIR conservatively assumes that VMT reduction due to implementation of these strategies would be inadequate to reduce residential VMT per capita and induced VMT to less-than significant levels, resulting in significant and unavoidable impacts, with no other feasible mitigation measures available. These impacts would also be cumulatively considerable."

C118-1

Comment: Because of these significant and unavoidable traffic impacts which are cumulatively considerable in the Proposed Plan, the Historic Preservation Alternative is the Environmentally Superior Alternative. Lower housing numbers and development will result in VMT reduction to a level safer and acceptable to the community and not destroy the safety or quality of life of current residents of Sonoma Valley. The density of housing in the Historic Preservation Alternative is the one requested by Supervisor Gorin, with support by other supervisors.

The analysis of the Historic Preservation Alternative in the DEIR is insufficient and incomplete for these reasons.
There is no analysis of financial feasibility in this alternative or benefit to the community and beyond.

Submitted by,
Bonnie Brown
El Verano, Sonoma Valley

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Bonnie Brown
To:	Brian Oh
Subject:	SDC DEIR comment/Wildfire Evacuation
Date:	Monday, September 26, 2022 12:56:27 PM

EXTERNAL

Comment: There is no substantial evidence given in the below analysis in chapter 3.8 of the DEIR, page 268, that 1500 to 1700 more vehicles, as planned by the Proposed Plan in the SDC Specific Plan. evacuating from a wildfire will not impair, physically interfere, or endanger the lives of current residents attempting to evacuate during a wildfire emergency. My personal experience shows these to be false statements.

I evacuated from the 2017 fires from my home at Verano Avenue and Arnold Drive. Vehicles were moving at a snail's pace. It took me an hour and one half to reach a location in south Sonoma Valley where I was meeting my daughter and could spend the night where evacuation was not required and I felt somewhat safe. If the fires had progressed farther south from Glen Ellen, the Springs and all of Sonoma would have been engulfed, which was a possibility and the reason for all of the valley to be ordered to evacuate.
In the 2020 evacuation of just Oakmont, I witnessed traffic going south on both Highway 12 and Arnold Drive. Both evacuation routes were just as impacted as the 2017 fires, and that was just Oakmont residents.

C119-1

To claim that the additional vehicles of 1500 to 1700 in the Proposed Plan would only increase evacuation time by less than a minute is completely false and relies on an unsubstantiated opinion. It does not take into account actual experience.

Clearly, from my actual experience during evacuations, it is evident that adding 1500 to 1700 vehicles to a wildfire evacuation in Sonoma Valley will cause extreme danger to current residents and significant risk of loss, injury or death involving wild land fires. When a wildfire is approaching, no County Emergency Operations Plan will help "to the extent feasible". People will evacuate when they feel in danger. This is NOT less than significant.

For this reason, the Historic Preservation Alternative is the Environmentally Superior Alternative. It lessens housing numbers and traffic impacts to the extent that evacuations can be safer.

Comment: The statements in red below do not give substantial evidence and bear no semblance to the actual conditions that local people have experienced during evacuations.
"Compliance with existing State and local codes and regulations as well as proposed policies...and structures to the extent feasible" go out the window when people fear for their lives.

C119-2

Chapter 3.8: Hazards and Hazardous Materials
"Impact 3.8-6 Implementation of the Proposed Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Less than Significant)"

"In addition, see Impact 3.16-1 in Section 3.16: Wildfire for further analysis. The County's Emergency Operations Plan establishes the emergency management organization for emergency response, establishes operational concepts associated with emergency management, and provides a flexible platform for planning emergency response in the

county. Development facilitated by the Proposed Plan would be constructed in accordance with federal, state, regional, and local requirements, which are intended to ensure the safety of county residents and structures to the extent feasible. Compliance with these standard regulations would be consistent with the County's Emergency Operations Plan. Thus, implementation of the Proposed Plan would not impair an emergency response or emergency evacuation plan and impacts would be less than significant.
Mitigation Measures
None required".

"Impact 3.8-7 Implementation of the Proposed Plan would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. (Less than Significant)
See Impacts 3.16-1 and 3.16-2 in Section 3.16: Wildfire for analysis on this impact. Compliance with existing State and local codes and regulations as well as proposed policies would reduce impacts to a less-than-significant level related to exacerbating wildfire risks during construction, operation, and implementation of the Proposed Plan.
Mitigation Measures
None required".

Submitted by,
Bonnie Brown
El Verano, Sonoma Valley

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Bonnie Brown
To: Brian Oh
Subject: SDC DEIR Comments/ Historic Resources
Date: Monday, September 26, 2022 12:47:39 PM

EXTERNAL

Historic Resources Impact 3.5-2

Comment: The analysis of the Historic Preservation Alternative is inadequate and does not provide substantial evidence in its statements. In the statement below, **ES.3.3**, there are no facts to verify that development would be more constrained than with the Proposed Plan. If the assumption is that adaptive reuse would not be successful and used for future development, then that is in conflict with the statement in **4.3 Historic Resources.**
It also does not give substantial evidence that there would be fewer jobs. Adaptive reuse of existing buildings can provide space for jobs, with the possibility of that near the Proposed Plan. The number of jobs estimated in the analysis is speculative and no evidence is provided.

C120-1

ES.3.3 Historic Preservation Alternative

"Further, because the historic character of the existing buildings
within the Sonoma State Home Historic District would be retained as much as possible, intensity and density of future development would be more constrained than with the Proposed Plan. As a result, overall development would be less than that of the Proposed Plan…..roughly 340 fewer jobs than envisioned by the Proposed Plan."

4.3 Historic Resources

"There are several compelling reasons for striving to reuse contributing buildings in the SSHHD (Sonoma State Home Historic District), to the greatest extent practical**. Adaptive reuse is recognized as a highly sustainable approach to construction.**"

"The Historic Preservation Alternative also does not include a new connection to Highway 12."

Comment: This is a benefit of the Historic Preservation Alternative and its proposed elimination was not analyzed in this alternative, thus the analysis is inadequate This connector road would cause oil and gas run-off in the open space, cause wildlife road kill, especially at night, necessitate a stop light on Highway 12, and bisect the open space that was promised to be preserved. Any drivers who attempt to go from Arnold Drive to Highway 12 or vise versa during an evacuation will find the exact same vehicle back-up as on the other route. There is an existing wide EW connector road three block south of SDC: Madrone Road. To not add a new road through the open space would preserve the historic open space. This was not analyzed in this Alternative, making it inadequate.

C120-2

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Bonnie Brown
To: Brian Oh
Subject: SDC DEIR Comments/Historic Resources
Date: Monday, September 26, 2022 12:45:19 PM

EXTERNAL

"The Proposed Plan would result in significant and unavoidable impacts related to transportation (Impact 3.14-2),
and historic resources (Impact 3.5-2)."

4.3 Historic Resources

"There are several compelling reasons for striving to reuse contributing buildings in the SSHHD (Sonoma State Home Historic District), to the greatest extent practical**. Adaptive reuse is recognized as a highly sustainable approach to construction.** Additionally, SDC is a fixture in the Sonoma Valley, reinforced by strong collective community memory. The sense of place, complete with historic buildings and mature landscape, offers an established location for the campus's next life. The SDC site also offers an existing sense of community that is respected and can be reinforced through a mixture of adaptively reused historic buildings and contextually responsive new buildings. **The level of detail and design present on the SDC site is not easily replicated with modern building practice and economics."**

C121-1

Footnote page 533:

"141 Rehabilitation and adaptive reuse at SDC is generally more expensive than new construction.
See Alternatives Report, November 2021 (Updated), available at
https://www.sdcspecificplan.com/documents"

Comment: Regarding the footnote statement above and information in the Alternatives Report, November 2021, the conclusions are not based on substantial evidence. No proof of the statement is given. Adaptive reuse is being successfully done all over this country. Community Housing Sonoma County (Keith Christopherson) has adaptively reused buildings in Sonoma County for veterans housing, even an old firehouse. The reason it is not done is because of developers' lack of imagination and will to develop anything except with demolition and new construction. There is no evidence of proof that adaptive reuse is more expensive than new construction. To re-quote other statements is not proof. Substantial evidence is required.

"Impact 3.5-2 - Implementation of the Proposed Plan would cause a substantial adverse change to the significance of a historic district, as defined as physical demolition, destruction, relocation, or alteration of the historic district or its immediate surroundings such that the significance of the historic district would be materially impaired pursuant to § 15064.5. (Significant and Unavoidable)"

C121-2

Page 296 -" Implementation of future development
and redevelopment permitted under the Proposed Plan would allow more dense new development adjacent to contributing resources, as well as alteration and reconstruction of contributing resources in the Core Campus area. New construction has the potential to disconnect the remaining contributing resources in the Core Campus from those in

Community Separator and Regional Parks lands to the east and west, consequently disrupting the feeling and character within the historic district. This would affect the cohesiveness of SSHHD's overall integrity to the point that it would no longer be eligible for listing in the NRHP, CRHR, or as a California Historic Landmark. The impact of such activities is considered significant because they would cause a substantial adverse change to the historical district as defined by CEQA Guidelines Section 15064.5.
While proposed policies noted above and the Standard Conditions of Approval (LU-1, LU-2, LU-3, LU-4, LU-5, and LU-6) would help reduce these impacts to the maximum extent practicable, there are no mitigation measures available to avoid impacts entirely. As such, this impact would remain significant and unavoidable.
Mitigation Measures
None required."

C121-2

Comment: Because of these significant and unavoidable impacts to the Historic District of SDC in the Specific Plan's Proposed Plan, it is clear that the **Historic Preservation Alternative is the Environmentally Superior Alternative** and should be adopted by the Board of Supervisors. Its density was requested by Supervisor Gorin and other Board members agreed.
This alternative was not studied in detail and does not include substantial evidence of its analysis.

Submitted by,
Bonnie Brown
El Verano, Sonoma Valley

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

C121-2

From: Bonnie Brown
To: Brian Oh
Subject: SDC DEIR/Adaptive Reuse
Date: Monday, September 26, 2022 2:35:49 PM

EXTERNAL

Footnote page 533:

"141 Rehabilitation and adaptive reuse at SDC is generally more expensive than new construction. See Alternatives Report, November 2021 (Updated), available at https://www.sdcspecificplan.com/documents"

Comment: This statement provides no substantial evidence and conflicts with Hazardous Materials study documents by Van Brunt Associates in the WRT report and reiterated by consultants for the Specific Plan, as
quoted below.

The last paragraph is significant: All hazardous materials must be removed before demolition. Then the building is demolished and all of that is transported to landfills, some to hazardous landfills out of state since some hazardous materials may be left in the rubble. Then the costs of labor and new materials for new construction are added. C122-1

No study of the total costs of all of the processes required for demolition and new construction have been substantially studied and compiled to make the statement that adaptive reuse is more expensive than demolition and new construction. And the GHG emitted by demolition and new construction were not studied or included, as requested in my original comments to the DEIR, and no substantial evidence was given.
This is especially important since all of the buildings east of Arnold Drive, constructed of cement and tile roofs, are planned to be demolished in the Proposed Plan.

Van Brunt Associates/WRT Report:

"Prior to any construction or demolition, all of these hazardous and potentially hazardous materials will be inspected, sampled, or inventoried. The ultimate goal for this work is to ensure workers and the environment is protected during building repairs, renovations, or demolition."

"The presence of most hazardous materials in buildings is not necessarily illegal or dangerous. Most potentially hazardous building components in good condition may be left in place. Upgrades involving new finishes such as paint and floor coverings may not trigger expensive abatement and remediation actions. If a building is planned for renovation, the extent and scope of renovation determines which hazardous materials must be abated, removed, stabilized, or even left in place." C122-1

"Building demolition would trigger the most costly hazardous materials abatement program. Generally speaking, all hazardous materials must be removed in order to demolish a building."

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Sonoma Developmental Center

I have done a preliminary examination of the draft Specific Plan prepared and just released by the County for the Sonoma Developmental Center

SOME POINTS OF REVIEW –

- Of the approximately 1100 housing units proposed, only 283, at most, will be affordable to households at an AMI of 80% or less.
- At the presumptive density of 20 units per acre, that means only 14 acres out of 180 acres in the core area are dedicated to affordable housing
- The Plan falsely claims that housing for the "Missing Middle" is for households at 120-160% of AMI. Nobody uses that range – the Missing Middle is usually defined as 80-120% of AMI C123-1
- 75% of the housing proposed is essentially market rate, with unrestricted sale and resale prices. No residency requirements. *These units are designed for absentee investors and second homeowners.*
- The bulk of all housing is to be on the East side of Arnold – however, it is forbidden for that to start construction until the non-residential West side is well underway
- There is no discussion of ADU's as an affordable housing resource.
- Entire portions of buildable land within the core 180 acres are set aside for "Open Space", even though the SDC is surrounded by thousands of acres of open space.
- The Specific Plan and EIR is vague on the "Arnold to Highway 12" connector, which is essential for a project of this scope.

Continued reference is made to the need for "financial sustainability" as the reason for so much market rate housing. Yet we have seen no financial projections justifying that.

NOTE: I continue to maintain that the denial of affordable housing, and the preponderance of market rate housing, is being driven by the need to pay for the infrastructure for the non-residential component of the SDC Specific Plan, including the 120 unit hotel (which nobody wants); and the proposed "conference center", which is completely undefined as to size and scope, and is the pet project of an environmentalist lobby which has been so influential over this process from behind the scenes going back a decade. C123-2

I see violations of State and Federal Law in this proposed Specific Plan, leading to prolonged litigation to either modify the affordable housing componenet or deny the entire flawed Specific Plan:

1) Failure to comply with the State guidelines implementing the SDC conversion which mandate a meaningful emphasis on affordable housing; (SB 82 Government Code 14670.10.5/Governor's Executive Order N-06-19)
2) A clear failure to Affirmatively Advance Fair Housing (a HUD federal requirement) by targeting higher income, predominantly non-minority households leading to increased racial, ethnic and family status exclusion.
3) The obvious failure to implement Sonoma County RHNA allocations for affordable housing in a sincere and meaningful manner to address Sonoma County's worsening housing crisis..

C123-3

In my opinion, the plan is designed to create a "cash cow" for the yet unspecified private, for-profit developer. This is not the plan the public wants, yet it just keeps moving ahead in disregard of public opinion.

Thank You

David Brigode
240 Del Rio Paseo
Sonoma, CA 95476
Cell: (707)-495-9769
DBrigode@comcast.net

From: David Eichar
To: Brian Oh
Subject: SDC DEIR, Missing Middle
Date: Friday, September 23, 2022 2:36:16 PM

EXTERNAL

More comments on the Draft EIR and SDC Specific Plan.
The DEIR overstates the GHG and VMT. This is partially due to the assumption at least 50% of the housing units will be for the "missing middle." As shown below, most teachers and firefighters will not be able to afford the "missing middle" housing units. As a result, these housing units will go to higher income families. Studies have shown that higher income families drive more and take public transportation less.

C124-1

From the SDC Specific Plan:
"Missing Middle Income households make
between 121 percent and 160 percent of Sonoma County AMI,
- too much to qualify for Affordable Housing , but not enough to buy a median priced home. Missing middle housing will make up 50 percent of the total market rate housing at the site. These homes will be accessible for Sonoma County's middle income workforce, such as teachers and firefighters, to help keep these professionals from being priced out of Sonoma Valley"

Sonoma County AMI, Effective June 15, 2022

Persons in Household	Median Income (100% Area Median Income)	Moderate Income (120% Area Median Income)	Calculated 160%
1	$78,950	$94,750	$126,320
2	$90,250	$108,300	$144,400
3	$101,500	$121,800	$162,400
4	$112,800	$135,350	$180,480
5	$121,800	$146,200	$194,880
6	$130,850	$157,000	$209,360

source: https://sonomacounty.ca.gov/incomelimits

"with these two increases, the average teacher salary would be $91,935, the beginning teacher salary would be $58,557 and the highest base pay would be $103,959."
https://www.sonomanews.com/article/news/95-of-teachers-authorize-strike-due-to-budget-impasse/

"The average Firefighter/EMT II salary in Sonoma, CA is **$69,590** as of August 29, 2022, but the range typically falls between **$64,560** and **$87,550**."
https://www.salary.com/research/salary/alternate/firefighter-emt-ii-salary/sonoma-ca

C124-2

As you can see, only single teachers making the maximum salary, which very few do will be in the 121%-160% AMI. Teachers and firefighters salaries are below 120% AMI. Therefore, teachers and firefighters would not be able to afford the "missing middle" housing, thus

needing deed restricted Affordable Housing; otherwise GHG and VMT will be greater. This means much more than the 25% of units need to be deed restricted Affordable Housing. This should be 100% Affordable Housing.

C124-2

Regards,
David Eichar
Boyes Hot Springs

https://www.dollartimes.com/income-needed-for-house

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Deb Pool
To:	PlanningAgency; Brian Oh
Cc:	BOS; engage@sdcspecificplan.com; Susan Gorin; district3; district4; David Rabbitt; Lynda Hopkins; senator.dodd@senate.ca.gov; senator.mcguire@senate.ca.gov; gerald.mclaughlin@dgs.ca.gov; jason.kenney@dgs.ca.gov; Cecilia.Aguiar-Curry@asm.ca.gov
Subject:	Public Comment on SDC Specific Plan and DEIR
Date:	Sunday, September 18, 2022 12:37:00 PM

EXTERNAL

September 18, 2022

To: Sonoma County Planning Commission, Permit Sonoma and Board of Supervisors

RE: Public Comment on SDC Specific Plan and DEIR

Dear Sonoma County Planning Commissioners,

Please do not support the SDC Specific Plan or DEIR as proposed by Permit Sonoma.

Instead, please direct Permit Sonoma to support the ***Historic Preservation Alternative*** as "it is the most environmentally sound" and reflects largely what the public, NVMAC, Springs MAC, and Sonoma Land Trust has repletely imputed as an alternative to Permit Sonoma.

Specifically, please direct Permit Sonoma to take these steps:
1. Reduce the size of development to 450 or fewer homes and require that the majority of them be affordable ***for the people who already actually live and work in Sonoma Valley*** and for ***people with disabilities***. Eliminate the hotel, and do not duplicate retail and commercial space that is already provided in Glen Ellen. Keep in mind, this is ***a rural community.***

C125-1

2. Riparian areas are crucial when it comes to Open Space. Increase setbacks along Sonoma Creek, Riparian areas and the Sonoma Wildlife Corridor to at least 100 feet, instead of inadequate 50 feet as proposed.

3. Protect Open Space by providing enforceable timeline, boundaries and actions ***for permanently preserving open space and keeping it in public hands***.

In the DEIR, analyze the impacts of and ***add enforceable measures*** to reduce impacts of proposed new uses in the open space including but not limited to agriculture, agricultural processing, tasting rooms, farm stands, recreation, parking lots, geothermal development and sports facilities.
4. Wildfire: Revise wildfire evacuation impacts to reflect actual experiences which occurred during recent wildfires using new county wildfire risk and hazard maps. Adding 11/2 minutes

C125-2

to the timeline of evacuation is meaningless!

5. Climate Crisis: Think 30X30 Initiative, which California embraces.
Given the County's Climate Crisis Resolution and commitments to reduce climate changing emissions (GHGS) from driving and other sources, ***revise the Specific Plan and DEIR with legally enforceable measures*** to reduce climate emissions, such as building fewer homes, reusing and demolishing fewer buildings, providing transit and permanently securing the maximum amount of Open Space.
6. The DEIR falls short of CEQA requirements. The DEIR is inadequate and the so-called self-mitigated Specific Plan contains ***many weak*** general policies, goals and conditions of approval, to address the environmental impacts.

C125-2

The DEIR does not adequately analyze and prevent or reduce environmental impacts in most if not all of the areas studied ***as evidenced by few actual requirements and many vague words*** such as "should" or "could occur" "may result" or "if feasible."

The DEIR needs to be revised and the Conditions of Approval strengthened and moved into a legally enforceable Mitigation and Monitoring Program.

C125-3

There is still so much work to do with the Specific Plan and the DEIR.

I support Commissioner Carr's request (Planning Commissioners Meeting 9/15/22) for additional time to get this right. He repeatedly stated that in order for the Planning Commission to do their job with integrity, they would need addition time to go page by page. This was even at the expense of more frequent meetings to accomplish the task, getting it to the Board of Supervisors as soon as is possible. There is a willingness to do the hard work, we just need the courage to take the bold steps, and do the right thing for the future.

Sincerely,

Deb McElroy Pool
13588 Railroad, Glen Ellen
707-486-7134
debjmpool@gmail.com

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

DEBORAH C. NITASAKA, M.A.
Science-Minded Thinker & Freelance Writer
P.O. Box 1054, Glen Ellen, California 95442-1054
707.996.8620; 707.318.7214 (mobile); dclaire77@gmail.com

27 November 2021

Sonoma County Board of Supervisors
Tennis Wick, Permit Sonoma
Brian Oh, Planning Manager
Dyett and Bhatia
Santa Rosa, CA
Submitted 11/28/21: engage@sdcspecificplan.com

RE: Sonoma Developmental Center: Best Use Planning Means Enrichment Planning For A Sustainable Future For All!

Dear Supervisors, Staff, and Consultants:

We have been asked to select from the three options laid out in the SDC Alternatives Report released just a few weeks ago (November 1, 2021). Each offering little realistically plausible beyond an audacious open door for upscale developers to bring in projects bound to fail if past is prologue (i.e., Rohnert Park's Sonoma Mountain Village]aka Hewlett-Packard] and Petaluma's telecom boom (and bust). Beyond some open space promises (with little detail), the rest in no way addresses the very real and urgent needs of Sonoma County residents. C126-1

More tourist-serving accommodations? This valley has been decimated by the county's cash-cow (Transient Occupancy Tax), converting units built for, zoned for, subsidized for, intended for - residents to live in - now operating as disruptive commercial enterprises in residential neighborhoods. The costs to our communities are innumerable. It is clear we have been sold out by our civic leaders. Any further moves toward "tourist-trapping" our community will not go down well. Forget the hotel! Give us back our housing stock!

Industrial parks? For which segment of our undereducated population? According to The Sonoma County Workforce Investment Board's draft Local Workforce Development Plan 2021 – 2024:

> Over the next five years, the following are the top five occupations that will be in-demand for Sonoma County:
> 1. Office and Administrative Support
> 2. Sales
> 3. Food Preparation and Serving
> 4. Transportations and Material Moving
> 5. Management

C126-2

Unless Sonoma County changes course, opting for a more enriching, visionary future, these will be the jobs of tomorrow. I see no reason to settle, to offer so little to our children, to our community. My vision is one calling for opportunity, advancement, growth, fulfillment in work and play.

The people of Sonoma County have been told there must be a plan covering how anything we ask for will be paid for. Curiously, I see no such level of detail in this consultant's report. Why the dichotomy? Maybe it's time to get real, to try a bit more transparency, to actually explore feasible options that will bring to the county what residents so urgently need, with top of the list being decent affordable housing for agricultural workers, students, developmentally disabled, the unhoused, and others most sorely in need. This housing might well be thought of as that needed to replace the hundreds of homes lost to the vacation rental industry as well as to the fires of 2017 - 2020.

Sonoma County may not have fulfilled its promise of a community-driven process, but the people of Glen Ellen and beyond are stepping up on their own. For my part, I am pushing past what some say is the line of possible to envision the day students live, learn, and work on SDC's campus. Imagine SDC as a place flourishing with innovation, preserving history, expanding its role to enrich the surrounding community with lifelong learning opportunities, special needs housing and education, visiting professor lecture series, and all while graduating people prepared with the skills essential for fulfilling, well-paying careers, ably set to meet and exceed the demands of today and the future. C126-3

I am in full agreement with the thoughts and recommendations sent to you by the Sonoma Land Trust concerning the need to preserve the wildlife corridor. Therefore, the remainder of my comments will pertain to the built portion of the campus.

To start, I have to say that the prospect of jamming together thousands of homes in the southern end of SDC is appalling. How does such a banal idea enrich the quality of life for Sonoma County residents? As a housing advocate clocking in more than 30 years, I endorse incorporating housing into SDC's future, especially special needs housing. To do so well will require far more thought than we see here. Questions remain as to how many homes can safely be added to the this part of the valley, how the units would be protected from further loss to Sonoma County's Vacation Rental Conversion Program or to any other misuse. As well, I need to see much more detail regarding the intended population. C126-4

As others have said (and I concur), "The alternatives do not provide for adequate emergency egress in the event of wildfire, are not compatible with the rural character of the surrounding communities within the Sonoma Valley, and do not realistically address impacts on infrastructure, such as water recharge, inadequate roadways, sewage system capacity, etc."

Too often Sonoma County officials have ignored what is needed for what is easiest, furthering the human toll. I've seen it all. The matter of public safety became alarmingly clear as a planning oversight when we learned, through the series of meetings held within a single week earlier this month (11/13/21, 11/16/21, 11/17/21), that the consultants did not meet with CalTrans when developing their traffic outline, yet calculated traffic flow by comparing apples and oranges. C126-5

Able-bodied drivers (2,000-4,000 new local residents, those traveling into Glen Ellen for work, tourists, and others are likely not comparable to developmentally disabled people who have never driven. Their traffic pattern predictions would be laughable if they weren't also potentially deadly (as we have seen when residents attempting to escape the Paradise fire and who were incinerated while desperately fighting to escape the flames).

A related shock, we also learned the consultants never met with local fire agencies. Simply appalling comes nowhere close to my outrage that Sonoma County is, once more, cashing in at the expense, at an ultimate cost of the very lives of the people who live and work here.

Yes, the pressures for change have arrived. Sonoma County's needs are:

- Development (commercial: housing imbalance) - We need to plan for a rebalancing;
- Poverty escalation due to promotion of industrial sectors paying less than living wages (hospitality, tourism, and agriculture) must be addressed by accepting nothing less than **living wage jobs**. We need to prepare our young people for a brighter future;
- Economic collapse following the housing bust;
- Brain drain: SDS closure, the relocation of well-paying industries (telecommunications, Hewlett-Packard, etc.;
- An insatiable hunger for revenue derived from new sources such as recreational drug production and sales, vacation rental conversion of thousands of Sonoma County homes;
- A growing homeless population;
- Escalating real estate prices - pricing most local residents out of the market;
- Housing codes prejudicing construction of large homes over more modest sized units;
- The impact of a collapsing infrastructure (fires, contaminated drinking water, unkept electrical systems);
- The decline of our professional and degreed populace;
- Climate change;
- Questionable practices at the county level (planning, code enforcement, zoning, emergency services);
- Student housing shortage: Santa Rosa Junior College opted to use bond revenue for the construction of an elaborate parking structure instead of desperately needed student housing - resulting in thousands of students now sleeping in their cars (some in that very parking structure [PD article about JC students living in their cars]);
- Low to middle income and special needs housing loss due to VACATION RENTAL industry & lack of building;
- Shortage of skilled tradespersons: Sonoma County lacks cutting-edge jobs training for a sorely-needed workforce - one able to meet national trades workforce shortage.

C126-6

What is the best possible use for SDC as one answer to the issues listed above? Let's start with the dilapidated SDC structures. Their condition is undoubtedly the result of the state's neglect. Therefore, it is incumbent upon Sonoma County to insist that the state acknowledge it is theirs to repair.

C126-7

Not only must the restoration be paid for by the state, we have recently learned that California has a revenue surplus to cover those costs. And those resources have attached to them some stringent guidelines as to how the reported surplus can be spent. Lucky for us infrastructure and colleges are among the options:

> "California is — once again — overflowing with money, and will likely have a $31 billion budget surplus next year, according to a Wednesday report from the independent Legislative Analyst's Office. And because the state is forbidden from spending more tax dollars per Californian than it did in 1978, once adjusted for inflation, it only has a few options for handling most of the cash windfall: slashing taxes; issuing tax rebates; funneling it to schools and community colleges; or earmarking it for certain purposes, such as infrastructure." (Hoeven, 11/18/21)

As indicated above, Sonoma County's workforce predictions are not encouraging. They mirror a sad national trend wherein opting out of college are also coming up short on the skills needed to succeed in the workplace:

C126-8

Two-thirds of Americans over 25 don't have a bachelor's degree or higher. A Harvard study uncovers inconsistent efforts to give these workers skills for economic mobility and calls for improving the problem.

C126-8

Academic work on training programs has been somewhat static, says Rachel Lipson, director of the Harvard Project on Workforce. A paper from 30 years ago might not look much different from one published today. "There's been a lot of attention on K-12 quality and college access and completion, but a lot less on the types of educational and training pathways that sit in between high school and four-year college," she says.

These pathways are critical to the future of economic mobility, and the Project on Workforce hopes to raise the research community's interest in them. "The plurality of the U.S. labor force does not have a four-year college degree," says Lipson. "We can't throw up our hands and say four-year colleges are the only answer." (Smith, 2021)

~~~~~~~~~~~~~~~~~~~

Answers:

Having outlined the need and some substantial financial avenues, I will now outline how to put SDC to work for the betterment of the people of Sonoma County. Instead of continuing to produce cooks and tourism graduates, we need to give our kids a better future, one promising living wage opportunities, not a serf's subsistence; one grounded in an understanding of California's history as essential to knowing how best to go forward!

Some Educational & Housing Models As Best Fits For The SDC Campus:

C126-9

- High Tech "Trade Tech College" -
- Satellite Junior College Campus: Vocational Tech!
- Berea College: I have learned that Berea is interested in expanding to develop this unique college model in every state: Every student attends tuition-free! Every student works on campus, putting to work the lessons learned in the classroom. Majors include education, agriculture, the trades, the arts, and much more.
- The University of Oregon, Phil and Penny Knight Campus for Accelerating Scientific Impact: a 160,000-square-foot campus built to accelerate groundbreaking scientific discovery and development in a collaborative multidisciplinary environment <https://inhabitat.com/leed-gold-targeted-knight-campus-advances-scientific-innovation/>
- Career Technical Education, (Sonoma County) also referred to as CTE, is a multi-year sequence of courses that integrates core academic knowledge with technical and occupational knowledge to provide students with a pathway to post-secondary education and careers. CTE programs deliver an enriched educational experience that promotes student interest and academic success while developing technical and career readiness skills necessary for the workplace of the future. Graduates of today's rigorous and relevant CTE programs are better prepared for high-wage, high-skill and high demand careers.
- "State-supported technical college" - Clark Howard 9/13/18 show
- "Upskilling For Today & Tomorrow" - The Hill Event: Streamed Live 9/22/21 <https://youtu.be/ph9f1Z_P45c>
~~~~~~~~~~~~~~~~~~~

I would add that it is entirely feasible within these models to:

- Incorporate an affordable housing component, including special needs housing, into the campus plan;
- Offer on-site housing for students, staff, faculty which will reduce traffic impacts and provide additional incentives to prospective applicants;
- Training/Educational offerings might include an emphasis on high tech (environmental sciences, construction trades - including 3-D printing for housing production, modern firefighting and law enforcement courses, certificate programs in mental health, special education, & so much more);
- Traditional Trades (Carpenter, electrician, plumber, telecommunications engineer, auto mechanics, fire fighting, law enforcement - emphasizing community policing!, ecological land/resource management, nursery management [plant propagation, marketing, shipping], etc.), w/emphasis on high tech tools;
- LEED Certification program;
- Environmental Sciences: building in internships around campus grounds care (maintenance, repairs, upgrades, etc.) - Forestry, Firefighting technology, Alternative Energy Program;
- Sustainable Farming Program;
- Indigenous People's Program: History & Culture;
- Health/Medical: Psych techs, med techs;
- Arts & Crafts Program (including student work program, sale to the public of hand-made goods);
- Retail Management: (w/training to include time spent running on-campus market);
- Day school for students with developmental disabilities (plug in tech students for "on-the-job" psych tech training aspect);
- Carve-outs for Crisis Management Clinic for Developmentally Disabled in need of care beyond that available in their community settings;
- Permanent Supportive Housing: See as a model Sweetwater Spectrum, Fifth Street West, Sonoma - a "mini-community" for autistic adults (Kory Stradinger, Executive Director);
- Community Center & History Museum: Oversight of cemetery, Sports/Playing Fields, Historic Preservation (Cemetery, buildings, overall site);
- Emphasis on: Economic and Racial Diversity.

C126-10

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

References:

A housing plan "must encompass the basic housing needs of the population as a whole." —Senator Robert F. Wagner in 1936. (Bryce Covert. 5/24/18. The Deep, Uniquely American Roots of Our Affordable-Housing Crisis Nearly half of all renters can't afford rent, and over half a million Americans are homeless on any given night. How did we get here? The Nation.) <www.thenation.com/article/give-us-shelter/>

A Roadmap to Reducing Child Poverty (2019). The National Academies of Science Engineering Medicine. <https://www.nap.edu/child-poverty/?utm_source=NASEM+News+and+Publications&utm_campaign=7ab6f52000-NAP_mail_new_2019_03_11&utm_medium=email&utm_term=0_96101de015-7ab6f52000-101867381&goal=0_96101de015-7ab6f52000-101867381&mc_cid=7ab6f52000&mc_eid=f658cd220a>
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Dyett & Bhatia (11/1/21). Alternatives Report. SDC Specific Plan, Sonoma County. <sdcspecificplan.com>

Fuller, J.B., Lipson, R., Encinas, J., et al. (4/7/21). Working to Learn: New Research on Connecting Education and Career. Harvard Project on Workforce. <https://www.pw.hks.harvard.edu/post/working-to-learn>

Future of Work in California - A New Social Compact for Work & Workers (3/21). Future of Work Commission, State of California. <https://www.labor.ca.gov/labor-and-workforce-development-agency/fowc/>

Gettinger, Aaron (3/6/19). One Reason Rural Students Don't Go To College: Colleges Don't Go To Them. KQED News. https://www.kqed.org/mindshift/53232/one-reason-rural-students-dont-go-to-college-colleges-dont-go-to-them

Kathy Goodacre, CEO & Executive Director, Career Technical Education Foundation (CTEF). CTEF works to align industry and education to strengthen economic development and student success through the development of innovative career to education strategies. <https://ctesonomacounty.org/about-cte/>

Hoeven, Emily (11/18/21). California's $31 billion surplus: More stimulus checks possible. CalMatters.<https://calmatters.org/newsletters/whatmatters/2021/11/california-stimulus-checks/>

Joshua Sabatini (7/2/18). Construction boom expands need for SF job training programs. <http://www.sfexaminer.com/construction-boom-expands-need-sf-job-training-programs/?utm_source=The+Examiner+E-dition&utm_campaign=c91c4a0814-EMAIL_CAMPAIGN_2018_02_02_COPY_01&utm_medium=email&utm_term=0_e2b97b1e7f-c91c4a0814-260813973>

LEED Gold-targeted Knight Campus advances scientific innovation: University of Oregon, Phil and Penny Knight Campus for Accelerating Scientific Impact <https://inhabitat.com/leed-gold-targeted-knight-campus-advances-scientific-innovation/>

LA Trade Tech College (213/763-7000): <http://college.lattc.edu/>

Sims, Christo (6/13/19). How Idealistic High-Tech Schools Often Fail to Help Poor Kids Get Ahead. Zocalo Public Square. https://www.zocalopublicsquare.org/2019/06/13/how-idealistic-high-tech-schools-often-fail-to-help-poor-kids-get-ahead/ideas/essay/

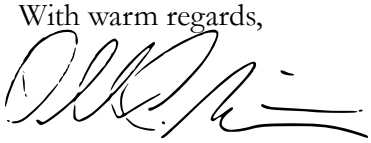
Smith, Carl (5/13/21). Workforce Training Programs Need Employers at the Table. Governing, The Future of States and Localities. <https://www.governing.com/work/low-skill-worker-training-needs-more-employer-input>

Sonoma County Workforce Investment Board: Local Workforce Development Plan 2021 -2024 (draft). <https://sonomawib.org/wp-content/uploads/2021/03/SCWIB-DRAFT-Local-Workforce-Development-Plan-2021-2024_compliant.pdf>

Kory Stradinger, Executive Director, Sweetwater Spectrum (Sonoma, Fifth Street West, "mini-community" for autistic adults).

Anisa Thomsen, Redwood Empire Chapter, National Electrical Contractors Association (see 11/4/21 PD LTE: Jointly run labor-management training programs & DIGNIFIED wages & benefits!).

With warm regards,



Deborah C. Nitasaka

From:	Deborah Nitasaka
To:	Brian Oh
Cc:	Hannah Whitman; PlanningAgency; State Senator Bill Dodd; State Senator Mike McGuire; Susan Gorin; district3; district4; David Rabbitt; Lynda Hopkins; Chase Hunter; Sonoma Valley Sun
Subject:	RE: Public Comment on SDC Specific Plan and DEIR
Date:	Monday, September 26, 2022 4:52:37 PM
Attachments:	9.26.22-D&T Nit - Planner Oh!.pdf 112721 (re-sent to SC BOS 1.12.22)-Deborah Nitasaka-SDC"s Future-My Comments to Sonoma County copy.pdf 9.23.22-California Coastal Conservancy funds study to create climate hub at Sonoma Developmental Center-Index-Tribune.pdf 11.3.21-Railroaded Behind the Scenes of SMART"s Freight Takeover copy.pdf

---

EXTERNAL

Please accept the attached letter (and articles) as our contribution to
the planning process pertaining the future of SDC.

Deborah Nitasaka, M.A.
Tadashi Nitasaka, M.D.
P.O. Box 1054
Glen Ellen, CA 95442
707-996-8620

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Dianne Brinson
To: Brian Oh
Subject: Comments on DEIR for the SDC Specific Plan
Date: Sunday, September 25, 2022 9:08:29 AM

EXTERNAL

Dear Mr. Oh,
I have a few comments about aspects of the DEIR.

AESTHETICS (Light and Glare)
Development at the level provided for in the Specific Plan — up to 1000 residences, a hotel, a conference center, employment centers — will create an urban village in a semi-rural area (Glen Elle, Eldridge). The development would create a new source of substantial light which would adversely affect both nighttime views and wildlife movement.

At night, a considerable amount of street lighting will be required for the safety of the residents, hotel guests, and employees leaving their workplaces after dark. Light will be spilling out of residence windows, hotel rooms, the conference center— and, in the winter, workplaces. The DEIR says that thick vegetation and compliance with dark-sky requirements will buffer wildlife from exposure to human activities. I don't think so.

C127-1

Are the building going to be single-story? No. How can thickly-planted trees and shrubs block light from second-story (or higher) windows? Newly-planted vegetation is unlikely to be tall enough to block even first-floor window light.

Who will decide if the vegetation is sufficiently thick — the developer? Policies 5-32, 5-39, and 5-43 are vague, making meaningful enforcement— to protect views and wildlife — unlikely.

I often walk in Oakmont as dawn is breaking. There is considerable light spillage from windows of early-rising residents. Take a walk through a developed neighborhood early some morning to see what light spillage from home windows looks like.

BIOLOGICAL RESOURCES
The DEIR states that the wildlife corridor is 3/4 of a mile wide. Where's the support for that statement? If the wildlife corridor is wider than that, then the statement that the "southern edge SLIGHLTLY (emphasis added) infringes into the northern portion of the Core Campus" is incorrect. All planned buildings and lighting could be closer to the wildlife corridor. The conclusion that no mitigation is required (Impact 3.4-4 on 254) needs another look, once the width of the wildlife corridor is established.

C127-2

WILDFIRE EVACUATION
The DEIR considers two potential fire scenarios — fire from the NE, fire from the SE. What if a fire comes from the north or northwest (Sugarloaf, Hood Mountain, Calistoga) — as the 2020 Glass Fire did? If the fire comes from the north or northwest, vehicles of 5000 Oakmonters will be added to the flow of vehicles fleeing the area. Evacuation times will be slower if Oakmonters are added.

When I evacuated from Oakmont in September of 2020, I was only allowed to go toward Kenwood. It took me a while to get out of Oakmont, but once I reached 12, I made my way smoothly to Madrone Road to Arnold Drive and south to a San Francisco hotel. However, if the vehicles of 2400 residents and 120-plus hotel guests from the SDC area had needed to evacuate, they would have gotten there before me and choked the route.

C127-3

ALTERNATIVES (Choice of)
All of the Alternatives that were considered provide for at least 750 housing units. The DEIR concludes that

C127-4

dropping the number of housing units from 1000 to 750 would mean a less economically viable project because of the high level of infrastructure and other costs involved.

C127-4

Those costs include cleaning up asbestos, lead, and pesticides left behind by the State of California. The assumption, I assume, is that the developer will have huge expenses to clean up the property and so must be allowed to build a huge number of housing units in order to recover those costs and make a profit. The State should be putting money in for clean-up. Otherwise, existing residents of this area (not just Glen Ellen and Eldridge, but Oakmont/Rincon Valley/Bennett Valley) are going to suffer from increased traffic, increased lighting, and slower fire evacuations so that the cleanup costs can be absorbed by the developer.

Could we look at a combination of low density (400 units) plus a public/institutional use such as a climate research center?

Dianne Brinson

Sent from my iPad

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Douglas McKinley-SR
To:	Brian Oh
Subject:	QUESTIONS - Sonoma Development Center
Date:	Monday, September 26, 2022 10:09:09 AM

EXTERNAL

QUESTIONS:

1) Traffic on Arnold Drive is already insufferable. The additional thousands and thousands of daily vehicles will increase traffic jams especially at known choke points getting in and out of Sonoma heading to the Bay Area or Petaluma.

QUESTION: Will funding for this project include improvements to these locations that already back up and the additional traffic will warrant a stoplight.

- Arnold and Carneros Hwy (121).
- Stage Gulch Road (116) and Old Adobe Road - When returning for the Bay Area you often get routed this way.

C127-1

2) Electricity -We are already told to conserve electricity and have impending rolling power outages.
QUESTION: Where is the additional electricity coming from?

3) Water - We are already told to conserve water and droughts are getting worse.
QUESTION: Where is the additional water coming from?

Douglas A McKinley
Sonoma, CA

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

To:
Mr. Brian Oh, Comprehensive Planning Manager
Permit Sonoma County of Sonoma
2550 Ventura Ave
Santa Rosa, CA 95403

From:
William Bucklin
Old Hill Ranch
15081 Trestle Glen Drive
Glen Ellen CA 95442
707 688 0080

Dear Mr. Oh,

I am the owner of Old Hill Ranch. Our property shares approximately a half mile border with the Sonoma Developmental Center property from Butler Creek to Trestle Glen Drive. You have already received my comments dated 4/7/2022 regarding the "3 alternatives." In my comments I expressed my concern regarding the proposed road between the Proposed Development and Hwy 12.

C129-1

The Proposed Plan acknowledges that the connection to Highway 12 as a "known controversy." While it is true, as stated, that some community members felt that the proposed connection would improve traffic conditions and wildfire evacuations, my experience of the many meetings I attended was most community members stated that the road was not essential and that it would be detrimental to wildlife habitat and the wildlife corridor.

Furthermore, the Draft EIR states no mitigation is required because "Implementation of the Proposed Plan would not have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service"

C129-2

And furthermore, the Draft EIR indicates that potential special status wildlife are, among others, the Golden Eagle considered to be a state species of special concern and protected by the Bald and Golden Eagle Act.

And Furthermore table 3.4-2 states that "The species has not been documented in or immediately near the Planning Area." I would like to draw attention to my letter sent to Brian.Oh@sonoma-county.org on 4/7/22 that stated I had recently seen a pair of Golden Eagles on the SDC property along the proposed road. Furthermore, I direct you to my Instagram account @willbuckzin to a post that is dated November 6th 2021 with 4 photos clearly identifying these majestic birds. Over the next two months I witnessed them on at least 6 different occasions, two of which they were situated in the trees along the proposed road.

C129-3

My question is, if the Eagles were hunting along the proposed access road, doesn't that suggest that the proposed road would have a potentially adverse effect on this special status species?

Another area of concern regarding the proposed road as it relates to Biological Resources. 3.4-1 of the Draft EIR states no mitigation is required because "Implementation of the Proposed Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites."

This statement is false and I would you to address my concerns. Can you please help me understand why no mitigation would be necessary in the event the proposed road was built across Butler Creek? C129-4

For example, just last month on September 9th I was contacted by Jacob Harvey who works for the Audubon Canyon Ranch and "Living with Lions." P13, a collared lion that they monitor had been prowling our ranch. (See detailed map enclosed.) The lion had traversed through the SDC campus, across the proposed Hwy 12 access road onto our ranch to take a deer. The map of P13's movements are attached.

Furthermore, in 2019, for over a year, the Audubon Canyon Ranch hosted a wild life camera on Butler Creek, approximately 10 feet from the Developmental Center property. The quantity and scope of wildlife photographed was remarkable with Mt Lions, Bobcats, Racoons, skunks and squirrels being plentiful. I personally know of a Coyote who has raised her litter besides Butler Creek every year since I can remember. I have seen Western Pond Turtles on our access road traversing into SDC property. There are numerous Horned and Barn Owls. I have heard Spotted owls there too. C129-5

A direct connection between the Proposed Development and Hwy 12 will scare, kill, and maim wildlife and would interfere substantially with the movement of native resident species.

Sincerely,

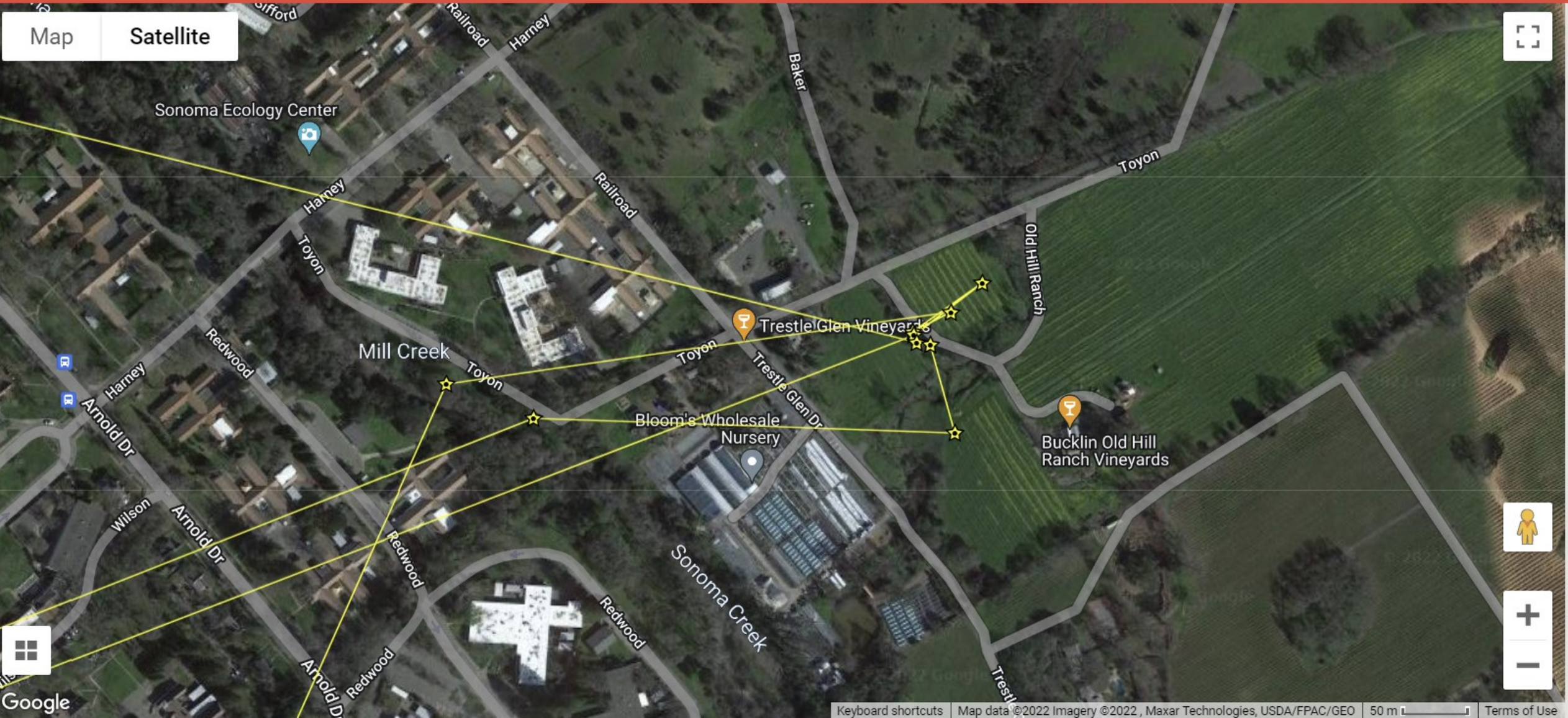
William Bucklin
Old Hill Ranch
15081 Trestle Glen Drive
Glen Ellen CA 95442
707 688 0080

VECTRONIC Aerospace

innovative technology for science and research

elcome **ACRLion**, you are connected to database "ACRLION". List view

This website will be terminated on September 30. Please use Inventa in the future.



To Brian Oh, Supervisor Gorin, Dyett and Bhatia September 26, 11:56 am

EIR public comment

Hello, my public comments in the past two rounds have **not** been addressed. I had high hopes the EIR would require direct samples and studies of the buildings on site, whether for adaptive re-use or demolition. Let me make this clear, I do not trust your analysis because you have done no studies on the actual buildings and report the condition of various buildings incorrectly.

C130-1

How can you say there will be LESS THAN SIGNIFICANT hazard when you do not know what the hazards are? See the copy below from text* following Figure 3.8-2, below. There is no mention of mercury, asbestos, cadmium, or other prevalent building materials used in construction prior to 1979. Remediation and encapsulation options for adaptive reuse are not reviewed herein at all.

As a professional in historic restoration I find this report suspect and tailored to drive conclusions to a predetermined outcome, an outcome that is fraudulently substantiated.

Here is my public comment: TEST THE BUILDINGS AND THE INFRASTRUCTURE throughout the footprint for building materials and conditions that affect the adaptive re-use and the demolition that would ultimately transform the site. Make the testing plan and the findings known to the public ASAP. Respond as promised.

Elisa Stancil Levine
www.stancilstudios.com
elisastancil@gmail.com
2221 London Ranch Road
Glen Ellen, CA 95442

Impact 3.8-1 Implementation of the Proposed Plan would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (Less than Significant) Construction activities during the redevelopment of the Core Campus and SR 12 connector may involve the transportation, use, or disposal of hazardous materials. Items such as paint, oil, or solvents used in construction would be subject to regulations from RCRA, OSHA, the US DOT, and others. These regulations cover matters pertaining to hazardous materials such as personal protective equipment, handling, recording keeping, and disposal of hazardous materials. Common construction materials such as paints, oils, greases, and fuels will likely be transported, used, and disposed of but these items do not pose a significant hazard. Any accidental spill of common construction materials would be contained and cleaned according to OSHA guidelines. Staff and construction

workers should implement OSHA standards that require employee training for an emergency response.2 Sonoma Developmental Center Specific Plan DRAFT Environmental Impact Report 265 If more than one (1) acre of soil is disturbed as part of the project, coverage under the National Pollutant Discharge Elimination System (NPDES) would be required under the NPDES General Construction Permit. The Construction General Permit requires a Stormwater Pollution Prevention Plan to be prepared and Best Management Practices for control of pollutant discharges to be implemented. Some BMP examples include maintenance of equipment, controls to reduce pollutant, and proper waste disposal procedures. Development could also involve the transport, use, storage, generation, and disposal of hazardous materials, including lead and asbestos from building materials and chemicals from commercial and industrial uses. As described in the Environmental Setting, there are several sites within the Planning Area that previously stored hazardous materials, which require regulatory oversight to protect human health and the environment. Future site remediation activities in areas with underground storage tanks, aboveground storage tanks, equipment and facilities that may require removal in the future would also utilize the transportation corridors. Transportation of hazardous materials on major streets and highways is regulated by USDOT, Caltrans, and the California Highway Patrol. The requirements of existing regulatory programs would reduce the potential of an accidental release of hazardous materials to a less than significant level. Upon implementation of the plan and regular Operations of the site, the regulations for hauling hazardous substances would continue to reduce the potential of an accidental release of hazardous materials to a less than significant level. Mitigation Measures None required. Impact 3.8-2 Implementation of the Proposed Plan would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Less than Significant) There is the possibility that there is a future accident in which there is a release of hazardous materials into the environment. There have been numerous accidental releases of varying quantities in the past at the Planning Area. However, existing regulatory programs associated with handling hazardous materials during construction and operation of the site would decrease potential impacts. Following the correct procedures outlined by governing bodies would decrease the chance of an accidental Chapter 3.8: Hazards and Hazardous Materials 266 release to a less than significant level. Furthermore, proposed uses will likely have less likelihood of these larger accidental releases than the former institutional use of the site. Hazardous materials at the Planning Area discussed above have the potential to be released into the environment. In such an occurrence several Federal, State, or local agencies such as the EPA, SF Bay Regional Water Quality Control Board, DTSC, or Sonoma County will provide oversight in remediation. Additionally, proper abatement procedures will be followed when renovating any of the structures that have lead-based paint or asbestos. Further testing as part of Phase II Environmental Site Assessments will also provide more information on the proper mitigation techniques in areas identified with historic contamination. Compliance with the Standard Conditions of Approval Measure HAZ-3 and existing regulations would reduce impacts related to the release of hazardous materials due to foreseeable upset or accident conditions to less than significant.

There are no actual studies done and all the conclusions about hazards on the site are unsubstantiated. C130-1

From:	Elizabeth Crabtree
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov; Rebecca Hermosillo; McGuire@senate.ca.gov; Sophia.Schwirzke@sen.ca.gov; Rebecca.wachsberg@sen.ca.gov; Susan Gorin; David Rabbitt; district3; district4; district5
Subject:	SDC Specific Plan and DEIR
Date:	Friday, September 23, 2022 9:50:33 AM

EXTERNAL

Sept. 22, 2022

Brian Oh, Comprehensive Planning Manager
Permit Sonoma

Re: SDC Specific Site Plan/DEIR

Dear Brian Oh:

My husband and I live about two miles south of the SDC site, on a lane off Arnold Drive. As survivors of the Oakland Hills fire in 1991 and the Nuns fire in 2017, we have intimate knowledge of how unpredictable and destructive fast-moving wildfires can be. Thus, we are deeply concerned about the proposal of the SDC Specific Plan that will put 2,500+ new vehicles on a two-lane country road that is already inadequate for traffic at peak hours, and the DEIR's conclusion that this will have no significant impact on fire evacuation plans. C131-1

When trying to determine accurate traffic data, it is common practice to commission a comprehensive study of traffic patterns. DEIR Appendix F, Traffic Model Data, raises far more questions than it answers. How was that information gathered? Was a study conducted that counted vehicles on multiple days at peak hours to establish an accurate baseline upon which to build projections for evacuation time in the event of a fast-moving wildfire? When was this study done? The data included in Appendix F as presented is virtually meaningless.

Between Madrone and Petaluma streets, Arnold Drive is lined with over 20 non-through roads, many of which connect to other non-through roads, whose only access out is Arnold Drive. This includes the relatively densely populated Grove, Sobre Vista, Carriger and Morningside Mountain/Vigilante roads, along with multiple smaller roads and lanes. How was the existing population accounted for when the DEIR assessed the proposed time it would take to evacuate in a wildfire emergency? When determining proposed evacuation times (DEIR, Table 3.16-1, p. 517), were people fleeing wildfire in the Mayacamas on the east side of Sonoma, for whom Arnold Drive would likely be the only escape route, considered? Answering each of these questions with the best information possible is essential to determining accurate evacuation data. C131-2

Further, the SDC DEIR envisions a plan that, in the event of approaching wildfire, encourages residents "to shelter in place." (DEIR, p. 511). I urge you to view the 2019 documentary film "Fire in Paradise" (Netflix) that clearly shows the human cost of minimizing wildfire danger in favor of development. During the 2018 catastrophic Camp Fire in Paradise, CA dozens of residents were forced to shelter in place as a last resort or risk dying in their cars trying to flee on a two-lane road engulfed in fire. They huddled for hours on a concrete pad as propane tanks exploded around them. They survived, but the trauma they experienced will likely stay with them forever. To propose "sheltering in place" as a reasonable option, rather than a last-chance way to survive catastrophic wildfire, is highly irresponsible.

C131-3

Regarding the day-to-day impact of adding 2500+ cars to traffic on Arnold Drive, the Specific Plan notes a goal to "Ensure that new development takes into consideration resultant traffic and levels of transportation activity from when SDC was operational." The SDC was operational throughout the 20th and into the 21st century. Which period when the SDC was operational does the Specific Plan refer to? And where will that data come from? As SDC residents didn't use Arnold Drive, it can be assumed it means the employees of the SDC. It was a 24-hour facility; any data used should reflect that, as well as take into consideration that Arnold Drive—especially south of the SDC—is far busier now than it was when the SDC was at peak operation. I drive Arnold Drive every day, and at peak hours, traffic between the rotary and Petaluma Street is sometimes bumper-to-bumper.

C131-4

In the Aug.24 meeting, Mr. Oh noted that he envisioned the SDC proposed development as a vibrant activity hub for locals and visitors alike, akin to, in his words, "Sonoma Square." There is a key difference**:** the town of Sonoma, with its approximately 12,000 residents, is a community spread across thousands of acres with a complex grid of roads and streets. There are seven through streets that intersect Sonoma Square, including four-lane Broadway. The SDC Specific Plan proposes to build a community with a population far larger than neighboring Glen Ellen, including a hotel and a significant amount of commercial space, on a single two-lane country road with a possible connector to another two-lane road. Arnold Drive cannot reasonably support traffic for the kind of community hub that the Specific Plan proposes.

C131-5

I understand that the proposed SDC Specific Plan will bring significant financial benefits to the County of Sonoma. However, to disregard the solicited input of the majority of local residents and community organizations about its visions and hopes for the site, when we will have to live with its day-to-day consequences, is extremely poor governance.

Thank you, and I look forward to receiving your answers to the questions above.

Sincerely,

Elizabeth Crabtree

16528 Arnold Drive
Sonoma, CA 95476

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

VECTRONIC Aerospace

innovative technology for science and research

Welcome **ACRLion**, you are connected to database "ACRLION". List view

This website will be terminated on September 30. Please use Inventa in the future.




17 C
BUCKLIN001
01/20/2019 01:16AM

From:	Lizanne Pastore
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov
Subject:	"Draft EIR Comments: SDC Specific Plan"
Date:	Sunday, September 25, 2022 6:12:19 PM
Attachments:	SDC_DEIC_Comments.pdf P13_Bucklin_Vectronics.jpeg Mtn Lion 2019 Butler Creek.jpeg

EXTERNAL

Hello, I have both attached my letter as a pdf and copied it into the body of the email.

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

C132-1

Attached images are the trackings of a mountain lion P-13 seen to have been all over the SDC as well as on our property, right where the proposed HWY 12 connector road would be. Also included is a photo taken by a wildlife camera on our property at Butler Creek.

To: Mr. B. Oh, Comprehensive Planning Manager

Permit Sonoma County of Sonoma

2550 Ventura Ave.

Santa Rosa, CA 95403

From: Elizabeth Pastore

15081 Trestle Glen Dr.

Glen Ellen, CA 95442

415-577-3504

Dear Mr. Oh,

Thank you for reading my comments. My husband and I live on the land adjacent to the John Mesa soccer fields/Regional Park off of Trestle Glen. We are the 40-acre parcel (vineyard) between BR Cohn and the Regional Park. In other words, we are SDC's next-door neighbors, literally.

C132-2

While we are pro-housing, we have MANY concerns about this development's scope and size. While I have numerous concerns about water, fire, night sky pollution…I will focus primarily on the connector road between the SDC and Hwy 12, which as proposed in the figures in your plans, basically parallels our dirt driveway, appearing to be mere feet away from our property line and would forever disrupt a critical part of the wildlife corridor that folks don't seem to know about.

I will begin with a positive comment.

Point 1. Re: Page 11—"*ES.3.2 Reduced Development Alternative*"

I am a **big fan of the Reduced Development Alternative**. I am pro-housing, but am more pro-wildlife, safety, and common sense. A population increase of 3000 individuals, a road bisecting an important wild-lands corridor, and many thousands of cars and visitors to this precious area is frightening and would alter not only the beauty of the land, but endanger the entire wildlife population. Nature must be part of our community, not separate from it. Both my husband and I had given input for the Hwy 12 connector road to be for **emergency use only**, and we continue to think this would be an excellent compromise given the importance of this land to the local wildlife, who would be displaced with cars. Even with bikes and pedestrians, they will still suffer. I support reduced development because it is more respectful of the wild-lands and wildlife.

C132-3

Point 2. The DEIC has no mitigation measures. Rather, you have "Goals" and "Policies." **Please explain in detail, why and how this plan is "self-mitigating" and how the community can trust that SP (Specific Plan) will meet requirements for mitigation? Who is overseeing the process of your policies being met?** What assurance is there that your "goals and policies" will be honored and met? My understanding is that CEQA requires specific mitigation measures for environmental impacts. You offer none.

C132-4

Point 3. On page 417 of the EIC, "*Arnold Drive–South of Proposed Plan Area*

To the south of the Proposed Plan area between Harney Street and Madrone Road, daily volumes in 2021 were approximately 6,200 vehicles, as compared to approximately 7,100" *…??*

C132-5

This section appears incomplete and I'd like to know what the rest of the paragraph says. It is incomplete. "7,100…??"

Point 4. Re: Section "*3.14.4.2 Methodology and Assumptions*"

"*Land Use and Transportation Network Assumptions Consistent with Chapter 2: Project Description, the analysis presented in this section is based on* ***an assumption*** *that implementation of the Proposed Plan would result in 1,000 residential units with State and County density bonuses, including 435 single family units, 345 multifamily units, and 220 senior housing units. The Proposed Plan also includes 40,000 square feet of commercial/retail space, 190,000 square feet of office uses (likely including a mix of office, research and development, and other employment-based functions), 70,000 square feet of institutional uses (including work and meeting spaces including a conference center), a 120-room hotel, and 12.1 acres of recreational uses. In total, build out of the Proposed Plan is estimated to result in an added population of 2,400 persons and 940 jobs at buildout.ad*"

C132-6

How many cars are you estimating will be on the roads? My estimate, conservatively, is 1 to 2 cars per household, 1 car for each job held, 1 car for each hotel guest room, plus at least 500-1000 more cars for guests, tourists, shoppers. Are you calculating traffic estimates and driving times for just the population or the workers too? **Are we looking at over 4,000 more cars in this tiny area per day?**

Point 5. Please elaborate on the "Goals and Policies" section *3.14.4.3*. Some of them seem overly optimistic: "no gaps in the sidewalk networks," "limit vehicle speeds," "work with Sonoma County Transit," "Fare-free bus rides," "Require development to reduce vehicle trips by 15%," but you have **not included mitigation plans** and have NO assurances that your "Goals" and "Policies" will succeed, let alone even be enacted. What if your "Goals" and "Policies" fail? Who is responsible? Why should we take your word that your "Goals" and "Policies" will even be considered and enacted by the developers? How does this suffice in an EIR? My understanding is that there must be stated mitigation measures to satisfy CEQA. **Please explain and ensure to me that "goals and policies" are sufficient and mitigation is waived.**

C132-7

Point 6. *"Proposed Hwy 12 Connection"*

Figures 3.14-3 and 3.14.4

And Policy 3.5 (page 437)

"***Reuse existing street network to the greatest extent feasible****. Improve multi-modal access from the SDC to SR 12 by exploring the feasibility of providing an additional east-west emergency access connection from the site that includes high quality pedestrian and bicycle facilities*"

C132-8

As diagramed in figures 3.14-3 and 4, the "proposed Hwy 12 connection" is situated within feet of our existing driveway as we live on the land immediately adjacent to the soccer fields of John Mesa Dr. We live on Trestle Glen. It appears that no one has actually walked this land (have you?) and observed the beautiful and important wildlife lands that exist there along with hilly terrain, a creek

that the road would have to cross midway, and where our wildlife camera has just this past year snapped shots of mountain lions, bobcats, deer, fox, turkeys, really, every animal you could imagine being here. My husband photographed a pair of Golden Eagles this year on the SDC. This little corner of the property is an important and overlooked part of the wildlife corridor.

C132-8

A road here would utterly upend this precious corridor and change the land forever.

My question to you is this, where will the animals go? How do you account for more pavement, cars, noise, pollution, speeding, and danger? There are already paved roads in this section, and the above "Policy 3.5" suggests "using existing street network to the greatest extent possible," yet you have a road going in a straight line parallel to our property line, ignoring the existing roads already present. If someone had actually walked this area, they would see it as an illogical place to construct a road, it's hilly and there is a creek it would have to cross. Has someone actually walked this site? I am formally inviting you to come. I'll state our suggestion again, if you must construct another road, use the existing roads already present, and please keep it a bike/pedestrian roadway only and **only open it to cars for emergency usage**..

Point 7: RE: page 580 "*While the Planning Area currently has no residents, historically SDC was home to over 3,500 patients. With the Proposed Plan, the Planning Area would accommodate a total population of approximately 2,400 people.*"

C132-9

I question the continued comparison of the population of *patients* at the SDC vs the expected population of the SP's project, and I'd like you to explain to me why you think comparing the population of a group of patients who lived full-time in an institution with no interaction with the local community is equivalent to a population of people living in individual housing who all drive cars and will directly interact with our community at all times of the day and night. **The SDC's clients were stationary patients, not one of them owned or drove a car!** They didn't drive to the market, receive countless items from Amazon delivery trucks every day, take extra-long showers, buy plastic water bottles and litter them, or waste water washing their hair every day. The SDC was a fairly self-contained organization. Furthermore, most of the workers at the SDC worked in shifts that did not interfere with commute traffic/rush hours. I know this, because I have lived next door to the SDC since 2002! **I also see discrepancies in the SP's projection of the total population of residents, in some parts of the SP you say 3000 people and in others, such as above, you say 2400. Please explain that disparity.**

I could question 100 more items in the EIC but I'll leave it there. Please listen to the community, and remember that ***our wildlife neighbors do not have a voice***. They were here long before we were and it's up to us to do right by them. I know we need more housing, but we must do everything possible to care for this sacred land and honor the foxes, big cats, and even the lowly skunks and lizards' right to exist here.

Thank you,

Elizabeth Pastore


17 C
BUCKLIN001
01/20/2019 01:16AM

Sonoma Developmental Center Specific Plan Draft Environmental Impact Report

SCH # 2022020222; August 2022

Comments from Greg Carr:

1. Please revise all determinations of "less than significant" to "significant and unavoidable" for impacts where the effectiveness of mitigation measures is uncertain. The following impact analyses include mitigation measures that either postpone analysis to future studies or contain "feasibility" qualifiers in their application. Since these measures cannot be relied upon to fully reduce these impacts, it is misleading to suggest that they do so. C133-1

Aesthetics: 3.1-1, 3.1-2

Air Quality: 3.3-1, 3.3-2, 3.3-3

Biological Resources: 3.4-1, 3.4-2, 3.4-3

Cultural, Historic, and Tribal Cultural Resources: 3.5-1, 3.5-3

Energy and Greenhouse Gas Emissions: 3.6-1, 3.6-2, 3.6-3, 3.6-4

Geology, Soils, and Mineral Resources: 3.7-1

Hazards and Hazardous Materials: 3.8-2, 3.8-4

Hydrology an Water Quality: 3.9-1, 3.9-4

Noise: 3.11-1

Public Services and Recreation: 3.13-1, 3.13-3

Utilities and Service Systems: 3.15-1, 3.15-3

Wildfire: 3.16-1, 3.16-2

2. In addition to the above changes, the EIR should identify changes in the Proposed Plan that would further mitigate the significance of impacts, including a lesser level of development, a fully fleshed out financial plan, and more firm and effective policies. C131-2

3. A major omission in the Draft EIR is the lack of analysis of potential impacts of future uses of the Preserved Open Space Area. Since the project description includes agricultural and recreational uses, the impact analysis should identify the likely impacts, at least at a programmatic level of specificity. While the DEIR is correct in suggesting that these uses would be speculative in nature, the likely impacts are easily predictable and, like the analyses of C133-3

development in the Core Campus, can be described with some accuracy. Please include these analyses, particularly in the discussions of Agriculture and Forestry Resources; Biological Resources; Cultural, Historical, and Tribal Cultural Resources; Energy and Greenhouse Gas Emissions; Geologic, Soil, and Mineral Resources; Hydrology and Water Quality; Noise; Public Services and Recreation; and Transportation.

C133-3

In addition, under Impact 3.4-1, the DEIR identifies Measure 2-12 limiting development in the wildlife corridor to limited trails/paths. Does this limitation apply to future agriculture use?...to future park use? Also, the Impact 3.13-2 analysis states that park and recreation uses would be limited to urban and built-up lands.

Please clarify the above and make corrections as needed.

4. The DEIR lacks a complete analysis of the consistency of the Proposed Plan with the County General Plan. First, the project description does not identify the proposed General Plan land use and zoning designations necessary to achieve consistency. Second, the DEIR lacks the analysis of General Plan objectives and policies that are applicable to the proposed plan, including the Circulation and Transit Element (Objectives CT-4.1, 4.2, and 4.3 and related policies), the Open Space and Resource Conservation Element (Objectives OSRC-7.1 and OSRC-8.1 and 8.2 and related policies), and the Land Use Element (Objective LU-3.1 and related policies as well as Policy LU-20ff).

C133-4

Third, the DEIR statement under Impact 3.10-2 that the Specific Plan is generally consistent with the General Plan is incorrect in as much as "some updates" are necessary. Finally, Impact 3.12-1 fails to analyze population and housing growth enabled by the proposed plan in relation to the County General Plan, incorrectly asserting consistency in light of Bay Area growth rather than planned growth in the local area, the Sonoma Valley, and the County. Please include the appropriate analyses and corrections in the EIR.

5. In general, the analysis of alternatives lacks objective comparisons of the relative impacts and instead arbitrarily defends the proposed plan as superior. Please provide objective substantiated comparisons.

C133-5

6. Section 2.5 of the Project Description (Project Buildout) provides for flexibility in the level and profile of development allowed in each of the proposed subareas/districts. This flexibility leads to greater uncertainty in the significance of the Plan's impacts. More certainty and more effective mitigation would result from capping future development (#units, square footage, etc) in each subarea/district in phases. These caps could be accompanied by a provision in the monitoring program requiring periodic reports at the predetermined phases. These reports would include important parameters such as traffic and service capacities prior to the next phase of development.

C133-6

7. Please clarify the applicability of Public Resources Code 21080.7 and Govt Code 65457 with respect to processing of future housing and non-residential project applications. This discussion should distinguish between environmental review and review for policy compliance for different types of projects. C133-7

8. Several sections are unclear with respect to the Hwy 12 connector. Goal 3-B suggests that the proposed connector to Hwy 12 would reduce air quality impacts. If the collector is not included in the plan, would air quality impacts be significant and unavoidable…or is there substitute mitigation available to minimize these impacts? Similarly, would GHG emissions be more or less significant without the connector? Third, the focused traffic analysis states that traffic levels of service in Glen Ellen would be improved with the connector, but did not analyze the levels without the connector. C133-8

9. Table 3.6-2 estimates existing mobile energy consumption at 176,922 million BTUs per year. What is the source of this figure? Please provide the calculations. C133-9

10. As mentioned above, the DEIR does not address the Plan's consistency with level of service objectives in the General Plan Circulation and Transit Element. Nonetheless, the County commissioned a focused traffic study in order to establish future levels of service for area roadways and intersections. Notwithstanding the fact that LOS is not a CEQA impact, these results should be presented and discussed in the EIR and the recommended mitigation measures, such as a signal at Arnold and Harney, should be included. C133-10

11. In the discussion of the impacts of the Reduced Development Alternative, the statement is made that State Law stipulates that the plan must ensure financial feasibility. This is not true. Please include the exact language from the legislation enabling the County to develop a specific plan for SDC. C133-11

12. In spite of the fact that CEQA allows the option of addressing cumulative impacts based upon future development under the County General Plan, the fact that there are two major land use initiatives underway involving amendments to the General Plan suggest that this is not the best approach. The Draft Springs Specific Plan calls for significant additional growth in the SDC vicinity and the Draft Housing Sites Rezoning calls for establishing additional affordable housing sites in the valley. The Public Review Drafts and DEIRs for these two plans have been released and should be included in this analysis. C133-12

13. In general, it appears that the preparers of the DEIR have used the comparison of the alternatives to rationalize approval of the proposed plan rather than to describe the differences among them, particularly in the discussion of the cumulative impacts of growth enabled by the plan. C133-13

From: Greg Guerrazzi
To: Brian Oh; BOS; senator.mcguire@senate.ca.gov; senator.dodd@senate.ca.gov
Subject: Public Comment on SDC Specific Plan and DEIR
Date: Friday, September 23, 2022 5:03:20 PM

EXTERNAL

To:
Sonoma County Planning Commission and Board of Supervisors and State Senators:

I am a 28 year resident of Glen Ellen and lifelong resident of Sonoma County. My family has been in the County for over 100 years. C134-1

Please do not support the SDC Specific Plan or Draft EIR, which are woefully inadequate and inaccurate.

The County is legally required to respond to the below Draft EIR comments.

Specifically, the traffic analysis lacks basis and is unrealistic. The size of the re-development must be scaled back to a realistic number of housing and commercial units to allow for an orderly and safe evacuation, such as proposed in the Historic Preservation Alternative.

1. On the night of October 8 & 9 it took us over an hour to evacuate Glen Ellen due to the Nuns Fire. Arnold Drive was gridlocked with cars, trucks and trailers shrouded in smoke. Hwy 12 was closed as the fire jumped the Hwy into Glen Ellen.
2. It is completely irresponsible to consider an emergency exit route from Arnold Drive to Hwy 12, as historically every wildfire has come from the east which where this "escape route" would lead residents to a wall of flames and gridlock due to the likely evacuation of Oakmont. C134-2
3. Proposing to shelter in place at the SDC campus is ridiculous as the wildfire will consume the new development as was the case in Glen Ellen and many Santa Rosa neighborhoods.
4. The Draft EIR does not adequately address the Vehicle Miles Travelled for the people and support required for 1,000 homes and 940 jobs, as this amount of traffic will overwhelm the two lane roads of Arnold Drive, Hwy 12, Bennett Valley and Warm Springs Roads.
5. How will evacuation and safety measure put in place since the 2017 and 2020 fires even begin to protect the lives of 5,000 additional people?
6. The Draft EIR does not adequately address the above items.

Environmental & Climate Impacts

1. The Draft EIR does not meet CEQA requirements.
2. The Draft EIR does not have conditions that will be legally enforceable such as a Mitigation and Monitoring Program. C134-3
3. The Draft EIR must be revised to align with the County's own Climate Crisis Resolution.
4. The Draft EIR lacks realistic mitigation measures and conditions to address the environmental and climate impacts of 1,000 homes and 940 jobs in a rural, wildlife corridor, setting.

Historic Preservation Alternative ("Historic Alt")

1. The Draft EIR must be revised to adequately address the Historic Alt, as it is identified as "the environmentally superior alternative".
2. The Historic Alt meet the state's statutory objectives. The Draft EIR must be revised to include a detailed analysis of this alternative.
3. The Historic Alt is the plan the community supports and the County has been specifically directed by the State to follow community input and secure community support.

C134-4

Cumulative Impacts

1. The Draft EIR does not adequately assess the future impact of the Elnoka Development.
2. The Draft EIR does not adequately assess the Sonoma Valley infill housing.
3. The Draft EIR does not adequately assess the future development in Rincon Valley, such as the new development at Hwy 12 and Calistoga Road.
4. All of these above projects and more will increase traffic in the Hwy 12 Glen Ellen corridor especially during an emergency evacuation.

C134-5

Water & Power

1. The Valley of the Moon Water District has contacted me to advise we must reduce or water consumption by 20%. The Draft EIR must be revised to address how the water demand of 1,000 homes and 940 jobs will impact the current users.
2. The Draft EIR must be revised to specifically analyze the water sources to be utilized to support 1,000 homes and 940 jobs/commercial activities during a wild fire event.
3. The Draft EIR must be revised to fully evaluate the assumptions made to assert that the water resources are available for this size of development. If they are why and I being asked to reduce my use by 20%?
4. During the recent heat wave, we were instructed to not use electrical power between 3 PM and 10 PM and this situation will recur. The Draft EIR does not adequately address how the power grid can accommodate 1,000 homes and 940 jobs/commercial activities without impacting the existing residents and commercial uses.

C134-6

Wildlife Corridor & Sonoma Creek

1. The Draft EIR does not adequately address, and it must be revised as to how 1,000 homes and extensive commercial activity will impact a crucial wildlife corridor.
2. The Draft EIR does not adequately address, and it must be revised as to how 1,000 homes and extensive commercial activity will impact the crucial water source of Sonoma Creek for wildlife and salmon restoration.

C134-7

Ultimately the Draft EIR will need to be revised to address the project selected by the State for redevelopment of SDC.

The Historic Alt must be analyzed as the most likely scenario.

Thank you.

Best Regards,

Greg Guerrazzi
(707) 935-1111

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

cbec
eco engineering
Hydrology | Hydraulics | Geomorphology | Design | Field Services

September 26, 2022

Via Email Only

Mr. Brian Oh
Comprehensive Planning Manager
Permit Sonoma County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403
Brian.Oh@sonoma-county.org

Subject: Review of Draft Environmental Impact Report (DEIR) (SCH# 2022020222)
Sonoma Developmental Center Specific Plan, Sonoma County, California

Dear Mr. Oh:

I am a hydrologist with over thirty years of technical and consulting experience in the fields of hydrology, geology, and hydrogeology. I have been providing professional hydrology and geomorphology services in California since 1989 and routinely manage projects in the areas of surface- and groundwater hydrology, water supply, water quality assessments, water resources management, and geomorphology. Most of my work has been in the Coast Range watersheds of California. My areas of expertise include: characterizing and modeling watershed-scale hydrologic and geomorphic processes; evaluating surface- and ground-water resources/quality and their interaction; assessing hydrologic, geomorphic, and water quality responses to land-use changes in watersheds and causes of stream channel instability; assisting and leading in the development of CEQA environmental compliance documents and project environmental permits; and designing and implementing field investigations characterizing surface and subsurface hydrologic and water quality conditions. I earned a Master of Science degree in Geology, specializing in sedimentology and hydrogeology as well as an A.B. in Geology from Miami University, Oxford, Ohio. I am a Certified Hydrogeologist (CHG #360) and a registered Professional Geologist (PG #5737) in the state of California. A copy of my resume is attached.

C135-1

I have reviewed the Draft Environmental Impact Report (DEIR) for the Sonoma Developmental Center Specific Plan in Sonoma County, California, and evaluated if the project may impact surrounding properties and the environment. Specifically, I have reviewed the DEIR and technical appendices. Based

C135-2

2544 Industrial Blvd., West Sacramento, CA 95691 USA
T 916.231.6052 F 916.669.8886 info@cbecoeng.com
www.cbecoeng.com

on my review of these materials, it is my professional opinion that the DEIR is inadequate in evaluating the potential significant impacts of project actions on hydrology, water quality and biological resources. The rationale for this opinion is based on multiple findings presented below.

C135-2

1. There are several local and state regulations applicable to the SDC Specific Plan that are not included in the Hydrology/Water Quality Regulatory Setting section (3.9.1 on pg. 270) of the DEIR. These include the following.

    a. Sonoma County General Plan 2020 Policy C-WR-2f, which states, "*Discretionary projects in Urban Service Areas, where the density of development thus extent of impervious surface area is greater than in Rural Communities, shall be required to maintain the site's pre-development recharge of groundwater to the maximum extent practicable/feasible. Develop voluntary guidelines for development in Rural Communities that would accomplish the same purpose. (GP2020 Revised)*".
    b. Sonoma County General Plan 2020 Policy C-WR-4b, which states, "*Use water effectively and reduce water demand by developing programs to: (1) Increase water conserving design and equipment in new construction, including the use of design and technologies based on green building principles; (2) Educate water users on water conserving landscaping and other conservation measures; (3) Encourage retrofitting with water conserving devices; (4) Design wastewater collection systems to minimize inflow and infiltration; and (5) Reduce impervious surfaces to minimize runoff and increase groundwater recharge. (GP2020)*".
    c. Sonoma County General Plan 2020 Policy C-WR-4f, which states, "*To minimize generation of wastewater and encourage conservation of Coastal water resources, require use of water saving devices as prescribed by the local water provider in all new developments. (New)*".
    d. California statutes and regulations (e.g., California Code, Division 3. Dams and Reservoirs) related to dam safety.

C135-3

    As elaborated below, the missing County policies and state regulations are directly relevant to the water supply and flood hazard assessments for the project as elaborated below.

2. The DEIR Project Description is not detailed enough to evaluate potential impacts on hydrology and the environment. The DEIR does not contain a project plan with sufficient detail about land use change to complete the necessary hydrologic and water quality assessments to determine impacts from the project. Due to the lack of an adequate Project Description, I don't agree with the DEIR determinations that potential hydrologic and water quality impacts are less than significant and that no mitigation measures will be required for the following reasons.

C135-4

a. Impact 3.9-1 - The DEIR states that potential impacts to federal, state, and local water quality standards are less than significant. However, the DEIR has not analyzed how changes in site runoff and associated erosion potential will change. Based on my experience, this analysis would require detailed hydrologic and hydraulic modeling that incorporates all changes in land use (esp. impervious surfaces) and runoff estimates to determine where and by how much flow rates (and erosion potential) may impact receiving waterways both on- and off-site. BMPs and other measures would then be designed correctly to mitigate these impacts. This is the primary way the DEIR can address the significance of the impact before and after mitigation.

C135-5

b. Impact 3.9-2 - The DEIR states that the project will not interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin and associated potential impacts are less than significant. However, the DEIR does not contain any detailed technical analysis of how the project development will alter groundwater recharge. The DEIR has an obligation to describe any potential changes in recharge. Simply stating that BMPs that support groundwater recharge will be integrated into the Project does not demonstrate that they will be sufficient to mitigate potential impacts.

C135-5

c. Impact 3.9-3 - The DEIR states that Project development would not substantially alter the existing drainage patterns or result in substantial erosion and flooding on- or off-site or contribute runoff that would exceed the capacity of existing or planned storm drain systems. Thus, the DEIR concludes that associated impacts are less than significant. These conclusions are not substantiated as the DEIR does not present results from any hydrologic on hydraulic analyses to demonstrate to what degree the project may increase runoff rates and erosion potential from new or improved development. The assumption that adhering to County mandated BMPs will reduce flooding and erosion impact to below significant has not been demonstrated. Instead, the DEIR defers analysis and mitigations for hydrologic and water quality impacts.

C135-6

d. Impact 3.9-4 – The DEIR states that the potential to expose people and structures to significant risk or loss, injury or death involving flooding from dam failure is less than significant. However, this is completely contrary to the California Division of Safety of Dams (DSOD) conclusions about Project dam safety presented in Section 3.9.2.5 (Flooding – Flooding from Dam Failure, pg. 286-287) of the DEIR. Page 286 of the DEIR states, "The DSOD has classified the downstream hazard of a failure at Fern Lake as high". On page 287, the DEIR states, "*The DSOD has classified the downstream hazard of a failure at Suttonfield Lake as extremely high*." These statements alone suggest this potential impact is not "less than significant". The DEIR does present inundation maps associated with these failures but provides no further analysis on how these potential impacts will be mitigated apart from the statement (pg. 287) "*Specific geotechnical investigations of the dams at Fern and Suttonfield Lakes would need to be conducted to determine their potential for failure*." However, this is a deferred analysis, which does

C135-7

not support the findings of "less than significant" impacts and "not applicable" mitigations.

e. Impact 3.9-5 - The DEIR states that implementation of the Project would not conflict or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Thus, the DEIR concludes that associated impacts are less than significant. However, for the same reasons presented above (items 2a. – 2c.), the DEIR does not present any technical justification for this determination and should be considered inadequate and incomplete. C135-8

3. An important analysis of the SDC project is the determination if there are sufficient water supplies to meet proposed project water demands. Appendix D of the DEIR presents the results of this analysis. Based on my review of Appendix D, I've identified several mistakes and other issues that suggest the DEIR does not demonstrate there is sufficient water supply to meet future (2045 full buildout) demands. C135-9

   Table 2 (pg. 14) of Appendix D indicates that estimated Project annual water demands by the year 2045 will be 342 acre-feet per year (AFY). Table 9 (pg. 31) of Appendix D indicates that available annual supply that will be 100% reliable for the period 2030-2045 is 356 AFY. Comparison of available and reliable water supply (356 AFY) to full buildout demands (342 AFY) suggest there is very little margin for error in terms of future water supply management. The DEIR supply estimate is also concerning to me in that the historic (1969-2007) water use (demands) for the SDC averaged 622 AFY and peaked at 1,143 AFY in 1986 (pg. 12, Appendix D). I'm suspect that the historic SDC water use is nearly twice the volume of estimated future full buildout (2045) Project water demands, especially when the Project proposes to build an additional 1000 residential units and hotel and reoccupy and/or expand the commercial and industrial uses (see Table 1, pg. 13 of Appendix D). Even with conservation measures, I would expect that Project water demands would be similar to if not larger than historic use. The next paragraphs elucidate this opinion.

   In reviewing and cross-checking the data and information presented in Tables 1 and 2 of Appendix D, I identified several questionable results that suggest the DEIR water demands are significantly underestimated. These findings are as follows.

   a. Table 2 (pg. 16 of Appendix D) only provides employee water use estimates for the proposed hotel. Water use by guests staying in the 100,000 square foot hotel is not accounted for in the annual water demand estimate. Incorporating guest water use into the demand estimate could easily result in total annual project demands greater than reliable supply. C135-10

   b. To better evaluate the DEIR demand estimates, I created Table A (below), which merges data from Tables 1 and 2 in DEIR Appendix D. In doing this exercise, I identified a significant math error in the DEIR demand estimates for General Commercial, Office, Public/Industrial, and Research & Development land uses presented in Table 2 of

Appendix D. When independently calculating water demands using the 2045 land use areas and Water Use Factors provided in Appendix D, the respective 2045 water demands for the General Commercial, Office, Public/Industrial, and Research & Development land uses result in values that are two orders of magnitude higher than those reported, which results in an increased annual Project water demand of 9846 AFY (see Table A).

C135-11

c. The Permit Sonoma website[1] provides guidelines (8-2-1 Water Supply, Use and Conservation Assessment Guidelines) for the preparation of Water Supply Assessments. The purpose of this policy is to provide guidance to applicants and their representatives on how to prepare a Water Supply, Use, and Conservation Assessment (henceforth, the "Assessment"). The Assessment may be a standalone document, or supplemental to a hydrogeologic study, Zero Net Use report, or other water supply related report. These guidelines are intended for discretionary and ministerial projects. Discretionary projects that are dependent on groundwater or surface water will typically require an Assessment with the use permit application. The Assessment will inform the environmental review process and conditions of approval. The authority of the Assessment falls under Sonoma County General Plan, Water Resource Element Goals WR-2 and WR-4, Objective WR-4.1, WR-4.2, and WR-4.3, and Policies[2] WR-2c, WR-2d, WR-2e, WR-4b, and WR-4f. Therefore, the DEIR Water Supply Assessment (Appendix D) should adhere to County Guidelines. Appendix A to the County's Guidelines has water use estimates for residential, landscape, agricultural, and Commercial and Industrial uses that are greater than those factors presented in Table 2 of Appendix D (see Table B). Applying the Sonoma County water use estimates to Project water demand estimates results in higher residential and irrigated area water demands than presented in the DEIR (see Table B below).

C135-12

In summary, correcting math errors and applying the Sonoma County guidelines water use estimates to the DEIR demand estimate tables results in a total annual Project water demand of 10,231 AFY, a values three times higher than reported reliable supply (356 AFY). This annual total demand will be even higher when hotel guest water use is considered.

[1] https://permitsonoma.org/policiesandprocedures/8-2-1watersupplyuseandconservationassessmentguidelines

[2] Note: these policies are not included in Hydrology/Water Quality Regulatory Setting section (3.9.1 on pg. 270) of the DEIR. See Comment 1 above.

TABLE A: Corrected DEIR Water Demand Estimates

Land Use	Total Land Use	Land Use Units	Water Use Factor	Water Use Factor Units	DEIR Est. Water Use (AFY) - 2045	Corrected DEIR Est. Water Use (AFY) - 2045
Single Family Residential	250	du	244	gpd/du	68	68
Multi-Family Residential	500	du	100	gpd/du	56	56
"Missing Middle" Residential	250	du	172	gpd/du	48	48
Hotel	100,000	sf	0.16	AFY/employee	28.0	26.7
General Commercial	40,000	sf	1.79	AFY/100 sf	7.2	716.0
Office	127,500	sf	1.79	AFY/100 sf	23	2282
Public/Institutional	155,000	sf	1.79	AFY/100 sf	28	2775
Research & Development	127,500	sf	2.35	AFY/100 sf	30	2996
Total Open Space	3,116,000	sf				
Irrigated Park Area	488,000	sf			21	21
Other Irrigated Common Space Areas (e.g., landscaped medians)	148,000	sf			2.9	2.9
System Water Losses			9.5%		30	854
				Total	**342**	**9846**

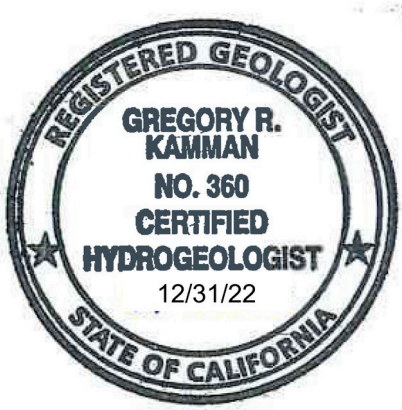
TABLE B: Corrected DEIR Water Demand Estimates using selected Sonoma County Water Use Factors

Land Use	Total Land Use	Land Use Units	Water Use Source	Water Use Factor	Water Use Factor Units	Estimated Water Use (AFY) - 2045	DEIR Est. Water Use (AFY) - 2045
Single Family Residential	250	du	Sonoma County	0.5	AFY/du	125	68
Multi-Family Residential	500	du	Sonoma County	0.5	AFY/du	250	56
"Missing Middle" Residential	250	du	Sonoma County	0.5	AFY/du	125	48
Hotel	100,000	sf	Original EIR	0.16	AFY/employee	28	28
General Commercial	40,000	sf	Original EIR	1.79	AFY/100 sf	716	7.2
Office	127,500	sf	Original EIR	1.79	AFY/100 sf	2282	23
Public/Institutional	155,000	sf	Original EIR	1.79	AFY/100 sf	2775	28
Research & Development	127,500	sf	Original EIR	2.35	AFY/100 sf	2996	30
Total Open Space	3,116,000	sf	Original EIR	-	-	-	-
Irrigated Park Area	11	acres	Sonoma County	3.6	AFY/acre	40	21
Other Irrigated Common Space Areas (e.g., landscaped medians)	3	acres	Sonoma County	1.8	AFY/acre	6.1	2.9
System Water Losses	-	-	Original EIR	9.5%	-	888	30
					Initial Sum	9343	312
					Total	**10,231**	**342**

Please feel free to contact me with any questions regarding the material and conclusions contained in this letter.

Sincerely,

Greg Kamman, PG, CHG
Senior Ecohydrologist



Hydrology | Hydraulics | Geomorphology | Design | Field Services

Greg Kamman, PG, CHG
Senior Ecohydrologist



Education

MS, 1989, Geology, Sedimentology and Hydrogeology, Miami University, Oxford, OH

BA, 1985, Geology, Miami University, Oxford, OH

Professional Registration

1993, Professional Geologist, California, #5737

1995, Certified Hydrogeologist, California, #360

Professional Experience

cbec, inc., eco-engineering, West Sacramento, CA, Senior Ecohydrologist, 2020-present

Kamman Hydrology & Engineering, Inc., San Rafael, CA, Principal Hydrologist/Vice President, 1997-2020

Balance Hydrologics, Inc., Berkeley, CA , Sr. Hydrologist/ Vice President, 1994-1997

Geomatrix Consultants, Inc., San Francisco, CA, Project Geologist/Hydrogeologist, 1991-1994

Environ International Corporation, Princeton, NJ, Sr. Staff Geologist/Hydrogeologist, 1989-1991

Miami University, Oxford, OH, Field Camp Instructor and Research Assistant, 1986-1989

Greg Kamman is a professional geologist and certified hydrogeologist with over 30 years of technical and consulting experience in the fields of geology, hydrology, and hydrogeology. He specializes in directing and managing projects in the areas of surface and groundwater hydrology, stream and tidal wetland habitat restoration, water supply and water quality assessments, water resources management, and geomorphology. Mr. Kamman has worked extensively throughout California's coastal watersheds and estuaries, and on multiple projects in Oregon and Hawaii.

Mr. Kamman's experience and expertise includes evaluating surface and groundwater resources and their interaction, stream and wetland habitat restoration assessments and design, characterizing and modeling basin-scale hydrologic and geologic processes, assessing watershed hydraulic and geomorphic responses to land-use change , and designing and conducting field investigations characterizing surface and subsurface hydrologic and water quality conditions. Greg commonly works on projects that revolve around sensitive fishery, wetland, wildlife, and/or riparian habitat enhancement within urban and rural environments. Mr. Kamman performs many of these projects in response to local, state (CEQA) and federal statutes (NEPA, ESA), and other regulatory frameworks. Mr. Kamman frequently applies this knowledge to the review and expert testimony on state and federal water operation plan EIR/EIS reports, Groundwater Sustainability Plans, Habitat Conservation Plans, and biological assessments.

Mr. Kamman is accustomed to working multi-objective projects as part of an interdisciplinary team including biologists, engineers, planners, architects, lawyers, and resource and regulatory agency staff. Mr. Kamman is a prime or contributing author to over 360 technical publications and reports in the discipline of hydrology, the majority pertaining to the protection and enhancement of aquatic resources. Mr. Kamman has taught the following courses: stream restoration through U.C. Berkeley Extension (2001-2008); wetland hydrology through San Francisco State University's Romberg Tiburon Center (2007 and 2012-2014); and presented webinars (2020) to California Water Boards staff on hydrologic and hydraulic modeling. He has devoted his career to the protection, enhancement and sustainable management of water resources and associated ecosystems.

SELECTED EXPERIENCE

Floodplain Management Projects

Flood Reduction, Mitigation Planning, and Design on Yreka Creek, Siskiyou County, CA
City of Yreka as subcontractor to WRA, Inc., 2008-2010

Mr. Kamman completed a series of field and hydraulic model investigations for restoration planning and design along Yreka Creek to reduce flood hazards and potential damage to the City's water treatment plant and disposal field infrastructure. This work also addresses and satisfies dike repair mitigation conditions stipulated by state resource agencies. While achieving these goals, Mr. Kamman tailored analyses and study objectives to assist the City in: enhancing the ecological floodplain restoration along Yreka Creek; providing opportunities for expanded public access and trail planning consistent with the goals of the Yreka Creek Greenway Project; and improving the water quality of Yreka Creek.

Key elements of this work included: review and synthesize existing information; identify and analyze the feasibility for three conceptual alternatives; and conceptual design and report preparation. Funding for implementation of restoration work over such a large area was a significant concern to the City. Therefore, designs identify and define phasing in a fashion that gives the City flexibility in implementation.

SELECTED EXPERIENCE *(CONTINUED)*

West Creek Drainage Improvement Assessment, Marin County, CA
Marin County Flood Control, 2006-2008

Mr. Kamman prepared a study focused on characterizing existing flood conditions and developing and evaluating flood reduction measures along West Creek in Tiburon. The work was completed through the implementation of hydrologic and hydraulic feasibility and design assessments. The conceptual design and analysis of potential flood reduction strategies (alternatives) was completed through the development of a HEC-RAS hydraulic model that simulates historic, existing and proposed project flood conditions. It was intended that the conceptual design developed under this scope of work would be of sufficient detail and quality to initiate project permitting and the environmental compliance process and documentation. Opportunities for riparian corridor and aquatic habitat enhancement were also considered and integrated into the conceptual design. Mr. Kamman also developed and assessed six alternative flood hazard reduction measures. The hydraulic model results for each alternative were compared against baseline conditions in order to evaluate their ability to alleviate flood hazards.

Gallinas Creek Restoration Feasibility Assessment, Marin County, CA
San Francisco Bay Institute, 2003-2005

Mr. Kamman completed a feasibility assessment for restoration of Gallinas Creek in northern San Rafael. Restoration will require removal of a concrete trapezoidal flood control channel and replacement with an earthen channel and floodplain in a “green belt” type corridor. Work included the collection of field data and development of a HEC-RAS hydraulic model to evaluate and compare existing and proposed project conditions. Designs must continue to provide adequate flood protection to the surrounding community. The study also includes and evaluation of existing habitat values, potential habitat values, and restoration opportunities and constraints.

Hydrologic and Hydraulic Evaluation for Trinity County Bridge Replacement, Trinity County, CA
Trinity County Planning Department, 2002

Mr. Kamman completed technical peer review of peak flow estimates and hydraulic design parameters associated with the replacement of 4 bridges across the upper Trinity River in Trinity County, California. A primary study component was accurately predicting the magnitude and frequency of flood releases from Trinity Dam. Numerous flood frequency analytical approaches were evaluated and used throughout this study.

Restoration of Lower Redwood Creek Floodway and Estuary, Humboldt County, CA
California State Coastal Conservancy and Humboldt County DPW, 2002-2003

Mr. Kamman provided technical review for the development of a hydraulic model to evaluate river and estuary restoration alternatives along the lower portions of Redwood Creek between Orrick (Highway 1) and the Pacific Ocean. This work was completed to evaluate the feasibility for creek/estuary restoration alternatives developed by the County, and effects on flood hazards along this flood-prone reach.

In order to better address and evaluate the current flood hazards along the entire floodway and identify potential flood hazard reduction measures, Mr. Kamman was retained to update HEC-2 models previously prepared by the Army Corps, and to evaluate the impacts of vegetation encroachment (increased roughness) and sediment deposition on floodway conveyance. Mr. Kamman expanded the Corps hydraulic model with newly completed channel surveys and channel roughness observations. The impetus for this work was to assist the County in identifying mutually beneficial strategies for ecosystem restoration and flood hazard reduction. Technical work was completed under close coordination and communication with county engineers. Study results and findings were presented at public meetings of local area landowners and stakeholders.

Tembladero Slough Small Community Flood Assessment, Monterey County, CA
Phillip Williams & Associates, Ltd., 1997

Mr. Kamman completed a flood information study of Tembladero Slough near Castroville on behalf of the San Francisco District Corps of Engineers. The purpose of this work was to identify and document local flood risks existing in the community and propose potential floodplain management solutions as part of the Corps 1995/1997-flood recovery process. Work centered on conducting a field reconnaissance, reviewing available historical data, and conducting discussions/interviews with local landowners and agency personnel.

Fluvial Projects

Muir Woods National Monument Bank Stabilization Plan for Conlon Creek, Marin County, CA
Golden Gate National Parks Conservancy (GGNPC), 2018-present

Mr. Kamman developed a grading and drainage plan for the Conlon Avenue Parking Lot, located adjacent to Redwood Creek and sensitive Coho salmon habitat. More recently, he has assisted GGNPC and the NPS in assessing the planning and design for creek bank stabilization and ecological enhancement at a failed culvert on a tributary channel at the project site. This work includes constructing a HEC-RAS model to evaluate: culvert removal and channel design; fish passage; and water quality impacts. Work is currently in development of 50% engineering design.

Hydrology and Hydraulic Assessments for Design of Butte Sink Mitigation Bank Project, Colusa County, CA
WRA, Inc., 2017-2018

Mr. Kamman was retained to provide hydrology and hydraulic modeling support in the development of design and Draft Prospectus for the Butte Sink Mitigation Bank (Bank). This work entailed developing the necessary hydrology information, hydraulic model and documentation to support further design, environmental compliance and agency approvals/permitting of the Bank. The main objective of work was to develop a design that provides the necessary ecological conditions and functions for successful establishment and operation of the Bank.

Lagunitas Creek Salmonid Winter Habitat Enhancement Project, Marin County, CA
Marin Municipal Water District, 2013-2018

Mr. Kamman designed and led a study to evaluate opportunities to enhance winter habitat for coho and other salmonids in Lagunitas Creek and its largest tributary - Olema Creek. This work was done as a two-phase assessment and design effort. The first phase (completed in 2013) included a winter habitat assessment to evaluate existing juvenile salmonid winter habitat in Lagunitas Creek and lower Olema Creek. The results of this assessment were used to prioritize winter habitat needs, and identify opportunities for winter habitat enhancement to increase

SELECTED EXPERIENCE *(CONTINUED)*

the winter carrying capacity of coho salmon and steelhead. The second phase (completed in 2017) consisted of a designing winter habitat enhancements. These enhancements focused on restoring floodplain and in-channel habitat structures. Winter habitat enhancement work also needed to consider potential impacts to or benefits for California freshwater shrimp (Syncaris pacifica), a federally endangered species.

This work included field reconnaissance, topographic surveys and the preparation of final design drawings at nine different project sites. An overall self-maintaining design approach was developed to guide individual project plan, with minimal earthwork and disturbance to existing riparian and wetland habitat. Self-sustained, natural evolution of a multi-thread channel within a more active floodplain is a desired outcome of project actions. Design elements and structures are intended to enhance or restore natural hydrologic processes to promote geomorphic evolution of more active high flow (side) channels and floodplain. Design elements include construction of 24 individual log structures.

Lower Miller Creek Management and Channel Maintenance, Marin County, CA
Las Gallinas Valley Sanitary District, 2013-2015

Mr. Kamman was commissioned to formulate and implement a plan for sediment removal and improved flood flow conveyance in the Lower Miller Creek channel. The need for improved flood and sediment conveyance is driven by the following factors. Progressive accumulation of course sediment in the project reach had reduced area wide discharge efficiencies along Miller Creek and at District outfalls. The District had an immediate need to dredge Lower Miller Creek to protect existing operations and facilities. Miller Creek supports a population of federally listed Steelhead, and adjacent wetland areas potentially support other state and federally listed special status species. Therefore, permitting requirements and cost efficiency required minimizing the extent and frequency of channel excavation/maintenance that may adversely impact habitats in the wetland and riparian corridor.

The design objective of the project was to define and optimize an integrated channel maintenance, flood, and sediment management plan, that protects existing facilities from stream and coastal flood hazards. The plan's objective was to minimize costs and ecological impacts of future anticipated and designed maintenance activities required under District operations. Working with District Staff, Mr. Kamman developed a suite of potential project alternatives and identified a preferred approach. Mr. Kamman completed all CEQA compliance (IS/MND) and permitting. Mr. Kamman also managed and directed development of engineered drawings and assisted in bid document preparation.

Mr. Kamman provided site assessment, long term management planning and channel maintenance support to the Sanitary District to maintain flood conveyance, manage sediment aggrading at District outfalls, and improve ecological values in the intertidal Bayland reaches of Miller Creek. The creek supports multiple federal and state listed endangered species. Initial work included completing hydraulic and geomorphic assessments to characterize causes of channel aggradation, and quantify sediment yields. Assessments included evaluation of climate change impacts on habitat and flood hazards, and water quality modeling of District outfalls to quantify tidal exchange and dilution. Based on this analysis and supporting biological resource assessments, Mr. Kamman identified alternatives for channel maintenance, performed a cost benefit assessment of dredging alternatives, and is assisted the District in developing short and long term management objectives. Mr.Kamman also led a multidisciplinary design team in the preparation of engineering plans and specifications as well as permits and environmental compliance documents.

Vineyard Creek Channel Enhancement Project, Marin County, CA
Marin County Department of Public Works, 2007-2013

Mr. Kamman managed the preparation of designs and specifications for a flood conveyance and fish habitat and passage improvement project on Vineyard Creek. Creek corridor modifications included replacing the box culvert at the Center Road crossing with a free span bridge or bottomless arch culvert (civil and structural design by others), providing modifications to the bed and bank to eliminate erosion risks to adjacent properties and improve water quality, promoting active channel conveyance of both water and sediment, and providing improved low and highflow fish passage, improved low flow channel form and enhanced in-stream habitat, repairing eroding banks, and expanding/enhancing adjacent channel floodplains. The riparian corridor was replanted to provide a low-density native understory, "soft" bank erosion protection, and increased tree canopy along the tops of banks. Mr. Kamman prepared the JARPA for the project and conducted permit compliance and negotiations with all participating resource agencies. Designs and permitting also address the known presence of Native American artifacts. This work was contracted under an expedited design schedule and phased construction was initiated the summer of 2008 and continued the summer of 2009.

Bear Valley Creek Watershed and Fish Passage Enhancement Project, Marin County, CA
The National Park Service and Point Reyes National Seashore Association, 2005-2013

Working on behalf of the NPS and PRNSA, Mr. Kamman completed a watershed assessment and fish passage inventory and assessment for Bear Valley Creek. Work included a geomorphic watershed assessment and completing field surveys and hydraulic modeling (including flood simulations) of ten road/trail crossings to identify and prioritize creek and watershed restoration efforts while considering and addressing current flooding problems at Park Headquarters – a major constraint to channel restoration efforts that would likely exacerbate flooding. Mr. Kamman also completed a suite of conceptual restoration designs (Phase 1) including: the replacement of two county road culvert crossings with bridges; channel creation through a ponded freshwater marsh (former tidal marsh); and replacement of 4 trail culverts with prefabricated bridges; and associated in-channel grade control and fishway structures. Engineered drawings and specifications were also developed for some of these sites to assist PORE with emergency culvert replacements after damages sustained during the New Year's Eve flood of 2005. Mr. Kamman also directed geotechnical, structural and civil design of project components.

Two projects were completed in 2006 on emergency repair basis resulting from flood damages suffered during the New Year's Eve storm of 2005. The two most recent projects were constructed in 2013, consisting of a large bank repair and adjacent to main access road/trail and culvert replacement further upstream on same road. The bank repair utilized bioengineering approaches including engineered log revetments and log diversion vanes.

SELECTED EXPERIENCE *(CONTINUED)*

Kellogg Creek Restoration Project, Contra Costa County, CA
Olberding Environmental on behalf of the Contra Costa County Water District, 2012-2013

Mr. Kamman led the development of PS&E to restore 3,000 linear feet of riparian and associated creek corridor habitat. Project was designed as compensatory mitigation for direct and indirect impacts to jurisdictional waters from the Los Vaqueros Reservoir Expansion Project that Contra Costa Water District. Work included field investigations and data analysis to characterize hydrologic/geomorphic conditions and numerical modeling to optimize desired inundation and hydroperiods. Work was completed under subcontract to.

Miller Creek Sanitary Sewer Easement Restoration, Marin County, CA
Las Gallinas Valley Sanitary District, 2010

Working on behalf of the District, Mr. Kamman completed field surveys and technical feasibility studies to develop engineering plans and specifications for a stream bank restoration project to protect an exposed sanitary sewer pipeline, stabilize incised banks, and promote an ecologically healthy stream corridor along an approximately 50 linear foot damaged reach of Miller Creek. The design includes backfill and materials to accommodate construction of a vegetated stabilized slope. The eroded bank repair included design of a 1:1 Envirolok vegetated slope with geogrid reinforced soil lifts extending eight to ten feet back from the slope face. One-quarter-ton rock will be placed in front of the Envirolok wall at the toe of the reconstructed bank to provide added scour protection. In order to perform the work, the project site will be dewatered. An existing felled tree perpendicular to the creek flow will be relocated and secured into the right creek bank with root wad remaining in active channel. All work on the bank and within the creek bed must be completed pursuant to project permits due to presence of steelhead trout.

California Coastal Trail Planning and Design at Fitzgerald Marine Reserve, San Mateo County, CA
WRA, Inc., 2008-2009

Mr. Kamman provided hydrology and hydraulics expertise in the planning and design for the 0.25-mile segment of the California Coastal Trail at the Fitzgerald Marine Reserve. The project was overseen by the San Mateo County Parks Department. This segment of Coastal Trail provides improved access from the trailhead to the beach as well as a free span bride over Vicente Creek. Greg completed the field surveys and hydraulic modeling to assist an interdisciplinary team to design the project. Understanding the hydrology of Vicente Creek and quantifying flood conditions was critical to successfully designing and constructing the free span bridge. He also evaluated how creek hydrology and coastal wave processes interact at the beach outfall in order to identify opportunities and constraints to beach access improvements (which will include crossing the creek on the beach) during both wet and dry season conditions in order to evaluate both permanent and seasonal crossing design alternatives.

Hydrologic Assessment and Conceptual Design for Conservation and Wetland Mitigation Bank Project, Stanislaus County, CA
WRA, Inc., 2009

Working as a subcontractor to WRA, Inc., Mr. Kamman provided hydrology, geomorphology and engineering support for the planning and design for a Conservation and Wetland Mitigation Bank on the San Joaquin River, in the Central Valley near Newman, California. The property is currently owned by the Borba Dairy Farms. The primary objective of the study was to characterize the hydrologic and geomorphic controls on the spatial distribution of habitat types. To meet this objective, Mr. Kamman's assessment included: (1) collecting and synthesizing hydrologic data to characterize existing and historic streamflow, geomorphic and shallow groundwater conditions; (2) filling a data gap by collecting topographic data of hydrologic features; (3) developing a hydraulic model capable of predicting water surface profiles for a range of design flows; and (4) quantifying the linkage between surface water/groundwater conditions and specific vegetation communities and habitat types through implementation of reference site assessments. Mr. Kamman also provided conceptual design and permitting support in evaluating habitat enhancement and creation opportunities on the site.

Redwood Creek Floodplain and Salmonid Habitat Restoration, Marin County, CA
Golden Gate National Recreation Area and Golden Gate Parks Conservancy, 2005-2008

Mr. Kamman lead development of a preferred project alternative and final project design drawings and specifications for a floodplain and creek restoration and riparian corridor enhancement effort on lower Redwood Creek above Muir Beach at the Banducci Site. A primary objectives of the project was to: improve salmonid passage/rearing/refugia habitat; riparian corridor development to host breeding by migratory song birds; and wetland/pond construction to host endangered red-legged frog. The preferred design includes: excavation along the creek banks to create an incised flood terrace; engineered log deflector vanes; removing and setting back (constructing) approximately 400-feet of levee; creating in- and off-channel salmonid rearing and refugia habitat; reconnecting tributary channels to the floodplain; and creating California red-legged frog breeding ponds. Designs were completed in 2007 and the project constructed in the summer of 2007.

Considerable hydraulic modeling was completed to evaluate and develop means to help reduce chronic flood hazards to surrounding roadways and properties. Alternatives that included set-back levees and road raising were developed and evaluated. Detailed and careful hydraulic (force-balance) analyses and computations were completed as part of engineered log deflector designs. These were unique and custom designed structures, building on past project efforts and in consultation with other design professionals.

This project demonstrates Mr. Kamman's ability to work closely with the project stakeholders to develop a preferred restoration alternative in a focused, cost-effective and expedited fashion. This was achieved through close coordination with the NPS and the effective and timely use of design charrette-type meetings to reach consensus with participating stakeholders. Conceptual through full PS&E were completed on-time and on-budget in 2007 and was project constructed in the fall of 2007. Mr. Kamman worked closely with NPS staff to "field fit" the project, by modifying grading plans to protect existing riparian habitat. Mr. Kamman also provided construction management and oversight to floodplain grading and installation of engineered log structures. Based on field observations, the project is performing and functioning as desired.

Pilarcitos Creek Bank Stabilization Project, San Mateo County, CA
TRC Essex, 2006-2007

Mr. Kamman directed field surveys and technical modeling analyses to develop restoration design alternatives for a Bank Stabilization Project on Pilarcitos Creek

SELECTED EXPERIENCE *(CONTINUED)*

in unincorporated San Mateo County, California. This work included hydrology and hydraulic design and preparation of plan sheets and technical specifications as well as a revegetation plan. Due to the importance of protecting an existing gas mainline, the design package will be completed in close coordination with TRC Essex geotechnical staff and revegetation subcontractor and PG&E civil staff. Design feasibility analyses focused on developing hydraulic design criteria for the project, including: estimates of design flood flow magnitudes (2-, 5-, 10-, 25-, 50- and 100-year floods); water surface elevation estimates for a suite of design floods; associated average channel velocities and shear stresses; and estimates for riprap sizing for channel bank toe protection. Plan sheets, technical specifications and cost estimates were provided for review and approval.

Watershed Assessments

Evaluation of Project Impacts on Oregon Spotted Frog, Klamath County, OR
Oregon Water Watch and Earthjustice, 2016-2019

Mr. Kamman designed a suite of hydrologic, hydraulic and geomorphic studies to evaluate proposed change operations of the Crane Prairie, Wickiup and Crescent Lake dams and reservoirs as related to harm to Oregon spotted frogs. Work began with analyzing impacts associated with proposed water delivery operations and developing a proposed alternative prioritizing protection and enhancement of frog habitat. This work followed with a technical review and critique of the USFWS's Biological Assessment. Work included preparation of four declarations for the clients.

Tennessee Hollow Creek Riparian Corridor Restoration, San Francisco County, CA
Presidio Trust, 2001-present

Mr. Kamman has been leading and assisting the Trust and Golden Gate National Recreation Area (GGNRA) in the planning and design on over a dozen multi-objective riparian corridor restoration and watershed management projects in the Tennessee Hollow/Crissy Marsh watershed since 2001. Specific project objectives include: daylighting creeks; riparian corridor restoration; expanding Crissy Marsh; enhancing recreation, education, archeological, and cultural resource opportunities; improving water quality discharges to San Francisco Bay; and remediation of numerous landfills within the watershed. Typical initial phases of work focus on characterizing surface and groundwater conditions within each project area and identifying opportunities and constraints to restoration of natural wetlands and creek/riparian corridors. Notable challenges of this work include restoring heavily disturbed natural resources in an urban setting while integrating designs with recreation, archeology/cultural resources, education and remediation programs. Mr. Kamman has acted as lead hydrologist and designer on eight separate reaches in the 271-acre Tennessee Hollow Creek watershed and several other projects within and in the vicinity of Mountain Lake.

All task authorizations under these on-call and individual design contracts and included hydrology and water quality assessments and conceptual restoration planning and design. The project areas overlapped both the Presidio Trust and NPS-GGNRA management areas. Preliminary construction cost estimates for project alternatives within the Tennessee Hollow watershed range from $10- to $20- million. Several restoration projects are also tied to providing mitigation for the current San Francisco Airport expansion and Doyle Drive Seismic Improvement projects. Several projects have been constructed since 2012 (Thompson's Reach, El Polin Loop), two projects (East Arm Mtn. Lake and YMCA Reach) were constructed in 2014, and MacArthur Meadow restoration in 2016.

This work illustrates the Mr. Kamman's ability to complete a broad variety of hydrologic analyses, including: multiple years of rigorous and thorough surface water and groundwater hydrologic and water quality monitoring throughout the entire watershed to characterize and quantify existing hydrologic conditions; development of a detailed watershed-scale water budget for existing and proposed land-used conditions (capturing existing and proposed vegetation cover types and land use activities) to calculate groundwater recharge estimates input into the numerical watershed model; preparation of EA sections on water resources and water quality (NEPA compliance) regarding Environmental Conditions, proposed Impacts, and Proposed Mitigations associated with the project; preparing detailed alternative plans; and coordination and preparation of engineered plans/specifications for construction. All work was completed on budget and in a timely fashion.

Mountain Lake Water Budget, San Francisco County, CA
Presidio Trust, 2012-2017

Mr. Kamman was retained to develop a water balance model for Mountain Lake in the Presidio of San Francisco. Through development of a water balance model, the Trust seeks to understand: the major source(s) of inflow to both Mountain Lake; anticipated seasonal (monthly) changes in water level relative to various outflow assumptions; and the relationship of surface and groundwater interaction. This information gained from this study will be used to: 1) better understand and manage lake levels for ecological habitats; 2) identify flood storage capacity of Mountain Lake and fluctuations in lake level under various storm conditions; 3) better understand and maintain wetland habitat in the east arm; and 4) complete mass balance calculations to assess water quality in and feeding into the lake.

To implement this study, Mr. Kamman developed a water budget model to identify and quantify the primary water inputs and outputs to the lake and determine major controls over water storage. Primary water budget variables analyzed includes: precipitation; evaporation/evapotranspiration; groundwater exchange; and surface runoff. This study also included a long-term field investigation completed between 2012 and 2016 to: identify all point source inputs such as culverts and drainage outlets; identify diffused surface runoff inputs from surrounding lands, including a golf course; better characterizing the function and performance of the primary lake outfall structure; monitor groundwater levels surrounding the lake; and continuously monitor lake water level and storage over a mult9i-year period. These data were used to quantify water budget variables used to build the water budget model. Precipitation and barometric pressure data used in the model was provided by the Trust maintained weather station. Model daily evaporation estimates came from a variety of local area gauges maintained by state agencies.

The water budget model developed for this study is successful in accurately simulating historic water level conditions. The model using a daily time-step appears more accurate than model using a weekly time-step, but both provide reasonable agreement with observed conditions. The model is highly sensitive to groundwater exchange with the lake. The water budget is also a proven useful tool for the design and analysis of improvements to the lake outfall structure and establishing flood storage needs to protect the adjacent highway.

SELECTED EXPERIENCE *(CONTINUED)*

Cordilleras Creek Hydrologic Assessment, San Mateo County, CA
City of Redwood City, 2002-2003

Mr. Kamman assisted the Cordilleras Creek Watershed Coordinator in planning, seeking funding, and implementing a hydrologic and biologic assessment of the Cordilleras Creek watershed. Work completed included completing a full creek reconnaissance and channel stability assessment, preparation of a watershed assessment work plan, presentations at public meetings, and study/review of flooding issues in the watershed. Challenges faced in this predominantly privately owned watershed include removal of numerous fish passage barriers and educating/coordinating property owners.

Capay Valley Hydrologic and Geomorphic Watershed Assessment, Yolo County, CA
Yolo County RCD, 2008-2010

Mr. Kamman designed and supervised a hydrologic, geomorphic watershed assessment, and conceptual restoration design for the Capay Valley segment of Lower Cache Creek . Funding for the project was from a CALFED Watershed Program grant. The Capay Valley reach of Cache Creek experiences considerable stream bank erosion, which contributes to downstream sedimentation. The channel instability also threatens adjacent homes and can negatively impact the riparian habitat along the creek that functions as an important wildlife corridor from the Western Coastal Range to the Yolo Bypass. Additionally, a significant proportion of methylmercury transported into the Bay-Delta originates from the Cache Creek watershed. The main goal of this proposed study is to address both the causes and the aforementioned consequences of bank erosion.

The assessment was designed to evaluate and quantify changes in hydrologic and geomorphic conditions in response to historical changes in land-use and water development (e.g., diversions, reservoir construction, groundwater pumping, etc.). This assessment also evaluated how historic human induced changes in hydrologic and geomorphic conditions affect riparian ecology in terms of the lost or altered floodplain area, character, and inundation frequency. A key product of this assessment was to distinguish between “natural” and “accelerated” bank erosion, and to identify the underlying causes (both natural and anthropogenic) so that appropriate solutions can be developed. Desired outcomes of the study included: reduce bank erosion by developing restoration designs for typical trouble sites; produce a ranking system to prioritize sites for stabilization and restoration; contribute to community education through watershed science education and the Yolo STREAM Project outreach program; improve water quality through reduction in accelerated erosion; and contribute to riparian corridor restoration and support the RCD’s Wildlife Conservation Board funded efforts to remove non-native tamarisk and around from the creek corridor. Work was completed through a broad spectrum of field and analytical investigations that received close review by the RCD, stakeholders, and a Technical Advisory Committee.

Ventura River Unimpaired Flow and Habitat Assessment, Ventura County, CA
City of Buenaventura and Nautilus Environmental, 2006-2007

Mr. Kamman completed a hydrology feasibility assessments as part of evaluating the reuse of Ojai Valley Sanitary District (OVSD) effluent for other beneficial uses. Currently, OVSD discharges treatment plant effluent to the lower Ventura River. The City and OVSD recognize that the reduction in the discharge of treated effluent to the Ventura River could have an environmental effect on sensitive and endangered species. In light of these concerns, this study was conducted to determine if a reuse project is feasible without significant environmental harm.

The assessment included hydrologic and geomorphic field and analytical assessments of past (unimpaired), current and proposed surface and groundwater flow conditions over a wide range of dry- through wet water year-types. The main objective if these analyses was to determine the linkage to water quality and aquatic habitat conditions including: flow durations; extent of gaining vs. losing reaches; low flow inundation/wetted area; and influence on barrier beach dynamics. Mr. Kamman collaborated with a team of other professionals to prepare a facility plan documenting the analyses and conclusions of respective water recycling investigations.

Hydrologic Analysis of FERC Minimum Flows on Conway Ranch Water Rights, Mono County, CA
Law Office of Donald Mooney, 2001-2002

Mr. Kamman completed a hydrologic analysis to evaluate if FERC’s proposed Minimum Flow Plan for Mill Creek would interfere with the exercise of the Conway Ranch’s water rights from Mill Creek. The approach to this analysis was to quantify the duration of time the Conway Water right was met under historic gaged and simulated proposed Minimum Flow Plan conditions. The primary objective of the analysis was to evaluate impacts during the winter period when flows are typically limited due to water storage as snow pack. Minimum Flow Plan conditions were simulated by developing a spreadsheet model that redistributes actual (historic) Lundy Lake releases in a fashion that maintains a minimum flow of 4 cfs to Mill Creek to accommodate the downstream Southern California Edison’s (SCE) power plant. The analysis period for both historic and simulated Minimum Flow Plan conditions consisted of water years (WY) 1990 through 1998 to capture an exceptionally diverse range of wet and dry year-types.

The primary method used to quantify changes in flow between historical and simulated Minimum Flow Plan conditions was to prepare and compare flow duration curves for each condition during both the winter and summer periods during a variety of water year types. Model results were tabulated for each conditions to determine the differences in the percentage of time target flows were equaled or exceeded. Based on these findings, Greg was contracted to complete more in-depth monthly modeling.

Groundwater Management Projects

Assessments of Groundwater-Surface Water Interaction, Stanislaus County, CA
The Law Offices of Thomas N. Lippe, APC and California Sportfishing Protection Alliance, 2015-present

Since 2015, Mr. Kamman has been assessing groundwater conditions within Stanislaus County and evaluating potential impacts of groundwater pumping on surface water flow and aquatic habitat of the Stanislaus, Tuolumne and San Joaquin Rivers. Mr. Kamman completed a comprehensive review and synthesis report of available groundwater and interconnected surface water (ISW) reports and data. Using available soils, geology and hydrology information, Mr. Kamman also delineated and mapped subterranean streams and Potential Stream Depletion Areas (PSDAs) to identify stream corridors susceptible to adverse impacts from groundwater pumping. This information is intended to help Groundwater Sustainability Agencies identify potential impacts to ISW.

SELECTED EXPERIENCE *(CONTINUED)*

Most recently, Mr. Kamman has been retained to review and comment on 7 Groundwater Sustainability Plans (GSPs) for critically overdraft groundwater subbasins within or adjacent to Stanislaus County. This review focused on how GSPs address Groundwater Dependent Ecosystems (GDE) and ISW. Comments included recommendations on monitoring and study plans to identify and quantify impacts of groundwater pumping on stream flow rates and associated ecological habitats.

Assessment of Surface Water-Groundwater Interaction, Humboldt County, CA
Friends of the Eel River (FOER), 2020-present

Mr. Kamman is currently providing technical assistance in understanding surface water-groundwater interactions in the Lower Eel River Valley. Work includes reviewing and synthesizing available reports and hydrologic data and providing a science-based opinion on the role groundwater plays in supporting stream flow and aquatic habitats. This analysis addresses conditions and changes associated with seasonal and long-term wet-dry cycles. Data gaps will be identified and documented during the analysis.

This work is being completed to support FOER efforts at protecting aquatic resources within the framework of current water management practices and the public trust doctrine under California law. Additionally, this work includes providing hydrologic and hydrogeologic review, comment and recommendations during development of the basin's Groundwater Sustainability Plan (GSP) under the California Sustainable Groundwater Management Act (SGMA).

Scott Valley Subbasin Technical Hydrogeologist Assistance, Siskiyou County, CA
Klamath Tribal Water Quality Consortium and Quartz Valley Indian Reservation, 2019-present

Mr. Kamman is providing technical review and comment on the groundwater models and associated studies in the Scott Valley groundwater subbasin under the Sustainable Groundwater Management Act (SGMA) process. Work includes: review of groundwater models; synthesis and review of available groundwater quality data; assisting to identify constituents of concern; and review of the planning and technical studies being used to develop a basin Groundwater Sustainability Plan (GSP).

Middle Russian River Valley Shallow Groundwater Storage Enhancement Study, Sonoma County, CA
Friends of the Eel River, 2016

Working on behalf of Friends of the Eel River, Mr. Kamman completed a study to identify and quantify the volume of recoverable aquifer storage along two independent 6-mile reaches within the alluvial fill valley of the Russian River. The approach to this study was to quantify how channel incision has reduced shallow groundwater levels and quantify how much aquifer storage can be increased if channel bed elevations are restored to historic levels. The goal of this investigation was to identify feasible approaches to increase groundwater storage that would off-set losses associated with the termination of out-of-basin diversions from the Eel River. This work was completed through: intensive review and mapping of available groundwater level data; quantification of aquifer hydraulic properties; and calculating the shallow aquifer storage volume. In total, reclaiming the shallow aquifers within these two areas yield a total added storage volume of over 20,000 AF.

Green Gulch Farm (GGF)/Zen Center Water Resources Investigation, Marin County, CA
Green Gulch Farm, 1998-2019

Mr. Kamman completed a multi-phase study to evaluate the short- and long-term water uses and resources at GGF. Work was initiated by developing comprehensive water usage/consumption estimates and assessing available water resources, including spring, surface water, and ground water sources. Water demand estimates included quantifying potable and agricultural water usage/demands. Once reliable water supplies were identified and water usage/demand figures calculated, Mr. Kamman provided recommendation for improvements to water storage and distribution systems, land-use practices, conservation measures, treatment methods, waste disposal, and stream and habitat restoration. The initial phase of work included: in-depth review of available reports and data; review of geology maps and aerial photography; review of water rights and historic land use records; field reconnaissance including year-round spring flow monitoring; mapping and quantifying existing runoff storage ponds; and surface water peak- and base-flow estimates.

The second phase of work included identification of possible groundwater sources and siting and installation of production wells. This included sighting three drilling locations, obtaining County and State well drilling permits for a domestic water supply; coordination and oversight of driller; and directing final well construction. Upon completion of a well, Mr. Kamman directed a well pumping yield test and the collection and analysis of water quality samples (including Title 22) for small water supply system use. The final phase of work included assisting GGF with water treatment system options at the well head and integration of the groundwater supply into an existing ultra-violet light treatment system servicing spring water sources. Work was completed in 2000 with a budget of approximately $25,000, including all driller and laboratory subcontracting fees.

Stanford Groundwater Assessments, Santa Clara County, CA
Stanford University Real Estate Division, 2012-2016

Mr. Kamman provided technical hydrogeologic services to evaluate groundwater conditions and drainage requirements associated with the construction of several new facilities on or near Page Mill Road. The main objective of this study is to determine the seasonal depth to groundwater beneath the project site under existing and potential future conditions and provide an opinion on if the project is required to comply with the City of Palo Alto, Public Works Engineering Basement Exterior Drainage Policy (effective October 1, 2006). This work included obtaining and reviewing available technical reports, maps and literature pertaining to groundwater conditions in the project vicinity. Based on this review, we have prepared a letter report of findings and recommendations.

Bodega Bay Wetland Water Supply, Sonoma County, CA
Friends of Bodega Bay, 2007

Mr. Kamman Conducted an evaluation of the groundwater underflow feeding a large coastal wetland in Bodega Bay and recommended mitigation measures for potential losses in supply associated with proposed residential development in recharge areas. Work included: long-term monitoring of ground water quality and supply; monitoring surface water and spring flow and water quality; assessing and characterizing the interaction between surface and subsurface water sources during different seasons and water year-types; developing a detailed water budget for the site to assess impacts to recharge areas; and developing a number of physical solutions to mitigate for recharge losses.

SELECTED EXPERIENCE *(CONTINUED)*

L.A. Department of Water and Power, Groundwater Recharge Facility Operation Study, Los Angeles County, CA
ICF Consulting, 2006

Working as a subcontractor to ICF Consulting of Laguna Niguel, California, Mr. Kamman provided technical assistance in the hydraulic modeling of sediment accumulation in selected spreading ground facilities owned and operated by the Los Angeles Department of Public Works. The object of this work is to evaluate changes in infiltration and groundwater recharge rates over time within the spreading grounds in association with sediment accumulation from turbid waters.

Corde Valle Golf Club Surface-Groundwater Interaction Study, Santa Clara County, CA
LSA Associates, 2004

On behalf of LSA Associates of Pt. Richmond, CA, Mr. Kamman completed a 3rd party independent review of available reports and data sets (boring logs, well water levels, groundwater quality, aquifer pump-test, and surface water monitoring) to evaluate if pumping of the Corde Valle irrigation well is adversely impacting flow in West Llagas Creek. This investigation was implemented in response to a concern expressed by California Department of Fish and Game staff regarding the potential for differential drying of the West Branch of Llagas Creek along Highland Avenue. The analysis was also complicated by the likely effects of pumping from surrounding off-site wells.

Aquifer Testing for Tennessee Hollow Watershed Project, San Francisco County, CA
Presidio Trust, 2002

The Mr. Kamman assisted in the design and implementation of an aquifer test at the Presidio of San Francisco. We prepared an aquifer test work plan and conducted step-drawdown and constant-rate aquifer tests at the site using both manual and electronic data collection methods. This work included interpretation of the aquifer test results using software-based solution methods and prepared a written summary of methods and findings. In addition, Mr. Kamman located, coordinated and managed a drilling effort for the logging and installation of several groundwater monitoring wells in the project area to address identified data gaps.

San Joaquin River Riparian Corridor Restoration Project, San Joaquin Valley, CA
McBain-Trush, 2002

Mr. Kamman completed an assessment of historic and existing shallow groundwater conditions beneath and adjacent to the San Joaquin River between Friant Dam and the Merced River. This work focused on reviewing available reports and flow/groundwater- level data to characterize surface water and groundwater interaction and implications for riparian vegetation, water quality and fishery habitat restoration. Hydrologic analyses were performed to identify the location and seasonal evolution of losing and gaining reaches an implication on future restoration planning and design efforts. The main deliverable for this analysis was a report section focused on describing the historical changes in regional and local groundwater conditions in the San Joaquin Valley and evolution of anthropogenic activities (e.g., groundwater withdrawals, irrigation drainage systems and return flows, development of diversion structures, changes in land-use; and introduction of CVP/State Water Project deliveries) and associated impacts on deep/shallow groundwater levels, surface water flows, and surface and groundwater quality.

Tidal, Estuarine & Coastal Projects

Quartermaster Reach Wetland Restoration Project, San Francisco County, CA
Presidio Trust, 2006-present

Mr. Kamman was retained in 2006 as part of a multi-disciplinary team to develop restoration alternative designs for a 10-acre filled and paved site marking the historic confluence of Tennessee Hollow Creek and Crissy Marsh adjacent to San Francisco Bay. The Trust's planning documents define the main objectives for Tennessee Hollow restoration as: a) "Restoration [of Tennessee Hollow] will expand riparian habitat and allow for an integrated system of freshwater streams and freshwater, brackish, and tidal marsh, re-establishing a connection to Crissy Marsh" and b) "Restore and protect Tennessee Hollow as a vibrant ecological corridor". The project is located within the setting of a National Park and a National Historic Landmark District. Thus, another goal for the project is to protect the area's historic buildings and sensitive cultural and archeological resources to the extent possible, to enhance visitor experience to the area, and to integrate creek restoration with other urban land uses.

Mr. Kamman provided H&H technical input and consultation to the design team to develop a restoration project consisting of a creek-brackish marsh-salt marsh interface and associated upland habitats. His work included evaluating surface water, groundwater and tidal sources. In addition, the development of a hydrodynamic model has informed and guided a preferred project design, including evaluation of storm surge, road crossing and Tsunami impacts to the project. A technical challenge addressed with the use of the model included predicting and quantifying salt/brackish marsh habitat zones within the restored wetland in response to periodically but prolonged closed-inlet conditions to Crissy Marsh - a water body that serves as the downstream connection to the proposed project.

Another unique challenge to this project includes integrating restoration planning and design efforts with the replacement and retrofit of Doyle Drive, the main on/off-ramp for the Golden Gate Bridge, being replaced along the entire northern boundary of the Presidio. Mr. Kamman is providing long-term technical review of this project to the Trust with respect to impacts to water resources and associated existing ecological habitats. The Quartermaster project also falls within the managerial jurisdiction of both the Presidio Trust and NPS-GGNRA, requiring work in close cooperation with both Presidio Trust and National Park Service (NPS) staff.

Salt River Ecosystem Restoration Project, Humboldt County, CA
Humboldt County RCD, 2005-2019

Mr. Kamman provided hydrology, engineering and environmental compliance services towards the planning and design of river and tidal wetland restoration on the Salt River (Eel River Delta plain) near Ferndale, California, in Humboldt County. The purpose of the Salt River Ecosystem Restoration Project (SRERP) is to restore historic processes and functions to the Salt River watershed. These processes and functions are necessary for re-establishing a functioning riverine, riparian, wetland and estuarine ecosystem as part of a land use, flood alleviation, and watershed management program. The Salt River Project has three components: 1) dredging the lower Salt River and lower Francis Creek from near the Wastewater Treatment Plant downstream for 2.5 miles; 2) restoring 247 acres of wetland estuary habitat in the lower Salt River within the 440-acre former

SELECTED EXPERIENCE *(CONTINUED)*

dairy; and 3) reducing sediment inputs from tributary watersheds. The Salt River Project was designed using an "ecosystem approach" to address hydrology, sedimentation, and fish and wildlife habitat.

As part of project feasibility assessment, Mr. Kamman completed a hydrologic and water quality monitoring program, and developed a MIKE11 hydrodynamic model of the lower Salt River and Eel River estuary in Humboldt County, for the Humboldt County RCD. The purpose of this work was to complete a hydrologic, geomorphic, and hydraulic modeling assessments of the character and dominant physical processes controlling flow of water and sediment through the lower Salt River. Land use changes in the area have caused significant aggradation and infilling of the Salt River, significantly reducing tidal exchange, fish passage, and exacerbating flooding in upland areas. A primary goal of this study is to evaluate the feasibility of proposed restoration elements intended to increase tidal prism and exchange and in-channel sediment scour and transport. The desired outcome is a sustained increase in river conveyance capacity to improve drainage of surrounding flood-prone lands and improve aquatic, wetland, and riparian habitat.

As part of project development and feasibility assessment, Mr. Kamman completed a hydrologic and water quality monitoring program and MIKE11 hydrodynamic model development of the lower Salt River and Eel River estuary in Humboldt County for the Humboldt County RCD. The purpose of this work is to complete a hydrologic, geomorphic, and hydraulic modeling assessments of the character and dominant physical processes controlling flow of water and sediment through the lower Salt River. Land use changes in the area have caused significant aggradation and infilling of the Salt River, significantly reducing tidal exchange, fish passage, and exacerbating flooding in upland areas. A primary goal of this study is to evaluate the feasibility of proposed restoration elements intended to increase tidal prism and exchange and in-channel sediment scour and transport. The desired outcome is a sustained increase in river conveyance capacity to improve drainage of surrounding flood-prone lands and improve aquatic, wetland and riparian habitat.

Western Stege Marsh Restoration Project, Contra Costa County, CA
Tetra Tech, 2008-2010

Mr. Kamman provided technical hydrology and wetland hydraulics support to post-project monitoring of the Western Stege Marsh Restoration Project. His involvement began by providing an independent technical review of previous year's hydrologic monitoring results to evaluate the proposed monitoring success criteria and the rationale used to develop these criteria. This work entailed reviewing historic monitoring data and available natural slough channel geometry data-sets for San Francisco Bay area marshes. Mr. Kamman's study approach was to independently develop desired and sustainable channel geometry relationships for natural, healthy San Francisco Bay salt-marshes and compare them to the published success criteria. Greg was also retained to implement the Year 4 post-project hydrologic monitoring, with modifications to aid in better linking hydrologic processes to ecological conditions and function within the restored marsh. This work consisted of completing more targeted water level monitoring and channel geometry surveys in reference marsh areas containing desired physical and ecological attributes. These data were used to develop geomorphic success criteria (target channel geometry) more tailored to the project marsh and augment the criteria provided in available literature. Working closely with the project team of scientists, Mr. Kamman compared these hydrologic monitoring results to available vegetation surveys to better assess the overall success and evolutionary trend of the marsh.

Giacomini Wetland Restoration Project, Marin County, CA
The National Park Service and Point Reyes National Seashore Association, 2003-2012

Mr. Kamman managed a multi-year project for the NPS in the design and feasibility analysis of a tidal wetland, riparian, and freshwater marsh complex, on the 500-acre Giacomini Dairy Ranch, at the south end of Tomales Bay. The project began in 2003 and included hydraulic, hydrologic, and geomorphic assessments to characterize existing physical conditions, developing restoration alternatives, and completing hydrologic feasibility analyses. Restoration alternatives evaluated creation of a mosaic of subtidal through upland wetland and riparian habitat zones, as well as improvements to salmonid passage, red-legged frog habitat, tidewater goby habitat, and clapper-rail habitat. Emphasis was placed on completing detailed studies to quantify project-induced changes in flood frequency, magnitude and duration, impacts on water quality to local groundwater supply wells, and changes in sediment and water quality conditions in Tomales Bay.

Beginning in 2006, Mr. Kamman managed and assisted design engineers, preparing plans, specification, and cost estimates for a three phased construction schedule, that was completed in the summer of 2008. This project illustrates Mr. Kamman's ability to complete a broad variety of hydrologic feasibility analyses, including flood frequency analyses for contributing watersheds, reproducing historic flood events through numerical modeling, flow duration analysis and evaluation of environmental flow regimes, development of a water budget for created freshwater marsh and frog breeding ponds, sediment yield estimates, completing field monitoring (flow, water level, groundwater level, sediment, and water quality monitoring) to characterize existing site hydrologic and geomorphic conditions (fluvial and tidal), wind-wave setup and run-up for levee stability determination and construction design, coordinating and performing topographic and hydrographic surveys, performing hydrodynamic and water quality modeling of existing and alternative conditions, developing detailed construction cost estimates preparation of technical reports and design drawings and specifications in support of NEPA/CEQA environmental compliance, and public meeting presentation and participation. In addition, Mr. Kamman managed staff in the generation of DEM and TIN models of the existing site and all action alternatives. All work was completed on budget and in a timely fashion, despite repeated expansions to the project boundary and last minute changes driven by endangered species issues.

Critical Dune Habitat Restoration to Protect Threatened and Endangered Species, Marin County, CA
The National Park Service, 2009-2010

Mr. Kamman provided and managed engineering, design, and implementation planning support for the restoration of 300 acres of critical dune habitat at Abbots Lagoon within the NPS Point Reyes National Seashore. He developed engineered drawings, technical specifications and engineer's cost estimates, and assisted NPS in defining a range of methodologies suitable to local conditions and sensitive flora and fauna. This area of the park supports the best remaining intact dune habitat, including some of the largest remaining expanses of two rare native plant communities: American dune grass (Leymus mollis) foredunes, and beach pea (Lathyrus littoralis). European beach grass and iceplant were removed from

SELECTED EXPERIENCE *(CONTINUED)*

the project site using mechanical removal and hand removal techniques. The project goal was to remove these invasive species from approximately 135 acres of prime dune habitat in the 300-acre project site, while not impacting sensitive species and habitats. The intended result was to remobilize this historic dune field and restore their natural form and migratory processes.

This project illustrates Mr. Kamman's ability to work closely with NPS staff to balance habitat protection and restoration across the landscape. As part of project design, he developed grading plans, and specified work flow, equipment movement and access routes which minimize impacts to special status species. Extensive fencing and exclusions zone planning was required to protect existing native habitats, and minimize tracking of plant stock to or through restored sties. In addition work elements had to be structured and prioritized to maximize ground work subject to budgetary constraints and work flow uncertainties. All work has been completed on budget and in a timely fashion, even with repeated expansions to the project boundary and affected area and last minute changes driven by endangered species issues.

Lower Gualala River and Estuary Assessment and Management Plan, Mendocino County, CA

California State Coastal Conservancy and Gualala River Watershed Council, and Sotoyome RCD, 2002-2005

Mr. Kamman worked with fisheries biologists to evaluate the hydrologic and water quality conditions in the lower Gualala River and estuary and identify and evaluate potential impacts to summer rearing habitat for salmonids and other aquatic organisms. This work included: assessing how the impacts of upstream land use (logging and water diversions) have altered water delivery and water quality to the Lower River and estuary over time; characterizing the physical coastal and riverine processes controlling opening and closure of the estuary inlet and lagoon morphology; monitoring and characterizing real-time and seasonal changes in lagoon water level and water quality; and evaluating the sediment transport capacity and geomorphic condition of the lower river and estuary. Mr. Kamman took the lead in developing and editing a management plan for the lagoon, prescribing actions to preserve, protect and enhance ecological habitats (with emphasis on salmonids) within the lagoon and lower Gualala River.

This project was completed on-time and on-budget and demonstrates Mr. Kamman's ability to integrate physical, water quality and biological data and information into a coherent and understandable description of the interrelated processes controlling the aquatic ecology of a lagoon system. A big challenge on this project was completing a high-quality and defensible field monitoring program on a "shoe-string" budget. The outcome of this study provides important understanding on how and why steelhead are surviving in a heavily logged (95% private ownership) watershed. The management plan prescribes recommendations to preserve and protect the lagoon as primary rearing habitat for steelhead.

Suisun Bay Tidal Wetland Restoration Design, Contra Costa County, CA

East Bay Regional Park District and LSA Associates, 1999-2005

Mr. Kamman provided hydrologic design services to the restoration of a 55-acre tidal wetland on Suisun Bay. The design will maximize habitat for special status fish species, and (to the extent possible) habitat for other special status animal and plant species. Working with a multi-disciplinary design team, Mr. Kamman assisted in developing a design based on analysis of habitat needs, tidal hydrodynamic and geomorphic processes, sedimentation rates and soil characteristics. Project tasks included: a site analysis defining existing ecological and hydrologic conditions; a hydrologic and biological restoration opportunities and constraints analysis to define restoration and management objectives; and hydrodynamic and sedimentation modeling to evaluate design alternatives. The final restoration and management plan included a grading plan, landscape revegetation plan and monitoring and maintenance plans. This work again illustrates his capabilities in the characterization of physical site conditions, development and feasibility analysis of project alternatives, and preparation of preliminary designs of sufficient detail to allow for environmental compliance through the CEQA/NEPA process.

Santa Clara River Estuary and Lower River Assessment, Ventura County, CA

Nautilus Environmental on behalf of the City of Ventura, Public Works Department, 2003-2004

Mr. Kamman directed a hydrologic and geomorphic assessment of the lower Santa Clara River and estuary. This work was completed for prime contractor in an effort to assist with re-permitting of treated effluent discharges to the estuary. The proposed study entailed characterizing existing and historic hydrologic and physiographic conditions and an assessment of historic changes in inflow to the estuary. This task included a comprehensive review and evaluation of available hydrologic reports and flow data within the watershed to characterize changes in flow associated with development of numerous water projects within the Santa Clara River basin. The main deliverable from this analysis was the development of a historic unimpaired flow record to the estuary based on regional regression analyses and water operations modeling. Within the estuary, Mr. Kamman designed and conducted a multi-year monitoring program of water levels, water quality (temperature, dissolved oxygen, salinity, and pH), and sand-spit morphology in order to evaluate inlet opening/closure frequency and associated changes in aquatic habitat (esp. tidewater goby) and other ecologic communities. A considerable portion of this subtask included detailed coastal process analysis (including wave power analyses and littoral sand transport), which, considered with the inflow analysis, provides a basis to evaluate the seasonal cycle of barrier beach buildup and destruction.

This project illustrates Mr. Kamman's ability to complete a broad variety of hydrologic and coastal process analyses under strict regulatory oversight. A premier study completed on this project was the development of a detailed water and salinity budget model for the estuary to evaluate the impacts of a wide variety of proposed and modified estuary inflow regimes to determine potential future water level and salinity conditions in the lagoon and impact on frequency of inlet breaching. In addition to coordinating and implementing a variety field monitoring and surveys, Mr. Kamman also provided real-time information and input to informational and negotiation meetings with state resource and regulatory agencies.

Eden Landing Ecological Reserve Restoration, Alameda County, CA

East Bay Regional Park District, 2000-2003

Mr. Kamman developed and completed hydraulic and hydrodynamic modeling assessments for the design of an approximately 1000-acre tidal marsh restoration in former Cargil salt manufacturing ponds, located a mile inland of San Francisco Bay. The restoration goals required balancing the desires to restore tidal marsh conditions to the site, while maintaining and enhancing the open water and salt

SELECTED EXPERIENCE *(CONTINUED)*

panne habitats preferred by resident and migratory shorebirds. The restoration plan also needed to incorporate restoration objectives with remediation of high soil salinities resulting from past salt production, subsided ground elevations, dredging of new channels to the bay, existing infrastructure constraints, public access for the San Francisco Bay Trail, and preservation of several important cultural and historical sites. Hydraulic design objectives include maximizing both interior circulation and tidal exchange between the restoration parcel and the bay. A series of one-dimensional unsteady hydrodynamic models (MIKE11) were used to design the channel network, identify high velocity areas requiring erosion protection, and characterize expected habitat conditions. An important component of this design and feasibility assessment was to translate desired ecological habitat conditions identified in the EIR into specific hydrologic design criteria, considering channel velocities, scour, sediment transport, tidal water inundation frequencies and seasonality of ponding. Mr. Kamman worked closely with EBRPD civil engineers, assisting with the translation of hydraulic design criteria into final engineered drawings and specifications.

Wetland & Pond Projects

Design of California Red-Legged Frog Breeding Ponds, San Francisco Bay Area (various), CA
The National Park Service and Golden Gate National Parks Conservancy, 1997-present

Mr. Kamman has lead or provided hydrologic and engineering design assistance to the sighting and design of nearly two dozen breeding ponds for California red-legged frog throughout the San Francisco Bay Area. Work has been completed in Marin, Sonoma, Solano, Contra Costa, Alameda, and Santa Clara Counties under the auspices of numerous federal, state, and local county/city agencies. A common study approach consists of an initial site reconnaissance of watershed conditions and identification of potential sites. The reconnaissance is followed by a surface water hydrologic sufficiency analysis using available meteorologic and stream flow information. An important variable sought during pond sighting is the presence of migration corridors between known breeding areas and/or perennial water sources. Based on in-depth research and post-project monitoring, Mr. Kamman has refined or developed site-specific evapotranspiration estimates, which commonly do not match standard applied values. Accurate evapotranspiration rates are necessary if ponds are intended to periodically dry-down as a means to preclude undesired species such as bullfrog or mosquito fish. In many instances, a seasonal groundwater-monitoring program is implemented in order to better investigate and quantify potential and seasonal groundwater contributions. Other design challenges we commonly experience include: design of impermeable liners for ponds located in upland areas or highly permeable soils; hydraulic analyses and design of outfalls/spillways; sedimentation management/ maintenance approaches; and requirements of inoculum and water used to line and fill the pond, respectively.

Hydrologic Feasibility Assessment for Mana Plain Wetland Restoration Project, Kauai, HI
State of Hawaii Department of Land and Natural Resources, 2010-2019

Working on behalf of the Mana Plain Wetland Restoration Partnership, Mr. Kamman completed a hydrologic feasibility assessment for the Mana Plain Wetland Restoration Project proposed by the State of Hawaii Department of Land and Natural Resources (DLNR), Division of Forestry and Wildlife (DOFAW) on the island of Kauai. The Mana Plain Wetland Restoration Project site is approximately 105 acres of low-lying abandoned sugarcane fields immediately north of the Kawaiele Waterbird Sanctuary and east of the Pacific Missile Range Facility. The purpose of the Mana Plain Wetland Restoration Project is to maximize the area of constructed wetlands within the restoration site. Palustrine emergent wetlands within the project will create habitat for four species of endangered Hawaiian waterbirds and other sensitive species, including: Hawaiian stilts; Hawaiian ducks; Hawaiian coots; Hawaiian moorhen; migratory waterfowl; and migratory shorebirds. The Mana Plain is of vital importance for the recovery of endangered waterbirds species. This restoration project will be designed to provide important breeding and feeding wetland habitats on an island where; 1) wetlands have been severely degraded, and 2) mongoose, an introduced predator, have not been established.

Mr. Kamman's work on this project included technical assessments and development of proposed restoration alternatives. Analyses completed included: a synthesis of the physical site setting (topography, geology, hydrogeology and soil); reviewing available data to characterize site meteorology, surface water drainage, water quality, and groundwater conditions; preparing a detailed water budget to describe the characteristics and processes of surface water and groundwater movement into and through the project area; evaluating project feasibility, water supply alternatives and costs; and completing a flood hazard impact assessment to evaluate potential project benefits and impacts to local area flooding. Working with the project partners, Mr. Kamman developed a preferred project alternative and supported in preparation of the project Environmental Assessment document. Mr. Kamman's firm was also retained by the State of Hawaii to develop engineering designs of the project.

MacArthur Meadow Wetland Restoration, San Francisco County, CA
Presidio Trust, 2013-2016

Mr. Kamman has been working on over a dozen independent wetland and creek restoration planning and design efforts within the Presidio of San Francisco since 2001. Most recently (2016), he developed a wetland restoration grading plan for the MacArthur Meadow Wetland Restoration Project in the central portion of the Tennessee Hollow watershed. As part of the site assessment, Greg characterized and modeled surface and groundwater interactions and identified a unique opportunity to restore 4 acres of mixed meadow, natural wetlands and creek/riparian corridor. This was possible due to the discovery of shallow groundwater conditions beneath this historically disturbed landscape. Various design components were integrated into the grading plan in order to enhance groundwater recharge and storage in the Meadow, while retarding runoff and drainage out of the wetland, including: daylighting storm drain runoff into the Meadow; reconfiguring internal channel alignments to enhance channel habitat and groundwater recharge; creation of wetland depressions to retain and recharge surface water; and removal of fill material to decrease the depth to the water table. Notable challenges of this work include restoring heavily disturbed natural resources in an urban setting while integrating designs with archeology/ cultural resources, education and remediation programs.

Dragonfly Creek Restoration Project, San Francisco County, CA
Presidio Trust, 2007-2011

Mr. Kamman designed and managed hydrologic monitoring and analysis studies in support of planning and design for riparian and wetland habitat restoration along approximately 500-linear feet of the Dragonfly Creek corridor near Fort Scott of the Presidio of San Francisco. Work has included completing subsurface

SELECTED EXPERIENCE *(CONTINUED)*

investigations including the installation of shallow wells and a sharp-crested weir with recorder to gauge creek flows. Mr. Kamman assisted in the development and selection of a preferred project alternative, considering on-site cultural resource protection, education and resource management issues (including flood control). Mr. Kamman prepared permit applications. Major components of the project included removal of significant fill and building foundations and installation of a new creek road crossing that will maintain the historical alignment, function and architectural character of a culturally significant roadway. Mr. Kamman oversaw development of PS&E for this project, which will create mitigation wetlands for a highway earthquake retrofit project that passes through the Park.

This project illustrates Mr. Kamman's ability to complete a broad variety of hydrologic analyses, including: surface water and groundwater hydrologic monitoring to characterize and quantify existing hydrologic conditions; rainfall-runoff modeling; hydraulic modeling of flood and scour conditions (including road crossing); preservation of existing wetland habitat and vegetation communities; integration with other Presidio Trust programs; and contracting flexibility to assist in conceptual planning and environmental compliance without increasing project design costs.

Mori Point Sensitive Species Habitat Enhancement Project, San Mateo County, CA
Golden Gate National Recreation Area and Golden Gate National Parks Conservancy, 2005-2011

Mr. Kamman provided hydrologic analyses, sighting and engineering design (PS&E) for three California red-legged frog breading ponds within the 105-acre Mori Point area. These efforts were completed in association and collaboration with a larger Coastal Trail improvement and ecosystem restoration effort. Quarrying and off-road vehicle use have left this site heavily scarred. The focus of restoration work was to protect the endangered San Francisco garter snake and the threatened red-legged frog. Most of this work will be focused on invasive species removal and enhancing endangered species habitat. As part of species habitat improvement, Mr. Kamman worked with project ecologists to design the ponds to optimize breeding habitat for California red-legged frog.

Work started with an initial site reconnaissance and study of watershed conditions and identification of potential sites. The reconnaissance was followed by a surface water hydrologic sufficiency analysis using available meteorological and stream flow information and installation and monitoring of shallow piezometers to quantify the proximity and seasonal variability in depth to water table. An important variable sought during pond sighting was the presence of migration corridors between known breeding areas and/or perennial water sources. Based on in-depth research and post-project monitoring for other ponds they created in the San Francisco Bay area, Mr. Kamman refined site-specific evapotranspiration estimates. Accurate evapotranspiration rates are necessary if ponds are intended to periodically dry-down as a means to preclude undesired species such as bullfrog or mosquito fish.

Other design challenges experienced included: design of impermeable liners for ponds located in upland areas or highly permeable soils; hydraulic analysis and design of outfalls/spillways; sedimentation management/maintenance approaches; and requirements of inoculum and water used to line and fill the pond, respectively. Mr. Kamman has designed numerous ponds for the NPS and affiliates within the Bay Area, including Mori Point (constructed 2007), Banducci (constructed 2007) and Giacomini (Phase I and Phase II constructed in 2007 and 2008) project sites.

Hydrologic Assessment and Restoration Feasibility Study for Shadow Cliffs Regional Recreation Area, Alameda County, CA
East Bay Regional Park District, 2009-2010

Mr. Kamman developed and implemented an assessment to identify groundwater levels and supplemental water supplies that will sustain seasonal wetland restoration areas and riparian habitats under an altered future hydrologic regime. This work will inform a forthcoming Land Use Plan Amendment for park occupying a series of former gravel quarry pits. Work included: obtaining and synthesizing available surface water and groundwater data to characterize existing hydrologic and water supply conditions and seasonal variability; quantifying the likely changes in groundwater conditions and quarry pit lake levels in association with changes in regional water transmission and groundwater recharge operations; and identifying, developing and evaluating a suite of ecosystem restoration alternatives. Other important project objectives include: improving habitat for waterfowl and wildlife; broadening recreational use; enhancing visitor education and wildlife interpretation; improve park aesthetics. Mr. Kamman evaluated a preferred park and ecosystem enhancement alternative that involves diverting high winter flows from an adjacent arroyo. This project demonstrates Greg's ability to characterize hydrologic conditions and quantify the relationship between groundwater, surface water and wetland habitat conditions, both under existing conditions and in predicting future hydrologic and ecologic conditions under an altered hydrologic regime (i.e., lower groundwater table).

Laguna Salada Marsh and Horse Stable Pond Restoration Project, San Mateo County, CA
Tetra Tech, 2007-2009

Mr. Kamman provided technical hydrology and hydraulics support to the planning and conceptual restoration design of Laguna Salada marsh and Horse Stable Pond, located adjacent to Sharp Park Golf Course in the town of Pacifica, California. The primary objectives of the project are: to reduce flood impacts within the project vicinity; improve sustainable ecological habitat for the endangered San Francisco garter snake and the threatened California red-legged frog; better understand and characterize the hydrologic and water quality conditions/processes affecting flood and ecological habitat conditions within the project vicinity; provide an effective pumping operation plan to meet ecological objectives; and develop appropriate hydrologic analytical approaches and models to assist Tetra Tech and the San Francisco Recreation and Park Department in the planning and design for marsh, pond, and creek restoration. The project is also a unique opportunity to connect this resource with the California Coastal Trail, the Bay Area Ridge Trail, and the surrounding GGNRA lands.

Mr. Kamman's work included completing a comprehensive review of available hydrologic and site information and implementing selected field investigations to develop and calibrate an integrated hydrology-flood routing-pond water operations model that will quantify the volume and depth of water moving through the project system. The investigation will also further characterize shallow groundwater conditions and water quality with respect to effects on Laguna Salada and Horse Stable Pond. Analytical and numerical modeling tools are being used to better characterize existing hydrologic and water quality conditions and to assist in identifying project opportunities and constraints as well as evaluate potential restoration design components - all necessary to inform a sustainable

SELECTED EXPERIENCE *(CONTINUED)*

and successful restoration design.

Tolay Lake Restoration Feasibility Assessment, Sonoma County, CA
Sonoma County Agricultural Preservation and Open Space District, 2003

Mr. Kamman completed a detailed hydrologic feasibility analysis to evaluate a suite of potential freshwater lake and wetland restoration alternatives. Sites were evaluated under existing watershed land-use practices and under existing and forecasted water demands (in the form of existing water rights/applications). Analysis consisted of developing a detailed water budget model to simulate alternative restored lake inundation areas and depths under median and dry year conditions, as well as a 50-year historic period (1947-1997) displaying highly variable rainfall and runoff supplies. Three lake restoration alternatives were evaluated based on existing topography and likely historic lake configurations. The restoration alternatives include lakes with storage volumes equivalent to 136-, 1100-, and 2550-acre feet.

Haypress Pond Decommissioning and Riparian and Channel Restoration, Marin County, CA
Golden Gate National Recreation Area (GGNRA), 2001-2002

This project restored 170 meters of historic creek and riparian habitat through removal of Haypress Pond dam in Tennessee Valley within GGNRA. The goals of the project were to alleviate long-term maintenance needs and eliminate non-native bullfrog habitat threatening native California red-legged frog habitat in adjacent watersheds.

Working with the Park biologist, Mr. Kamman developed designs to decommission the dam and restore natural riparian and meadow habitat. This work included: characterization of existing topographic conditions; design of a channel profile through the proposed restoration project reach; preparation of a grading plan for the restoration project; and hydrologic and hydraulic analyses to evaluate the performance of the creek channel and flood plain below the former dam during a variety of flows. Challenges of this work included integrating sediment reuse into plans and construction phasing.

Damon Slough Site Seasonal Wetland Design, Alameda County, CA
Port of Oakland, 1999-2001

Working on behalf of the Port of Oakland, Mr. Kamman completed extensive surface and groundwater monitoring and data analyses to develop a detailed water budget to assist in the evaluation and design of a 7.5 acre seasonal freshwater wetland. Primary project objectives included a design that would provide shorebird/waterfowl roosting habitat, minimize impacts to existing seasonal wetland areas, and lengthen the duration of ponding through the end of April to promote use by migratory birds. In addition to developing hydrologic design criteria, responsibilities included development of grading plans to accommodate a local extension of the Bay Trail and wetland outlet works.

Water Quality Projects

Chicken Ranch Beach Soil and Groundwater Quality Investigation and Restoration Planning, Marin County, CA
Tomales Bay Watershed Council, 2007-present

Mr. Kamman is leading scientific and engineering efforts for a wetland and riparian corridor restoration project on Third Valley Creek and Chicken Ranch Beach in Inverness, California. The main project goals are to create a self-sustaining riparian and wetland system (requiring minimal operation and maintenance) and eliminate public exposure to high levels of bacteria that exist in a site drainage ditch discharging to the beach. The design will likely include establishing a blend of habitats, including: riparian stream corridor, seasonal/perennial freshwater marsh, and tidal/saltwater marsh.

Current efforts have included the development and implementation of a soil and groundwater quality investigation to delineate the source of elevated bacteria levels. This work includes: the collection and testing of depth-discrete soil samples; groundwater well installation, sampling and testing; and surface water sampling and testing; analysis of laboratory results; and reporting, including recommendations for further/expanded investigations. Mr. Kamman coordinated this time-sensitive sampling and analysis (six hour hold times) with Brulje and Race Laboratories in Santa Rosa.

Lower Miller Creek Channel Maintenance and Material Reuse Sampling Analysis Plan, Marin County, CA
Las Gallinas Valley Sanitary District, 2015

Mr. Kamman was commissioned to formulate and implement a plan for sediment removal and improved flood flow conveyance in the Lower Miller Creek channel. Accumulation of course sediment in the project reach had reduced discharge efficiencies at District outfalls. Miller Creek supports a population of federally listed Steelhead and adjacent wetland/marsh areas potentially support other state and federally listed special status species. Working with District Staff, Greg developed a suite of potential project alternatives and identified a preferred approach. Mr. Kamman completed all CEQA compliance (IS/MND), permitting and oversaw development of engineered plans and specifications.

In order to evaluate if reuse of excavated material from 2,655 feet of creek corridor in upland areas was feasible, Mr. Kamman developed and implemented a Sampling Analysis Plan (SAP) pursuant to U.S. Army Corps Guidance for Dredging Projects within the San Francisco District. Sample collection, sample handling, and analysis were performed in accordance with the SAP. Results for analytes were compared to a variety of screening criteria to determine the material's suitability for reuse in aquatic environments. A full suite of chemical and physical analyses were performed on soil samples collected from 16 locations, including: metals, PAHs, PCBs, pesticides, TOC, specific conductance, pH, sulfides, percent moisture and grain-size. Mr. Kamman managed all aspects of this effort including reporting and presentations/negotiations at multi-agency meetings through the Corps Dredge Materials Management Office (DMMO).

Lower Pitkin Marsh Hydrologic and Water Quality Monitoring, Sonoma County, CA
Sonoma Land Trust, 2008-2010

Mr. Kamman was retained to develop and implement a hydrologic and water quality monitoring program at Lower Pitkin Marsh outside of Forestville, California. The Pitkin Marsh area is one of the most valuable complexes of mixed riparian woodland and thicket, freshwater marsh, wet meadow, oak woodland and grassland in Sonoma County. The complex interaction of surface water, ground water, and scattered seeps and springs on the site creates unusual hydrologic conditions that promote a rare assemblage of plant species which includes several endemics. The primary objective of the hydrologic monitoring program was to understand the annual and season sources of both surface and ground water supplying wetlands. Hydrologic and water quality monitoring was

SELECTED EXPERIENCE *(CONTINUED)*

initiated during the winter wet season of 2008/09 and will be conducted for a 12-month period through the ensuing summer dry-down and into the following wet season. Understanding how groundwater levels, spring flow and creek flow rates recede from winter wet to summer dry conditions will provide an important understanding and quantification of the seasonal variability in water supplies feeding selected wetland types. General water quality parameters (temperature, pH, specific conductance, and ORP) are measured at all monitoring locations during each visit. Nutrients (N and P) are measured in selected surface water and groundwater samples collected during at least three monitoring events, including a winter high flow, spring high base flow and summer low baseflow.

Pescadero Lagoon Restoration and Enhancement, San Mateo County, CA
California State Coastal Conservancy, 2005-2006

Mr. Kamman was retained to support restoration and water quality enhancement planning efforts in Pescadero Lagoon. In 2005-2006, he completed a synthesis of available hydrologic and water quality information in responding to requests for development of a hydrodynamic and water quality model of the lagoon. This model was considered as a means to identify causes for repeated fish-kills in the lagoon that occurred during initial breaching of the inlet. Mr. Kamman assisted in preparing a synthesis and model development feasibility report from this effort.

Water Temperature Simulations for Trinity River Fish and Wildlife Restoration Project, Trinity County, CA
Trinity County Planning Department, 1994-2004

For over a decade, Mr. Kamman completed a number of hydrology and water quality investigations in support of alternative feasibility studies on the Trinity River Fish and Wildlife Restoration Project in direct support of the Trinity River Restoration EIR/EIS. Studies involve assessing the effects of proposed flow alternatives on water temperature within and downstream of Lewiston Reservoir. Mr. Kamman was responsible for data collection, processing, and flow/temperature modeling of Lewiston Reservoir as part of a coordinated evaluation including other Trinity River system models. Another study included evaluating how project operations could be implemented or modified to optimize Lewiston Lake release temperatures to meet downstream temperature criteria and compensate for increased warming of the river associated with side channel and feather edge restoration activities. Mr. Kamman continues to evaluate how more recent water projects (raising Shasta Dam, Sites Reservoir, and the Waterfix tunnels) consider and integrate with the Trinity Restoration Project.

Upper Eel River Unimpaired Flow and Water Temperature Assessments, Humboldt County, CA
CalTrout, 1997-1999

Mr. Kamman evaluated changes in the natural flow regime of the upper Eel River, and developed an Upper Eel River proposed release schedule to enhance downstream Chinook and Steelhead spawning and rearing habitat. This work was triggered by proposals set forth by PG&E as part of their Potter Valley Project FERC relicensing process. Work consisted of two main investigations. The first included reviewing results of a ten year PG&E study and development of multivariate regression and stream reach (SSTEMP) temperature models to assess the effects proposed flow alternatives would have on downstream temperatures. The second investigation consisted of characterizing unimpaired flow conditions and developing a daily unimpaired flow record for use in project operation models.

Selected Litigation Support Projects

Kamman, G.R., 2019, Review of Deschutes Basin Habitat Conservation Plan (DBHCP) and Associated Draft Environmental Impact Statement (DEIS). Prepared for: Water Watch of Oregon, Center for Biological Diversity and Associates for the West, November 22, 55p.

Kamman, G.R., 2019, Review of Draft PEIR, California Vegetation Treatment Program (CalVTP). Prepared for: Shute, Mihaly & Weinberger LLP, August 2, 8p.

Kamman, G.R., 2019, Oral Testimony of Greg Kamman for Agricultural Order 4.0 requirements discussion, Public meeting before the Central Coast (Region 3) California Water Board, Watsonville City Council Chambers, Watsonville, CA, March 21.

Chartrand, A.B., and Kamman, G.R., 2019, Comments to Central Coast Regional Water Quality Control Board Ag. Order 4.0 regulatory requirement options and proposed Requirement Options Tables. Prepared for: The Otter Project and Monterey Coastkeeper, January 22, (8p.), 5 tables and Monitoring Reporting Plan (MRP; 26p.).

Kamman, G.R., 2019, Review of Draft Environmental Impact Report/Statement, Sites Reservoir Project. Prepared for: Pacific Coast Federation of Fisherman's Association (PCFFA) and Save California Salmon, January 21, 45p.

Kamman, G.R., 2018, Review of Amendments to the Sonoma County Cannabis Ordinance, California. Prepared for: Shute, Mihaly & Weinberger LLP, August 3, 10p.

Kamman, G.R., 2018, Written Testimony of Greg Kamman for Part 2 of the California Waterfix Change of Diversion Hearing before the State Water Resources Control Board, November 28, 10p.

Kamman, G.R., 2018, Oral Testimony of Greg Kamman for Part 2 of the California Waterfix Change of Diversion Hearing before the State Water Resources Control Board at Joe Serna Jr.-CalEPA Building, Sacramento, CA, April 16.

Kamman, G.R., 2017, Review Comments: PAD and SD1, FERC Relicensing of Potter Valley Project (PVP). Professional declaration prepared for: Friends of Eel River, July 31, 8p.

Kamman, G.R., 2017, Review Comments, Draft Environmental Impact Report, Fish Habitat Flow and Water Rights Project. Professional declaration prepared for: Friends of Eel River, March 8, 18p.

Kamman, G.R., 2016, Review of Draft General Waste Discharge Requirements for Vineyard Dischargers in the Napa River and Sonoma Creek Watersheds. Prepared for: Law Offices of Thomas N. Lippe APC, December 12, 4p.

Kamman, G.R., 2016, Review of Middle Green Valley Specific Plan Project, Second Revised Recirculated Draft Environmental Impact Report, Solano County, CA, Sch# 2009062048. Professional Declaration Prepared for: Law Offices of Amber Kemble, October 25, 3p.

SELECTED EXPERIENCE *(CONTINUED)*

Kamman, G.R., 2016, Review of Draft EIR for General Waste Discharge Requirements for Vineyard Dischargers in the Napa River and Sonoma Creek Watersheds. Prepared for: Law Offices of Thomas N. Lippe APC, September 14, 81p.

Kamman, G.R., 2016, Second Declaration of Greg Kamman Plaintiff's Joint Motion for Preliminary Injunction, Prepared for Center for Biological Diversity (Plaintiff) v. U.S. Bureau of Reclamation, Case No. 6:16-cv-00035-TC (Recovery for Oregon Spotted Frog, Upper Deschutes Basin, Oregon) , March 11, 11p.

Kamman, G.R., 2016, Declaration of Greg Kamman Plaintiff's Joint Motion for Preliminary Injunction, Prepared for Center for Biological Diversity (Plaintiff) v. U.S. Bureau of Reclamation, Case No. 6:16-cv-00035-TC (Recovery for Oregon Spotted Frog, Upper Deschutes Basin, Oregon) , February 4, 8p.

Kamman, G.R., 2015, Sharp Park Project Impacts to Laguna Salada. Prepared for National Parks Conservation Association and Wild Equity Institute, April 14, 1p.

Kamman, G.R., 2014, Review of Middle Green Valley Specific Plan Project, Revised Recirculated Draft Environmental Impact Report, Solano County, CA, Sch# 2009062048. Professional Declaration Prepared for: Law Offices of Amber Kemble, August 11, 11p.

Kamman, G.R., 2012, Deposition of Gregory Richard Kamman, R.G., C.H.G., Schaefer vs. City of Larkspur, CA, Superior Court of the State on California, County of Marin. August 23, 2012.

Kamman, G.R., 2012, Technical review comments to Biological Assessment, Sharp Park Safety, Infrastructure Improvement and Habitat Enhancement Project. Prepared for Wild Equity Institute, August 3, 11p.

Kamman, G.R., 2012, Proposed Hardy-based Environmental Water Allocation (EWA) Input for WRIMS Model Simulation, Klamath River Basin. Prepared for: Yurok Tribe, July 20, 5p.

Kamman, G.R., 2012, Review of groundwater conditions and modeling report by S.S. Papadopulos & Associates, Inc., Scott Valley, California. Prepared for: Yurok Tribe, 4p.

Kamman, G.R., 2011, Supplemental Declaration of Greg Kamman regarding Laguna Salada, Wild Equity Institute v. City and County of San Francisco, et al., Case No.: 3:11-CV-00958 SI, United States District Court, Northern District of California, San Francisco Division. Prepared for Wild Equity Institute, November 4, 50p.

Kamman, G.R., 2011, Declaration of Greg Kamman regarding Laguna Salada, Wild Equity Institute v. City and County of San Francisco, et al., Case No.: 3:11-CV-00958 SI, United States District Court, Northern District of California, San Francisco Division. Prepared for Wild Equity Institute, September 23, 7p.

Kamman, G.R., 2010, Review of Sonoma County Water Agency NOP (issued 9/29/10) Fish Habitat Flow and Water Rights Project. Professional declaration prepared for: Friends of Eel River, November 8, 7p.

Kamman, G.R., 2007, Independent Model Review for Klamath Settlement Negotiations, Klamath Independent Review Project (KIRP). Prepared for Northcoast Environmental Center, November 9, 19p.

Kamman, G.R., 2007, Review of Negative Declaration for File No. UPE04-0040, Gualala Instream Flow. Professional declaration prepared for Friends of the Gualala River, October 21, 2p.

Kamman, G.R., 2003, Evaluation of potential hydrologic effects, Negative Declaration for THP/Vineyard Conversion, No. 1-01-171 SON, Artesa Vineyards, Annapolis, CA. Professional declaration prepared for Friends of the Gualala River, May 19, 9p.

Kamman, G.R., 1999, Review of Final Supplemental Environmental Assessment, Cirby-Linda-Dry Creek Flood Control Project. Professional declaration prepared for: Monty Hornbeck, Sunrise Office Park Owners Association; Bill Kopper/John Gabrielli, Attorneys at Law; and Sharon Cavello/Cathie Tritel, Placer Group Sierra Club, May 24, 10p.

Kamman, G.R., 1995, Variable Water Resources Available in the Area of Salinas, California. Declaration prepared for Price, Postal, and Parma, Santa Barbara, California, May, 6p.

Conference Presentations

Kamman, G.R., 2018, Water is Life! A hydrologist's eye on the Gualala River. Presented to: Friends of the Gualala River and public, Gualala Arts Center, Gualala, CA, May 3.

Kamman, G.R. and Kamman, R.Z., 2015, Landscape Scale Urban Creek Restoration in Marin County, CA - Urban Creek Restoration: Interfacing with the Community. 33rd Annual Salmonid Restoration Conference, March 11-14, Santa Rosa, CA.

Kamman, G.R., 2015, Enhancing Channel and Floodplain Connectivity: Improving Salmonid Winter Habitat on Lagunitas Creek, Marin County, CA - Beyond the Thin Blue Line: Floodplain Processes, Habitat, and Importance to Salmonids. 33rd Annual Salmonid Restoration Conference, March 11-14, Santa Rosa, CA.

Kamman, G.R., 2012, The role of physical sciences in restoring ecosystems. November 7, Marin Science Seminar, San Rafael, CA.

King, N. and Kamman, G.R., 2012, Preferred Alternative for the Chicken Ranch Beach/Third Valley Creek Restoration Project. State of the Bay Conference 2012, Building Local Collaboration & Stewardship of the Tomales Bay Watershed. October 26, Presented by: Tomales Bay Watershed Council, Inverness Yacht Club, Inverness, CA.

King, N. and Kamman, G.R., 2010, Chicken Ranch Beach Restoration Planning by TBWC. State of the Bay Conference 2010, A Conference about Tomales Bay ant its Watershed. October 23, Presented by: Tomales Bay Watershed Council, Inverness Yacht Club, Inverness, CA.

SELECTED EXPERIENCE *(CONTINUED)*

Higgins, S. and Kamman, G.R., 2009, Historical changes in Creek, Capay Valley, CA. Poster presented at American Geophysical Union Fall Meeting 2009, Presentation No. EP21B-0602, December.

Kamman, G.R. and Higgins, S., 2009, Use of water-salinity budget models to estimate groundwater fluxes and assess future ecological conditions in hydrologically altered coastal lagoons. Coastal and Estuarine Research Federation 20th Biennial Conference, 1-5 November, Portland, OR

Bowen, M., Kamman, G.R., Kaye, R. and Keegan, T., 2007, Gualala River Estuary assessment and enhancement plan. Estuarine Research Federation, California Estuarine Research Society (CAERS) 2007 Annual Meeting, 18-20 March, Bodega Marine Lab (UC Davis), Bodega Bay, CA

Bowen, M. and Kamman, G.R., M., 2007, Salt River Estuary enhancement: enhancing the Eel River Estuary by restoring habitat and hydraulic connectivity to the Salt River. Salmonid Restoration Federation's 25th Salmonid Restoration Conference, 7-10 March, Santa Rosa, CA.

Magier, S., Baily, H., Kamman, G., and Pfeifer, D, 2005, Evaluation of ecological and hydrological conditions in the Santa Clara River Estuary with respect to discharge of treated effluent. In: Abstracts with Programs, The Society of Environmental Toxicology and Chemistry North America 26th Annual Meeting, 13-17 November, Baltimore Convention Center, Baltimore, Maryland.

Baily, H., Magier, S., Kamman, G., and Pfeifer, D, 2005, Evaluation of impacts and benefits associated with discharge of treated effluent to the Santa Clara River Estuary. In: Abstracts with Programs, The Society of Environmental Toxicology and Chemistry North America 26th Annual Meeting, 13-17 November, Baltimore Convention Center, Baltimore, Maryland.

Kamman, G.R., Kamman, R.Z., and Parsons, L., 2005, Hydrologic and Hydraulic Feasibility Assessments for Ecological Restoration: The Giacomini Wetland Restoration Project, Point Reyes National Seashore, CA. In: Abstracts with Programs, The Geological Society of America, 101st Annual Cordilleran Section Meeting, Vol.37, No. 4, p. 104, Fairmont Hotel, April 29-May1, 2005, San Jose, CA.

Kamman, G.R., 2001. Modeling and its Role in the Klamath Basin – Lewiston Reservoir Modeling. Klamath Basin Fish & Water Management Symposium, Humboldt State University, Arcata, CA, May 22-25.

Kamman, G.R., 1998, Surface and ground water hydrology of the Salmon Creek watershed, Sonoma County, CA. Salmon Creek Watershed Day, May 30, Occidental, CA.

Kamman, G.R., 1998. The Use of Temperature Models in the Evaluation and Refinement of Proposed Trinity River Restoration Act Flow Alternatives. ASCE Wetlands Engineering and River Restoration Conference Proceedings, Denver, Colorado (March 22-23, 1998).

Hecht, B., and Kamman, G.R., 1997, Historical Changes in Seasonal Flows of the Klamath River Affecting Anadromous Fish Habitat. In: Abstracts with Programs Klamath Basin Restoration and Management Conference, March 1997, Yreka, California.

Hanson, K.L, Coppersmith, K.J., Angell, M., Crampton, T.A., Wood, T.F., Kamman, G., Badwan, F., Peregoy, W., and McVicar,T., 1995, Evaluation of the capability of inferred faults in the vicinity of Building 371, Rocky Flats Environmental Technology Site, Colorado, in Proceedings of the 5th DOE Phenomena Hazards Mitigation Conference, p. 185-194, 1995.

Kamman, G.R. and Mertz, K.A., 1989, Clay Diagenesis of the Monterey Formation: Point Arena and Salinas Basins, California. In: Abstracts with Programs, The Geological Society of America, 85th Annual Cordilleran Section Meeting, Spokane Convention Center, May 1989, Spokane, Washington, pp.99-100.

To:	Brian Oh
Cc:	Joanne St. Amand
Date:	Monday, September 26, 2022 2:26:48 PM
Attachments:	VOR - Letter to Sonoma County re SDC Property Distrubution.pdf

EXTERNAL

September 25, 2022

Mr. Brian Oh,

Sonoma County, California

brian.oh@sonoma-county.org

Dear Mr. Oh,

By way of introduction, VOR – A Voice Of Reason - is a national non-profit founded in 1983. For nearly forty years, we have been advocating for high quality care and human rights for all individuals with intellectual and developmental disabilities (I/DD).

I write you today on behalf of those individuals with the most severe and profound I/DD and autism in California, in regard to the county's plans for the property that was once home and community for many of our loved ones with I/DD at the Sonoma Development Center. It is my understanding that the property is being divided and parceled out to property developers and investors.

We would like to ask that you please keep a substantial portion of the property available to providers of services for those individuals most deeply impacted by I/DD and autism, in keeping with the original intent of those who first developed this property.

C136-1

Sonoma County is known around the world for its beauty, its amazing vineyards, and for its people. Forest fires may change the landscape. Drought may ruin a season of grapes. But the people of Sonoma County have a chance to retain their heart, their soul, and their dignity, by determining to continue to provide for California's most vulnerable citizens.

Business schools used to teach about the value of "Goodwill". You cannot set a price on it, but it is an asset that can bring greater value to all of the other assets a business, or a county, holds. We urge the Sonoma County commissioners to bring that unique and rare value to their community, and to maintain the goodwill that they have considered one of the many blessings that have long graced Sonoma County and its families.

Thank you for your time and consideration,

Hugo Dwyer – Executive Director

Joanne St. Amand - President

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Hugo Dwyer
Executive Director
VOR - A Voice Of Reason
72 Carmine Street Rear Duplex
New York, NY 10014

646-387-2267
hdwyer@vor.net
https:www.vor.net

Confidentiality Notice: This e-mail and any attachments may contain confidential information intended solely for the use of the addressee. If the reader of this message is not the intended recipient, any distribution, copying, or use of this e-mail or its attachments is prohibited. If you received this message in error, please notify the sender immediately by e-mail and delete this message and any copies.
Thank you.

From:	Wildthyme
To:	Brian Oh
Cc:	Susan Gorin; Jones@sonoma-county.org; karina.garcia@sonoma.-county.org
Subject:	DEIR Questions
Date:	Monday, September 26, 2022 11:59:24 AM

EXTERNAL

Attention: Brian.Oh@sonoma-county.org
Susan Gorin,Susan.Gorin@sonoma-county.org
North Sonoma Valley MAC: Jones@sonoma-county.org
Springs MAC: karina.garcia@sonoma -county.org,

Questions About the Draft EIR

Demolition Impact: Assessment needed of the considerable cost and environmental impact of turning all the buildings on the east side of Arnold Drive into rubble and hauling it away. Where will the tile roofs and fire resistant plaster walls garbage go ? What is the impact of hundreds of tons of this material in the land fill? Reuse , renovation and repurpose are the future on planet earth which is being covered with discarded garbage!!

Water: Water availability concerns are at a crisis level. What exactly is the the water source for 1000 new homes or even for 450 new homes in the draft EIR?

Housing versus Houses: Why is building new houses proposed when the SDC housed 3000 in existing structures? Why not renovate, restore and repurpose the historic, beautiful buildings on the SDC campus before any new construction? The EIR must be modified to insure the first use of existing buildings.

Fire Prevention: New home construction is a magnet for wild fires. What special fire resistant construction will be used if these homes are built? Will this include fire resistant tile roofs and heavy plaster walls like those found on most of the historic buildings which were built to last and have lasted?

C137-1

Wildlife: The SDC campus is an extension of an important wildlife corridor and passage between Sonoma Mountain and the Mayacamas Range. The area must remain open to wildlife coming through Jack London Park and traveling to the Audubon and Oak Hill preserves.
We look forward to hearing your response to these concerns.
Thank you, J.E. Airey 1280 Craig Ave, Sonoma 95476

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Jack Allan
To: Brian Oh
Subject: Access during construction of SDC revampe
Date: Friday, September 23, 2022 11:32:42 AM

EXTERNAL

Hello!

I have a comment on the accessibility of the open space during construction. How will this work and will there be access throughout the building process from Arnold drive to the open spaces on the west side of the campus? For example the parking spaces on Wilson which many cyclists use as their starting point.

C138-1

This is a crucial entry point for plenty of folks who do not wish to park at Jack London and enter from the other side, as well as the current residents of the Glen Ellen/Eldridge neighbourhood.

Jack
www.jack-allan.com

Mobile: 650 398 5403

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: jason enzenzensperger
To: Brian Oh
Subject: S D C
Date: Monday, September 26, 2022 2:45:56 PM

EXTERNAL

The land was deeded in perpetuity to the feeble minded.
Please don't sell it to the greedy.

C139-1

Sent from my iPhone

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

SDC Campus Project

sdccampusproject@gmail.com

Brian Oh
Comprehensive Planning Manager
Permit Sonoma
County of Sonoma
2550 Ventura Ave.
Santa Rosa, CA 95403
Brian.Oh@sonoma-county.org

Re: Sonoma Developmental Center Specific Plan and Draft Environmental Impact Report ("DEIR")

Dear Mr. Oh and County of Sonoma Supervisors,

Thank you for the opportunity to submit further comments on the recently issued Sonoma Developmental Center (SDC) Specific Plan and Program Environmental Impact Report (PEIR). The following comments are submitted on behalf of the SDC Campus Project

1. **Permitted Uses in Preserved Open Space**

It has come to our attention that in the Draft Specific Plan, Table 4-3, Permitted Uses, under Preserved Open Space, the following uses are included as P, permitted:

Agricultural Crop Production and Cultivation
Agricultural Processing
Animal Keeping: Confined Farm Animals
Animal Keeping: Farm Animals
Farm Retail Sales
Farm Stands
Indoor Crop Cultivation
Mushroom Farming
Nursery, Wholesale

C140-1

Timberland Conversions, Minor
Tasting Rooms

In the Draft EIR, Section 3.4.3.4 Impacts:

"Summary of Proposed Plan
The Proposed Plan would include residential development in the following districts: Marker Place, Core North Residential, Historic Core, Fire House Commons, Core South Residential, Creek West Residential, Agrihood, and Eldridge North. Approximately 1,000 housing units are planned to be developed throughout these districts as well as commercial, institutional, and public land uses and an Highway 12 connector road. The existing undeveloped portions of the Planning Area would be designated as Preserved Open Space land use. **Development is not proposed to occur within Preserved Open Space, where current daytime recreational uses would continue."** (emphasis added)

C140-1

The DEIR concludes as follows: "3.4-1 Impact.
Implementation of the Proposed Plan would not have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. (Less than Significant)" (DEIR p.241)

While residential development is not proposed within Preserved Open Space, the permitted uses identified in Table 4-3, including Agricultural Crop Production and Cultivation and Timberland Conversions, clearly contemplate vineyard development. Vineyard development involves deep soil disturbance, vegetation and tree removal, with likely significant habitat impacts for Special Status Species Yellow Legged Frog and California Giant Salamander, listed as present on SDC land in DEIR Table 3.4-1. The deep ripping of the soil to plant grape vines will be especially harmful to salamanders, who live part of their lives in underground tunnels.

C140-2

"Agricultural Processing" likely is meant to permit wineries. This reading is supported by permitting tasting rooms. These uses, in addition to habitat

C140-3

destruction, will also involve construction activities, vehicular traffic. Farm retail sales will generate vehicular traffic. Keeping farm animals raises concerns about impacts on wildlife. The Relevant Policies and Implementing Actions listed in Section 3.3.3.3 of the DEIR, do not adequately address the reasonably foreseeable significant impacts on wildlife likely to result from these permitted uses. Allowing these permitted uses is not consistent with the reasonable understanding by the public of what is meant by protecting the preserved open space.

C140-3

While the SDC Campus Project supports organic food crop agriculture in a specifically designated approximately five -acre area in the southern end of the east open space, we do not support the permitted activities in the Preserved Open Space listed in Draft Specific Plan Table 4-3. Food agriculture in this limited area will provide a public benefit without significant impacts on biological resources.

Respectfully submitted by,

Jerry Bernhaut
Attorney for The SDC Campus Project
Law Office of Jerry Bernhaut
23 Woodgreen St.
Santa Rosa, CA 95409
Telephone: 707-595-1852
Email: j3bernhaut@gmail.com

From:	Jim Price
To:	Brian Oh; engage@sdcspecificplan.com; Susan Gorin
Cc:	Greg Carr; Caitlin Cornwall; Pat Gilardi; Larry Reed; Jacquelynne Ocana; Shaun McCaffery; Belen.Grady@sonoma-county.org; PlanningAgency; Logan; Senator.McGuire@senate.ca.gov; Senator.Dodd@senate.ca.gov; Rebecca; Ezrah; Cecilia.Aguiar-Curry@asm.ca.gov; Gerald McLaughlin; district4; James Gore; district5; Susan Gorin; David Rabbitt; SDC Specific Plan; Hannah Whitman; Arielle Kubu-Jones; Rebecca Hermosillo; Rep. Mike Thompson
Subject:	Public Comments on Sonoma Developmental Center Draft Environmental Impact Report (DEIR) and Specific Plan – Revise EIR to Meet CEQA,
Date:	Saturday, September 24, 2022 8:41:12 PM

EXTERNAL

Dear Permit Sonoma, Board of Supervisors and Sonoma County Planning Commission,

I have lived in the Springs of Sonoma Valley since 2008 when my late wife Pamela and I moved to the Sonoma Valley. I am a homeowner, a Viet Nam era Army veteran and a graduate of UC Santa Cruz with degrees in Economics and Planning and Public Policy in Environmental Studies. I'm also a member the Sonoma Land Trust and and avid hiker of the Sonoma Valley Parks and Jack London State Park as well as the lands of the SDC currently owned by the State. I have a love of this land and place as well as the people of this community that I call home. The SDC is a public treasure that demands our best efforts at preservation and protection. That said, I support the North Valley Municipal Advisory Council's vision for future development at the SDC. I do not support the Sonoma Developmental Center (SDC) Specific Plan as proposed by Permit Sonoma and find that the DEIR is inadequate to meet the requirements of the California Environmental Quality Act. While I'm not a resident of Glen Ellen, I nonetheless have been actively following the advocacy the North Valley Municipal Advisory Council have performed on behalf of the citizens of Glen Ellen and all of Sonoma Valley and I strongly urge you to follow their recommendations. C141-1

I will confine my comment to one important issue that I have not seen addressed in the DEIR:

<u>The conflicts created by domestic animals that a population of ~ 2,400 people and their pets will have on the wildlife corridor and other native species.</u>

Questions:

1) What specific empirical studies has Permit Sonoma and/or their consultants conducted to determine the probable effects of domestic animals (specifically cats, dogs, reptiles, amphibians) on the wildlife known to use the corridor and other native wildlife know to inhabit the SDC and environs? C141-2
2) If such studies have been conducted where are they available for review?
3) If such studies have been conducted what mitigating measures have been identified for each species of domestic animal studies?
4) In the Specific Plan, it has been suggested that cat owners will be required to keep their cats on leashes as a mitigating measure. At what specific locations in California has this strategy been implemented? What studies have been done to suggest that such a stratagem works? How would this be enforced and by whom? What penalties will the cat owner face for not following the mitigation measure? Can these measures be overturned by subsequent Homeowners Associations that might be expected to be constituted at a later date? How do you ensure these measures in perpetuity? C141-3

5) Cats are know to carry disease that may have ill effects on our native mountain lions and bobcats that are known to frequent the corridor and the environment in and around the SDC. What specific diseases has the DEIR considered? What specific mitigating measures are recommended to keep our wild cats safe from these diseases?
6) In my own experience, dogs have a keen sense of hearing a smell and it is not unusual for them to bark at wildlife that strays onto their owner's property. What studies has the DEIR relied upon to inform them of the probable effects that domestic dogs will have on the wildlife corridor? What mitigating measures have proven effective at preventing domestic dogs from barking at wildlife expected to use the wildlife corridor? How and who will be responsible for enforcing your recommended mitigating measures?
7) What diseases do domestic dogs carry that may be threat to native animals that are know to use the wildlife corridor? What mitigating measures have proven effective are preventing the spread of these diseases to the wildlife know to use the corridor?

C141-3

8) Domestic reptiles and amphibians are known to carry diseases that may have deleterious effects on native species. What studies have been done to identify these diseases? What mitigating measures are recommended to prevent the transfer of these diseases to native species? What enforcement measures are contemplated? How and who will be responsible for endorsement?
9) Light pollution may have a negative impact on the wildlife corridor. What light mitigation measures are contemplated at the core campus to limit these effects? What science is/or will Permit Sonoma and/or their consultant use to identify and mitigate these effects?
10) Lions and Bears are native to the SDC. There is a strong probability that domestic animals may be considered food by these apex predators. What protocols will be put into place to ensure native apex predators are not euthanized because they kill domestic animals? What measure will human pet owners be required to follow to mitigate domestic animals from falling pray to apex predators? How and who will be responsible for enforcement of these protocols/laws?

C141-4

Thank you for addressing my specific questions.

Best regards, — Jim Price, Homeowner and Resident of the Springs, Sonoma, CA.

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Johanna M. Patri
P. O. Box 604
Sonoma, CA, 95476

September 22, 2022

Delivered via email to: Brian Oh, Comprehensive Planning Manager, Brian.Oh@sonoma-county.org

Please Distribute

TO: Permit Sonoma, Sonoma County Planning Commissioners, and Board of Supervisors

RE: Comment Letter on the Adequacy of the Sonoma Developmental Center Specific Plan Draft Environmental Impact Report

Introduction

Please address the following questions and issues regarding the analyses contained in the Sonoma Developmental Center Specific Plan Draft Environmental Impact Report (DEIR) and its compliance with the California Environmental Quality Act (CEQA).

Project Description

While the DEIR may satisfy Section 15124 of the CEQA Guidelines under Section 2 Project Description, the project description is the foundation upon which environmental analysis is constructed and the DEIR project description is inadequate.

The DEIR project description does not contain enough detailed information or all of the components of the project as identified in the Specific Plan as required by CEQA provisions and case law to allow the public, reader, or decision makers to understand thoroughly the components of the project and the types and intensities of the project's environmental effects and impacts. C142-1

How does the DEIR adequately address all the components and potential environmental impacts of the project as the DEIR project description contains only conceptual and board-stroked project concepts?

Explain why most of the DEIR project description refers to historical facilities, data, infrastructure, conditions and assumptions, including, but not limited to: e.g.

2.1.2.2 Transportation: Does not include any project description for proposed or additional local or regional public transportation to serve the proposed total buildout of approximately 2,400 residents and 940 jobs – approximately twice the population of current Glen Ellen, CA.

2.1.2.4 Utility Infrastructure: C142-2

Wastewater: ends with "assuming that additional connections can be made to the main sewer line at the south side of the site" with no verifiable conclusions;

Stormwater: refers to "additional measures will ensure" is speculative without describing what those measures are or would be;

Natural Gas and Electricity: refers to a system of distributed energy resourced (DERS) that could include solar, wind, geothermal, and methane gas co-generation is speculative without specifics; such facilities as wind machines, solar arrays, and geothermal systems cannot be evaluated, quantified, or analyzed.

C142-2

2.1.3.1 SDC Core Campus: If all new development is proposed to be located in the already previously developed Core Campus, where in the project description are activities associated with demolition including a demolition plan, travel routes for off-haul, disposable sites, recycling, etc.?

The DEIR does not have sufficient information in the project description about the actions and activities that would occur under the proposed project and is misleading and incomplete to enable the public and decision makers to understand the logic and facts that link the proposed project to the intensity of the project and the environmental impact conclusions contained in the DEIR.

When is construction of the proposed project expected to be initiated; how long will it take to complete construction; when would project operations, occupancy, use begin?

C142-3

What is the quantitative measure of the intensity of each component? e.g.

- square footage of commercial space;
- width and linear feet of new roadways;
- number and size of windmills or solar arrays;
- limits and quantities of grading, including material imported or exported

What is the expected schedule and details for the phases of build-out?

Hotel Overly Zone Allowing for a 120-room Hotel

Where in the DEIR is the project description and analysis of the proposed 120-room hotel, including, but not necessarily limited to:

C142-4

VMT Analysis: The DEIR states: “Given the programmatic nature of the Proposed Plan, all potential future development within the Proposed Plan boundaries is included in the VMT analysis.” Where is the analysis and data for tourist traffic?

Housing Allocations and Build-out Population

The DEIR states: “According to the Final 2023-2031 RHNA, ABAG has determined that unincorporated Sonoma County’s fair share of regional housing needs for the 2023 to 2331 period would be 3,881 units. Approximately 1,632 of these units would be allocated as housing affordable to very low- and low-income households.” This is a ratio of approximately 42% of housing needs allocated to very low- and low-income households as determined by ABAG.

C142-5

The Specific Plan proposes a total buildout of 1,000 housing units, but it appears that only 283 units are designated as low-income housing units or a ratio of approximately 28% units are low-income housing units. How does the DEIR justify this allocation given the counties need for housing very low- and low-income households?

How does the DEIR justify a build-out population of 2,400, twice the size of the current population of Glen Ellen?

Future and Additional Environmental Review Analysis Under CEQA Provisions with Mitigation Measures and a Verifiable Mitigation Monitoring Plan

The proposed Sonoma Developmental Center Specific Plan provides a vision for the future possibilities of development in the defined planning area and utilizes a Programmatic EIR. While Government Code section 65457 may exempt from further CEQA requirements, subject to certain exceptions, residential development projects if they are consistent with a specific plan for which an EIR has been certified, it does not exempt other types of development such as commercial and recreational development.

C142-6

What additional environmental review will be required for all the commercial, retail, educational, medical, office, administration, tourist-serving, and recreational development components as proposed in the Sonoma Developmental Center Specific Plan?

Provisions and Analyses of Adequate Alternatives to the Project,

While CEQA establishes no categorical legal imperative as to the scope of alternatives to be analyzed, an EIR must describe a reasonable range of alternatives to the project that could feasibly attain most of the basic objectives of the project while avoiding or substantially lessening any of the significant effects of the project. The DEIR fails to provide and evaluate a reasonable range of alternatives with meaningful detail analysis.

Why is an alternative project that best fits the Glen Ellen and Sonoma Valley communities not evaluated? This would consist of a smaller project with a more robust equation of affordable housing units over market-rate housing, elimination of any hotel project and reducing commercial development as these types of development exist in nearby communities.

C142-7

While tourism may seem to have a positive impact on employment opportunities and revenue to governmental jurisdiction coffers, the effects of the tourist industry as it regards the distribution of revenue among the different social groups must be analyzed. The DEIR fails to analyze the impacts of tourism on the environment, the wildlife resources and income inequality.

An Alternative Project must be presented and analyzed with more educational and community facilities and benefits resulting in higher-paying job opportunities with the goal of effective economic distribution policies designed to improve the living standards of the work force.

How does the DEIR justify a development model, which consists primarily of lower-income paying jobs with no provisions that ensure employee housing on the Sonoma Development Center campus and would require those workers to live outside of the community and commute long distances, as a worthy or sustainable model.

Why are not:

C142-8

- a reduced Development Alternative project with a minimum of 50% affordable housing; and
- an Historic Preservation Alternative Project

prepared with a sufficient degree of analyses to provide decision makers with information that enables them to evaluate and review environmental, aesthetic and community-oriented superior projects thoroughly? Where is the substantiated, quantifiable, and verifiable evidence, data, and analyses in the DEIR that the project objectives cannot be met with reduced development and robust historic preservation of the existing campus?

Are not the outlined objectives broad enough that a reasonable, less impacting range of alternative projects can be analyzed?

C142-8

Travel Demand Management Plan (TDMP)

Transportation Mobility and Access Goal 3-1 and Policy 3-4.2 are totally inadequate to address the provisions for an effective TDMP.

The DEIR does not provide an adequate and verifiable Travel Demand Management Plan (TDMP) with Best Employer-Based Practices and Implementations as encouraged by Caltrans to significantly reduce Vehicle Miles Traveled (VMT) and reduce green-house gases and improve air quality by providing employees with:

- Financial incentives such as transit passes for using Sonoma County Transit routes;
- Transportation information;
- Employer-provided shuttle buses and vanpools;
- Ride-sharing opportunities;
- Transportation options;
- Dedicated employee on-site parking spaces for carpoolers;
- Staggered work hours and flexible scheduling;
- Compressed workweek;
- Commute during off-peak times of day;
- Affordable employee on-site housing;
- Secure workplace parking for bikes, as well as shower and locker facilities for those who bike and walk to work; and
- Guaranteed-ride-home for unplanned trips home.

C142-9

Evaluation of Vehicle Miles Traveled (VMT) for Hotel Visitors

The Technical Advisory on Evaluating Transportation Impacts in CEQA (April 2018) makes a clear distinction between “Trip-based” and “Tour-based” assessments of Vehicle Miles Traveled (VMT). The DEIR fails to assess VMT of Hotel Visitors. “A tour-based assessment counts the entire home-back-to-home tour that includes the project… a tour-based assessment of VMT is a more complete characterization of a project’s effect on VMT. The DEIR fails to make any attempt to use such “tour-based” methods for hotel visitors.

C142-10

Because the proposed Specific Plan would enable a new hotel project, the DEIR must include and analyze all visitor trips from their beginning, ending at the hotel, and back home, as these trips are 100% “project induced”.

The DEIR fails to address the job-housing-vehicle miles traveled crises of Sonoma Valley, which is an example of why the State passed in 2013, SB743. It reflects a State Legislative mandate to more appropriately address the regional picture of traffic congestion management related to development and reduction of GHG emissions because of Vehicle Miles Traveled.

The DEIR fails to analyze Vehicle Miles Traveled (VMT) and promote the State's smart mobility goals, thereby aligning with the County's long-range transportation plans and reduction of greenhouse gases.

C142-10

The DEIR fails to analyze traffic and the increase in VMT in sync with Caltrans' mission, vision, and goals to reduce statewide vehicle miles traveled (VMT) and to promote the State's smart mobility goals with only the availability of Arnold Drive, which bisects the Town of Glen Ellen.

Conclusion

The DEIR does not adhere to the basic principal of CEQA, which is simple: design, shape, and analyze the total project and sufficient alternatives to avoid significant impacts before deciding to certify an EIR and subsequently approve a project.

C142-11

The DEIR fails CEQA provisions which require the analysis and shaping of a project in quantifiable terms, not assumptions. Figuring it out later after certification of an EIR is neither a sound approach for the decision makers, the Lead Agency, the State, nor likely a defensible approach under CEQA.

Thank you for your consideration and responses.

Respectfully submitted,

Johanna M. Patri

Johanna M. Patri

From: Julie Cade Bon
To: Brian Oh
Cc: Bruce Bon; Susan Gorin
Subject: Comment regarding SDC Specific Plan
Date: Monday, September 26, 2022 7:29:52 AM

EXTERNAL

Although the State mandates changes to the SDC, the recommended changes in this Specific Plan and the DEIR go far beyond what is desirable or wise. The increased **groundwater usage** due to additional population in an increasingly dry and hot climate; the **increased traffic** as new residents travel to Santa Rosa or Sonoma for goods and services, which will necessitate more roads, infrastructure, and **vehicle miles traveled** and will add to the **difficulty and danger** of driving on narrow, curvy, two-lane roads such as Bennett Valley and Warm Springs Roads and Arnold Drive (especially during **evacuations**); the addition of people and structures placed at risk due to more and larger **wildfires**; and the impacts on the **rural nature** of the area, will **negatively affect *everyone* in the Sonoma Valley**. **The Proposed Plan is *not* the environmentally superior alternative.**

C143-1

In 3.8-7, the DEIR specifically states that "the Proposed Plan would not expose people or structures to significant risk of loss, injury, or death involving wildland fires." **This is patently not possible with the addition of thousands of new residents and buildings to the area!**

In 3.14-4, "Implementation of the Proposed Plan *would not* result in inadequate emergency access". **This defies the experience of many in the Tubbs and Glass fires.**

In 3.16-1 and 3.16-2, the comments here are entirely **understating the current and future wildfire risks and challenges of emergency response or evacuation plans.**

Having evacuated in 2017 and 2020 from Oakmont in the Tubbs and Glass Fires and in each case, virtually being parked on the two-lane Highway 12 for hours in traffic while flames wrapped around us, we know beyond any doubt that more people feeding out to Highway 12 in an emergency will be a massive problem. There are already insufficient ways to leave the area, whether going towards Sonoma or Santa Rosa. Building more roads and emergency egress/access will take years and add to the fossil fuel usage/emissions, if these roads can *ever* be built (note that nothing has changed around Oakmont since the Tubbs fire to fix the egress concerns). Adding cars will only make things worse, risking more lives and increasing liability for the governmental parties involved in this decision. **It seems this EIR was written without regard to how challenging and dangerous it is to live here.**

C143-2

In 3.9-2 "Implementation...*would not* substantially deplete groundwater supplies…" Wells in the area are already going dry and as yet, there is no monitoring of them by the County or water agencies. Adding 1000 + residents, new businesses, possibly including wineries (already heavy water users), hotels, and restaurants, will increase the draw on groundwater. **The Specific Plan will deplete existing local residents' water availability at what is already a critical time of shortage.**

Why we are qualified to make these statements:

We are ten-year residents of Oakmont. We lived in a house adjacent to the SDC property for a year while our Oakmont home was being remodeled. We walked daily on the grounds of the SDC and beyond and became acquainted with the natural beauty, charm and character of this rural area. Julie worked at the former Valley of the Moon Winery (now Abbot's Passage) and was a volunteer and then an employee of the former Quarryhill Botanical Garden (now

C143-3

Sonoma Botanical Garden). All of these experiences deepened our knowledge, understanding, and appreciation of the natural treasures of the area. Having lived in 17 towns and traveled to many parts of the world, we say with enthusiasm that the Sonoma Valley is unique for its history, scenery, and rural nature and **must be preserved to the greatest extent possible**.

Accepting this Specific Plan at the Proposed Plan level would be disastrous for Sonoma Valley. **The EIR needs to be updated** based on climate change, wildfires, and water scarcity that have gotten worse since this one was written. Putting 1000-2400 additional residents in the area, no matter whether the homes are affordable or not, will create environmental damage and risk of the lives of the entire population of existing and new residents.

C143-3

If this Plan is in any way accepted, it should be at the lowest population increase level, "Historic Preservation Alternative", which will still create the significant issues highlighted above.

Julie Cade

Bruce Bon

7712 Pythian Road

Santa Rosa CA 95409

707-228-5765

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

September 23, 2022

Dear Sonoma County Board of Supervisors, Planning Commission, Permit Sonoma, Advisory Team and Consultant Team,

My name is Kaitlyn Garfield, I am Housing Administrator at Housing Land Trust of Sonoma County (HLT). This letter represents HLT's public comments on the SDC Specific Plan draft. Thank you for all your time and hard work on creating this plan and we look forward to seeing the final result. C144-1

HLT supports the plan's 25% inclusionary requirement for ownership units. We ask that ownership units at a variety of income levels are created, at values based on the economic framework and affordable housing needs at the time of project construction. HLT also supports the opportunity for developers to use density bonuses to increase the overall housing stock created.

HLT strongly supports the requirement that all inclusionary units must be built onsite of the SDC campus and must be fully integrated into the community. Inclusionary units should be scattered not clustered together, and co-located with the market rate units. Inclusionary units should also be built concurrently with market rate units and be comparable in size, basic finish options, construction quality, and exterior design to adjacent market rate units. Onsite and integrated inclusionary housing has been shown to produce a host of individual and social benefits, including equality of access to resources, a more cohesive community of diverse citizens, less stigma and pushback, and greater upward mobility and wealth building for residents. C144-2

HLT also strongly supports the requirement that all affordable units must be affordable in perpetuity. There is no benefit to short term affordability covenants on affordable homeownership units: the developer has the same cost, the city will either eventually lose or must fight to keep an affordable unit, and the community will inevitably end up with a smaller housing stock than they would with permanent affordability. A model that creates affordability in perpetuity by design without any future re-upping should be used.

Thank you again for your time and effort on this important project.

Regards,

Kaitlyn Garfield
Housing Administrator
Housing Land Trust of Sonoma County

KATHLEEN FERRIS
Attorney
kathleenferris22@gmail.com
602.615.4255

September 26, 2022

Via E-Mail to Brian.Oh@sonoma-county.org

Brian Oh
Comprehensive Planning Manager
Permit Sonoma, County of Sonoma

RE: SONOMA DEVELOPMENT CENTER SPECIFIC PLAN AND DRAFT EIR

Dear Mr. Oh:

I write as a Glen Ellen homeowner and a water policy expert. I served as Executive Director of the Arizona Groundwater Management Study Commission, Director and Chief Counsel of the Arizona Department of Water Resources, and Executive Director of the Arizona Municipal Water Users Association. I am currently a Senior Research Fellow at the Kyl Center for Water Policy at Arizona State University. C145-1

As explained below, the Draft Environmental Impact Report (EIR) for the Sonoma Development Center Specific Plan (Project) inadequately evaluates the potential hydrologic and water supply impacts of the Project.

The potential impacts on groundwater are not fully examined.

The Project and Valley of the Moon Water District (VOMWD) are located within the Sonoma Valley Subbasin that is designated under the California Sustainable Groundwater Management Act as a high priority basin because of the density of wells, groundwater reliance and documented impacts of declining groundwater levels.[1] Water users in the Subbasin have already reported wells going dry and many residents are concerned about the long-term sustainability of the Subbasin's groundwater.[2] As water levels drop and wells dry up, some Sonoma County officials have suggested a moratorium of new well drilling may be needed.[3] Following a ruling by the California Court of Appeals, Sonoma County must now adopt C145-2

[1] Draft EIS, Appendix D at 35.
[2] https://www.sonomamag.com/as-wells-run-dry-sonoma-valley-reckons-with-new-water-regulations
[3] Id.

standards for new well permits to ensure that new wells "do not harm resources that belong to everyone, including future generations."[4]

The Draft EIR acknowledges at page 296 that "there could be a significant impact on groundwater if it were drawn to serve the needs of new residents, visitors, and businesses in a way that would substantially impede with groundwater recharge." But the potential impacts are dismissed because "future development at SDC would use surface water . . . and not be reliant on groundwater." Yet the Draft EIR fails to analyze what might happen to those surface water supplies as drought and climate change continue. Additionally, because the Project is not well-defined, it is impossible to know if its development will impede groundwater recharge. Impacts on the fragile Sonoma Creek seem all but ignored. C145-2

The Planning Area is insufficient to consider the impacts of the Project.

The Draft EIR limits its evaluation to the 945-acre SDC Specific Plan Planning Area. But water supplies for the Sonoma Valley are inter-related. As the Sonoma County Civil Grand Jury advised in 2020:

> "Today there are more water users in the Valley than ever. Valley residents still depend on surface and groundwater resources throughout the Valley. *These resources are not sufficient to sustain current population without importing additional water from the Russian River.* Water resource planning, development, regulation and use take place primarily in four local organizations: the City of Sonoma, the Valley of the Moon Water District, the Sonoma Developmental Center, and Sonoma Water. *These are separate entities, but they all depend on the same limited resources. The actions of each affect all the others.*"[5] (*Emphasis added*)

C145-3

Estimated water use and impacts on VOMWD are not fully considered.

The projected water use of the Project, 342 acre-feet per year at build-out, seems significantly underestimated for 1,000 dwelling units, 940 employees and 390,000 square feet of commercial, hotel, office, public and institutional space. For example, the Proposed Plan contemplates a population of 2,400 at build-out, with an estimated residential water use of 172 acre-feet per year, which amounts to about 64 gallons per capita per day (GPCD). However, VOMWD had a potable water use of 102 GPCD in 2020[6] and there is no explanation why the estimated residential per capita water use for the Project would be 38 gallons per capita less than VOMWD's 2020 GPCD. C145-4

[4] https://permitsonoma.org/sonomacountyproposesrulechangesforwellpermitstoprotecthealthoflocalwaterways
[5] http://sonoma.courts.ca.gov/sites/all/assets/pdfs/general-info/grand-jury/2019-2020/FinalConsolidatedGrandJuryReport2019-2020.pdf, at 72-73
[6] https://www.vomwd.org/_files/ugd/f7204b_928f2c92199b4ad389bc930ec96ffc95.pdf

Of concern is that the Draft EIR admits that VOMWD will see "shortfalls" in being able to meet future demands within its service area during "single dry years," which VOMWD will address through its Water Shortage contingency Plan—meaning existing customers will bear the brunt of these shortages. Even under current conditions, VOMWD has already declared a Phase 2 shortage seeking a 20 percent cut in water usage.[7]

Further, the Draft EIR Water Supply Assessment looks at projected water demand only from 2025 through 2045, a mere 20 years. That might be all that the law requires, but it is not an acceptable standard for sustainable large-scale planning in a time of increasing water scarcity. What's more, the Water Supply Assessment conclusion—that sufficient water is estimated to be available to the VOMWD to meet future demands within its service area and the Project—is based on past water supplies available to VOMWD and several assumptions, including future supply augmentation and increasing state-mandated efficiency and drought requirements. This is not a confidence-building conclusion given the questionable nature of these assumptions and the likelihood that water supplies will be reduced going forward.

C145-4

The recent drying of the Colorado River has painfully illustrated that it is unwise to base our projections of future water supplies on the past. Climate change, mega-droughts, aridification, and overuse have radically altered the Colorado River, which now is freefalling towards "dead pool" when no water can be released from Lakes Powell and Mead. In the space of less than a year, Colorado River water managers have crossed the divide from "we have this handled" to "our Colorado River water may be cut off completely." This and other stark realities must alter how we look at managing our finite and threatened water supplies moving forward.

C145-5

I urge Sonoma County to take the time necessary to conduct an in-depth assessment of how development of the SDC will affect the entire Sonoma Valley's water resources in the long-term (100 years), considering the impacts of climate change, population increases, groundwater overdraft, and other stresses on our finite and inter-related water supplies. This is a time to be cautious and conservative about the level of development our threatened water supplies can support, as the crisis of the Colorado River has proved to us all.

Thank you for considering my concerns.

Sincerely,
/s/ Kathleen Ferris

[7] https://www.vomwd.org/_files/ugd/9232b1_c430c3d43be64018962c2846193fce71.pdf

Of concern is that the Draft EIR admits that VOMWD will see "shortfalls" in being able to meet future demands within its service area during "single dry years," which VOMWD will address through its Water Shortage contingency Plan—meaning existing customers will bear the brunt of these shortages. Even under current conditions, VOMWD has already declared a Phase 2 shortage seeking a 20 percent cut in water usage.[7]

Further, the Draft EIR Water Supply Assessment looks at projected water demand only from 2025 through 2045, a mere 20 years. That might be all that the law requires, but it is not an acceptable standard for sustainable large-scale planning in a time of increasing water scarcity. What's more, the Water Supply Assessment conclusion—that sufficient water is estimated to be available to the VOMWD to meet future demands within its service area and the Project—is based on past water supplies available to VOMWD and several assumptions, including future supply augmentation and increasing state-mandated efficiency and drought requirements. This is not a confidence-building conclusion given the questionable nature of these assumptions and the likelihood that water supplies will be reduced going forward.

C145-4

The recent drying of the Colorado River has painfully illustrated that it is unwise to base our projections of future water supplies on the past. Climate change, mega-droughts, aridification, and overuse have radically altered the Colorado River, which now is freefalling towards "dead pool" when no water can be released from Lakes Powell and Mead. In the space of less than a year, Colorado River water managers have crossed the divide from "we have this handled" to "our Colorado River water may be cut off completely." This and other stark realities must alter how we look at managing our finite and threatened water supplies moving forward.

C145-5

I urge Sonoma County to take the time necessary to conduct an in-depth assessment of how development of the SDC will affect the entire Sonoma Valley's water resources in the long-term (100 years), considering the impacts of climate change, population increases, groundwater overdraft, and other stresses on our finite and inter-related water supplies. This is a time to be cautious and conservative about the level of development our threatened water supplies can support, as the crisis of the Colorado River has proved to us all.

Thank you for considering my concerns.

Sincerely,
/s/ Kathleen Ferris

[7] https://www.vomwd.org/_files/ugd/9232b1_c430c3d43be64018962c2846193fce71.pdf

3.9-2 Implementation of the Proposed Plan would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	Provided that the entire project be under management of the Sonoma Valley Groundwater Management Plan	C146-1
3.9-3 Implementation of the Proposed Plan would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would result in substantial erosion, siltation, or flooding on- or offsite; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows.	Increased runoff from impervious surfaces of the project will increase downstream flow to areas at approximatley18 feet above sea level of Sonoma Creek Schell Creek Arroyo Seco	C146-2
3.9-5 Implementation of the Proposed Plan would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Provided that the entire project be under management of the Sonoma Valley Groundwater Management Plan	C146-3
3.13-3 Development under the Proposed Plan would not require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	The proposed project would decrease recreational activity due to the loss of the existing softball diamond on the project site	C146-4
3.15-2 Development under the Proposed Plan would have sufficient water supplies available to serve the Planning Area and reasonably foreseeable future development during normal, dry and multiple dry years.	Provided that the entire project be under management of the Sonoma Valley Groundwater Management Plan	C146-5

From: Marina Abbott
To: Brian Oh
Subject: Fwd: SDC
Date: Monday, September 26, 2022 9:11:50 AM

EXTERNAL

I continue to be stunned and appalled at the plan to add 1,000 homes to the rural site of SDC.
> 1. What happened to the green belts we have consistently voted for?
> 2. What about our abysmal public transit? In CA, statistics show that 1 home means 3 cars, adding pollution and traffic in a rural area.
> 3. Evacuation in emergency? Already a problem in our valley. Add 3,000 cars? Death trap.
> 4. While additional housing is needed, adding single family dwellings is foolhardy. If housing must be placed here, make it a reduced number of multi family units, clustered only along the road and have funding and plans in place to offer robust, frequent, affordable public transportation.
> 5. Reject any plans for a resort hotel. This unavoidably degrades the environment, doesn't benefit valley residents and further complicates evacuation in emergencies. Currently it's rare for valley hotels and vacation rentals to be fully booked. If more hotel rooms are needed, let current properties add rooms by building upward.
> 5. This land is a rare and precious wildlife corridor. The tiny sliver allocated in the plan is woefully inadequate. Putting housing there will inevitably put more animals into contact with residents or their cars resulting in injuries and/or death to threatened species.
> 6. The suggestion that new residents will find employment onsite in new retail shops or restaurants is ludicrous on its face. Glen Ellen has numerous commercial spaces that sit empty or turn over frequently because the community can't support the current businesses. Adding more just adds to the problem.
> Wrong plan, wrong place.
> From Marina Abbott

C147-1

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

September 21, 2022

TO: Brian.Oh@sonoma-county.org
Please distribute to the Sonoma County Board of Supervisors, the Sonoma County Planning Commission and Permit Sonoma

RE: Public Comment on SDC Specific Plan and DEIR

C148-1

The DEIR is inadequate and does not define a specific project, nor does it adequately analyze, prevent or reduce the environmental impacts – specifically wildfire, evacuation and the existing wildlife corridor.

1) There is no analysis of the impacts on the wildlife corridor through the campus and acknowledgement of the fact that animals currently use the campus and will be severely impacted by any development. The property and the campus itself are part of the **WILDLIFE CORRIDOR** and must be acknowledged as such. (Page 8 DEIR)

   - What mitigation measures will be required and enforced to protect and preserve this critical **WILDLIFE CORRIDOR** that was established by the late, prominent environmentalists and Sonoma Valley residents, Otto & Ann Teller prior to the closing of the Sonoma Developmental Center? Will performance standards be put into place to consider the impacts of traffic on wildlife function, resources, light and noise if, or when, an intermediary road cuts through the heart of the corridor to mitigate wildfire evacuation?
   - Will the wildlife corridor be considered essential or will the development of the "open space" have priority? What comes first? The cart or the horse?

2) The DEIR needs to be revised with conditions of approval strengthened and moved into a legally enforceable mitigation and monitoring program. It fails to disclose the full extent of impacts that will result throughout Sonoma Valley from this large-scale development in an area currently zoned AG and Rural Residential and outside of the **urban growth area**. Employment and resident numbers at SDC reached a peak over 50 years ago when both primary traffic arteries in the Valley were still well-functioning roads. Vehicle trips were limited to employees with the VMT were spread out over the period of the work day.

C148-2

   - Why is a large-scale hotel being proposed when it's not a defined project objective, and when VMT is listed as a significant challenge?

3) The current plan will destroy the very qualities that make the historic SDC site unique and the environmental impacts of the Specific Plan – what is the intended scale of the project?

C148-3

   - Why has the **Historic Alternative** been dismissed even though it is identified as the "**superior alternative**"? (DEIR page 14).
   - What mitigation measures will be required and included?
   - What are the other options were considered and why was this option dismissed?

4) The DEIR has failed to describe existing fire hazards and risks nor does it properly address the increased frequency, severity, intensity and spreading speed of wildfires due to climate change. Fire evacuation is a current and future concern for **ALL** residents of Sonoma Valley.

C148-4

- What mitigation measures will be required to ensure the safety of the residents of Sonoma Valley during future wildfires should this AG-Rural Residential property be fully developed as proposed?
- How will any mitigation measures be enforced?

5) The DEIR (pg. 515) dismissed "a fire approaching from the west (Sonoma Mountain) may be less likely, and did not warrant further specific analysis". The residents of Sonoma Valley lived through several major fires within the last 60 years and know that possibility must be considered in the DEIR. The DEIR states that "the additional SR12 connector will provide additional fire access and evacuation routes." (pg. 520)

C148-5

- Has the DEIR considered that previous fires have approached Sonoma Valley from the SR12 direction to the EAST? During recent wildfires the primary road arteries were clogged with traffic for 24 - 48 hours in the valley, thus creating dangerous conditions.

The DEIR has presented no project alternative reflecting the community values of the residents of Sonoma Valley neither as an educational, cultural or recreational campus for the **residents** of Sonoma Valley. The current DEIR does not meet these objectives and the concerns that have been voiced by the residents of the of Sonoma Valley throughout the process.

The DEIR has failed to acknowledge and address these and other primary issues that must be included in any future development at the Sonoma Developmental Center property in Sonoma Valley, California.

Please answer all questions and concerns before the final DEIR is adopted.

Respectfully Submitted,

Mary Martinez

Sonoma Valley Resident since 1972
~ when you could SAFELY ride your bike from Glen Ellen to the Sonoma Plaza on Hwy. 12!

Mary & Brian Reeves
15421 Woodside Court
Glen Ellen, CA 95442

Sonoma County Planning Commission
c/o Brian Oh, Comprehensive Planning Manager,
Permit Sonoma
County of Sonoma
2550 Ventura Avenue Santa Rosa, CA 95403

September 14, 2022

RE: SDC Draft EIR and Specific Plan

To the Sonoma County Planning Commission:

We have lived within a mile of the Sonoma Developmental Center for over 20 years. We have raised our two children here, walking its streets and trails while appreciating the truly special place it is, from its diverse community of residents, to its rich wildlife population, and its verdant landscape. It is a unique resource for our community--- for the entire North Bay, that requires a well-considered, thoughtful approach to its transition.

C149-1

While the process may have started out this way, this push to approve an inadequate, nonspecific and unenforceable Draft EIR and Specific Plan is a dangerous and unconscionable rush to judgement. Undertaking this process simultaneous to the State's Request for Proposal is a waste of precious resources; these tools should react to a *specifc* development proposal that has yet to be produced. The Draft EIR and Specific Plan before you makes it clear the process is out of order. Simply, the cart has been placed before the horse.

Your overarching question has to be: What happens if the RFP generates a proposal that this Draft EIR and Specific Plan doesn't *specifically* address, or worse, is so broad that the room for interpretation allows a full range of unintended and unacceptable consequences? The requisite comprehensive detail

of this proposal mandates an EIR and Specific Plan that analyzes point by point all the merits and drawbacks of this enormously complicated project.

C149-1

3.4 Biological Resources

To bring development to the SDC necessitates adding additional roadways to handle the traffic associated with such an overload of residential and commercial units. A new Arnold Drive to Highway 12 connector is proposed—one that would cut a path right though the critical Valley of the Moon Wildlife Corridor. How can this have a "less than significant impact" on the black bears, mountain lions, bobcats, and dozens of other species that have all been documented in the area? If left undisturbed, studies have shown the Wildlife Corridor through the SDC can continue to provide critical connectivity. If development is more important to our environment, what is the plan to mitigate this unrecoverable loss?

C149-2

3.9 Hydrology and Water Quality

Where is the water coming from to support 2,400 new residents? The Draft EIR suggests there will be no impact on groundwater. For those who have been asked to conserve water because of a local dwindling supply, development on this scale makes no sense. How will this undeniable impact during a drought emergency be mitigated?

C149-3

3.10 Land Use and Planning

How can we know that "development under the Proposed Plan would not physically divide an established community" if the Draft EIR isn't even reacting to a specific development proposal? Those of us on the southside of Glen Ellen would argue any type of major development in the SDC corridor could sever our connection to the village on the north side of Glen Ellen. The project should work to unify, not divide, our historic community, but without specifics, we cannot know what impacts might occur and how they might be mitigated.

C149-4

3.12 Population and Housing

While we are aware how much Sonoma County needs affordable housing (with two sons who've regretfully had to settle elsewhere to afford their homes), using the SDC to resolve this issue is unrealistic. From a practical standpoint, this

C149-5

project's horizon is not even within ABAG's Regional Housing Needs Allocation time frame (2040 vs. 2023-2030). As broadly conceived as it is now, the Draft EIR and Specific Plan can't even ensure development that complies with the requirements that new housing be firesafe, reduce environmental impacts and traffic, and mitigates the drought emergency.

C149-5

Right now, there are about 700 dwelling units in the Village and 350 in the concentrated southside. You don't need an expert to see that doubling—not to mention potentially tripling, the housing units in Glen Ellen by building them all in the acres between the two will have an impact. Even the lowest increase of 450 units in the Historic Preservation Plan would represent a 45% increase and have an impact of at least equal measure. Trying to solve Sonoma County's housing crisis all in one project located in a narrow Valley with one road in and out is poor planning pure and simple; *nothing* in this Draft EIR suggests how the attendant problems of this scale of development might be resolved.

3.14 Transportation

Again: one road in, one road out. Then layer in at least one car in every new garage. Even in its heyday in the 1950's the SDC didn't have as much traffic as this scale of development will generate, and the Valley of the Moon, had a much lower surrounding population back then. Adding 1,000 homes could easily add as many cars, particularly given the limited public transportation and limited services in the area. These new residents will need cars and they will need a great deal more time for commuting when they are stuck on that one road in, one road out. Adding another crossing between Arnold Drive and Highway 12 will still place all these cars, a substantial increase, on two two-lane roads that are already heavily travelled—and have a devastating record for traffic fatalities in this very area. There will be a transportation impact regardless of the scope of the project—it must be comprehensively and specifically analyzed and the impacts duly mitigated.

C149-6

3.16 Wildfire

In 2017, we packed up our family and pets as we were ordered to evacuate our home due to the Nuns Fire and were stuck in gridlock on Arnold Drive for *hours* as we joined our neighbors attempting to flee the flames. The suggestion that

C149-7

adding 2,400 residents would not "not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan," would be laughable, if the consequences were not so frightening. The location proposed for an additional crossing between Arnold Drive and Highway 12? In 2017, it was *in flames.*

C149-7

We urge you to set this process aside and wait the short time until a development proposal has been chosen by the State. Then a Draft EIR and Specific Plan can be prepared to react to specific issues, impacts can be better analyzed and reasonable mitigation measures proposed. Please do not make a rush to judgement; this resource is too valuable to put at risk.

Sincerely,

Mary Poppic-Reeves

Brian Reeves

Cc: Susan Gorin
Mike Thompson

From: BOS
To: PlanningAgency
Subject: FW: Comment for SDC Draft EIR and Specific Plan
Date: Thursday, September 15, 2022 4:14:54 PM
Attachments: SDC EIR Response.pdf

From: Susan Gorin <Susan.Gorin@sonoma-county.org>
Sent: Thursday, September 15, 2022 4:14 PM
To: BOS <BOS@sonoma-county.org>
Subject: Fwd: Comment for SDC Draft EIR and Specific Plan

Susan Gorin | 1st District Sonoma County Supervisor
575 Administration Drive, Room 100A
Santa Rosa, CA. 95403
Office 707-565-2241 | Cell 707-321-2788

From: Mary Poppic-Reeves <mpr4mpr@gmail.com>
Sent: Wednesday, September 14, 2022 4:23:37 PM
To: Brian Oh <Brian.Oh@sonoma-county.org>
Cc: Susan Gorin <Susan.Gorin@sonoma-county.org>
Subject: Comment for SDC Draft EIR and Specific Plan

EXTERNAL

Mr. Oh,

Please accept our correspondence into the record for the Sonoma County Planning Commission's consideration of the Sonoma Developmental Center Draft EIR and Specific Plan. Feel free to reach out if you have questions. C150-1

Sincerely,

Mary Poppic-Reeves and Brian Reeves

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Maud Hallin
To: Brian Oh
Subject: Sonoma Development Plan
Date: Thursday, September 22, 2022 1:23:08 PM

EXTERNAL

Dear Brian:

Chapter 3.3 "Air Quality and Environmental Impact " manages to defer any decision about autos to PG&E and Sonoma Electrical. This is not acceptable. As early as 2025, we are required to operate a large number of electrical vehicles. In other words, property owners will need access to charging stations. It would be ecologically correct to encourage auto owners to have charging stations connected to their home el system. Whether they decide to install el panels or not! In addition the shopping center should have a number of charging stations.

C151-1

Eager to make money, I presume, that you would exempt the hotel complex from parking fees on campus.

The authors of the Environmental impact study do not live in this area. They appear to have no knowledge of the fact that workers in the construction or remodeling, or repair industry very often commute over an 1 hour away from SDC. Just as in the wine industry, staff are expected to arrive on the job, wherever, by their own auto. Housing is outside their budget. This is one reason, why we have asked for more low income housing. The first people to be allowed to get temporary or purchase housing should be in the construction business. Then you could limit some of the trucks on Arnold Drive.

C151-2

We currently have 1 bus line between Sonoma and Sta Rosa every 45 minutes. It looks as if you have preferred to defer this problem to others!

In most households in the age bracket of 23-65 you will find that 2 grown up persons are working outside the home. Calculating that retired people have no need for vehicle transportation(???) nor would people in the housing for mentally disturbed. You still only calculate that there will be rather low income jobs on the campus for 700+ people. As the construction costs are around $725/sq/ft in this area, one person in each family would have to work outside the Campus. With the jobs that you outline, people can't afford those single family homes. Dreams are wonderful! It is easy in a large city to limit auto transportation as buses, etc. are available. Around Glen Ellen, that is not possible. I would like to see the people over 70 who would volunteer to hop on a scooter to go shopping.

C151-3

As to construction a new connection between Arnold Drive and Highway 12 - this makes no sense, as Highway 12 is more blocked on a regular basis than Arnold Drive. Plus that road would have got run right through the current wild life corridor.

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Maud Hallin
To: Brian Oh
Subject: Sonoma Development Plan
Date: Thursday, September 22, 2022 1:22:25 PM

EXTERNAL

Dear Brian:

Chapter 3.3 "Air Quality and Environmental Impact " manages to defer any decision about autos to PG&E and Sonoma Clean Power. This is not acceptable. As early as 2025, we are required to operate a large number of electrical vehicles. In other words, property owners will need access to charging stations. It would be ecologically correct to encourage auto owners to have charging stations connected to their home el system. Whether they decide to install solar panels or not! In addition the shopping center should have a number of charging stations. Any "public" parking area for residents, etc. should be covered by solar panels, and parking stations.

C152-1

Eager to make money, I presume, that the hotel complex would receive an exemption from parking fees on campus. Neither the grocery store on Madrone nor in the center of Glen Ellen use parking meters. In other words, it would make it more difficult for the local grocery store to make money, as people may shop elsewhere.

The authors of the Environmental impact study do not live in this area. They appear to have no knowledge of the fact that workers in the construction or remodeling, or repair industry very often commute over an 1 hour away from SDC. Just as in the wine industry, staff are expected to arrive on the job, wherever, by their own auto. Local housing is above their budget. This is one reason, why we have asked for more low income housing. The first people to be allowed to get temporary or purchase housing should be in the construction business. Then you could limit some of the trucks on Arnold Drive. Since the 2017 Fires, homeowners have often housed contractor and staff in trailers on their land. Contractors have arrived from Nevada, etc.

C152-2

We currently have 1 bus line between Sonoma and Sta Rosa every 45 minutes. It looks as if you have preferred to defer this problem to others!

In most households in the age bracket of 23-65 you will find that 2 grown up persons are working outside the home. Calculating that retired people have no need for vehicle transportation(???) nor would people in the housing for mentally disturbed. You still only calculate that there will be rather low income jobs on the campus for 700+ people. As the construction costs are around $725/sq/ft in this area, one person in each family would have to work outside the Campus. With the jobs on campus that you outline, people can't afford those single family homes. Dreams are wonderful! It is easy in a large city to limit auto transportation as buses, etc. are available. Around Glen Ellen, that is not possible. I would like to see the people over 70 who would volunteer to hop on a scooter to go shopping.

C152-3

The word Microgrid is dropped as a Goal. Chapter 3.6-19 This concept should be developed, and not just listed as a 20-year Goal. It is clear that the authors are clueless about solar/wind etc. energy usage. If you try to reduce pollution, how can you then ignore looking deeper into the needs for solar panels? They obviously know more about composting. Ah - I may be able to sell worms!

C152-4

As to construction of a new connection between Arnold Drive and Highway 12 - this makes no sense, as Highway 12 is more blocked on a regular basis, and ha higher average traffic than Arnold Drive. Plus that road would have to run right through the current wild life corridor. Besides Madrone has bicycle lanes, and is very nearby! What is needed is widening of Arnold Drive so that people may walk, or bicycle along that road.

C152-5

Construction crews will all arrive in gas or diesel operated autos. I wonder how many people will want to buy a home at the SDC campus, if they are told they cannot operate an auto, nor connect an electrical auto to their own garage/parking space attached to their million dollar home? At what prices is the developer going to be able to sell? The Air Quality Station in Sebastopol clearly has difficulty in measuring from the SDC campus!

C152-6

You are trying to please some people by setting a 30' height limit for new construction. You state that existing construction is often above this height. Setting the limit to 35' would make more sense from an architectural point of view. That slight flexibility would allow for more interesting design of 3-story buildings for low income housing. Yes, you do want to make that housing attractive and pleasant for the $1 million plus owners to look at.

C152-7

While you tear down and/or remodel housing you could be intelligent and get some prefab housing. There are now some great companies that could ship in 20'x20' units for $50,000 with kitchen and bath all ready to connect. Later on, you could move them, stack them, etc. and create some great low income housing. Sorry for that idea, cuts into the profit of the developer!

The present design has a road and lights too close to the creek. Wild life is not considered in the Report, only humans. I object!

It is obvious, that the single family homes and the hotel are just there, to attract a developer. None of those are what is needed. All the housing should be low income housing, at different levels.

C152-8

I object to the intention to make 1 person rich at the benefit of so many hardworking people, who have to live over an hour away from their jobs, because of the cost of construction.

Maud Hallin
Glen Ellen Resident
Retired CPA

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: support@megbeeler.com
To: Brian Oh
Cc: district4; James Gore; district5; Susan Gorin; David Rabbitt; engage@sdcspecificplan.com; PlanningAgency; Greg Carr; Caitlin Cornwall; Pat Gilardi; Larry Reed; Jacquelynne Ocana; Gina Belforte; Kevin Deas; Shaun McCaffery; Belen.Grady@sonoma-county.org; Melissa F Dowling; Chase Hunter; jim.sweeney@pressdemocrat.com
Subject: Comments on Draft EIR and Specific Plan for SDC, 9.21.22, Meg Beeler
Date: Wednesday, September 21, 2022 3:16:40 PM
Attachments: Screen Shot 2022-09-20 at 4.30.48 PM.png
L-DEIR. 9.21.22. Meg Beeler.pdf

EXTERNAL

Mr. Brian Oh, Comprehensive Planning Manager, Permit Sonoma
County of Sonoma
2550 Ventura Avenue Santa Rosa, CA 95403

Brian.Oh@sonoma-county.org

Sent via email; PDF attached

Re: Comments on Draft EIR and Specific Plan for SDC

Dear Mr. Oh,

Like many in the community, I believe the County has a once in a lifetime opportunity to stand out and lead at SDC in these times of climate crisis.

Yet the DEIR fails in significant ways to offer clear goals and standards (policies) for protecting the riparian corridors, the rights of nature, and our precious natural resources. In fact, *there are no stated goals for the creeks, wetlands, or beautiful lakes on the property*, and minimal policies are included. The DEIR needs *significant* modifications to be used as a tool for systematic implementation, *as required by the State*. I'd like your help with this. C153-1

I am commenting as a neighbor (living five minutes south of campus), a long-time hiker and passionate defender of the property, and a participant in the planning process for nearly 10 years in my role as Chair of Sonoma Mountain Preservation. Thank you for the opportunity.

Water is life, and *by setting goals and policies* to protect wetlands and riparian zones as a resource and respite for the community, and to protect migrating Coho and Steelhead, *both the DEIR and Specific Plan can be enhanced, set precedent, and lead the State.* Two specific goal-setting areas are central: Elevate creek protection and wildlife corridor flexibility by expanding buffers significantly; and enhance and protect rare, vulnerable wetlands and species there through setting them aside and abandoning the road through them. Just because buildings and asphalt were placed too close to the creeks in the past, there is no justifiable reason to continue outmoded practices. We know better, and the lack of studies done during this process is no excuse either.

If there were goals and policies that supported wetlands, there would be no proposed new road from Arnold Drive to Highway 12**.** A road will create substantive, adverse effects: on the protected wetlands that support documented endangered species, the wildlife corridor, and fire egress in the face of Diablo winds coming from the East (the road will be in the direct path of 2017 fires.)[1] **These impacts are not mentioned or addressed in the DEIR; goals do not support the wetlands, and "best practices" do not address the cumulative effects of such a road; or the fact that roads and wildlife corridors do not mix well**. The approach of "We'll do needed studies later" gives developers no clear direction up front, and does not guarantee wetland and species protection or mitigation policy. C153-2

Riparian zone protection also lacks goals and policies to prioritize riparian protection.

The DEIR ignores current studies that say *creek setbacks should be up to 325 feet*.[2] In addition, the DEIR and Specific Plan are in conflict. Sometimes they propose a 50-foot setback next to Sonoma Creek; sometimes they refer to existing County standards of 30-foot setbacks; sometimes they ignore Mill Creek setbacks entirely (P 41 people/wildlife interface policies). In fact, some of the proposed "Institutional development" (map 2.4-1) is right on top of Mill Creek. C153-3

I request that you please:

1) Analyze current studies relating to riparian protection, wetlands protection, and related groundwater sustainability to conform to State and County climate goals and best environmental practices.
2) Set goals and policies for protection.
3) Cite studies used to support your decisions on creek buffers, wetlands incursions, wildlife travel, and lake protection.
4) Analyze the cumulative impacts and potential degradation of floral and faunal habitats, groundwater supply, and riparian zones caused by the increased housing density, noise, construction, traffic, and demolition proposed under the Preferred Plan. Provide analysis of the impacts of redevelopment on migratory fish species, such as coho and steelhead salmon. Also analyze whether these impacts would be mitigated by a smaller redevelopment such as the HPA.
5) In the DEIR, add creeks/riparian zones and wetlands to goals, significance criteria, and section 3.1.3.3 relevant policies, implementing actions, and policies. Note that in section 3.4.1.3, local land use regulations, Sonoma County General Plan 2020, the DEIR mentions policy LU10-a for establishing maximum densities and siting standards for wetlands, sensitive natural communities, and areas of essential habitat connectivity, yet the same DEIR offers none of these.
6) Adhering to the above studies, delineate—in both the Preferred Plan and the DEIR—clear boundaries for riparian setbacks, identify the entities that a developer must work with to facilitate creek and wetland protection, or explicitly require a developer to ensure that redevelopment of the core campus be done in such a way, and with sufficient buffers, as to protect the natural values of the open space.
7) Add specific, enforceable guidelines for riparian and wetland protections, specifying acreages and minimum boundaries on both the east and west sides of Arnold Drive, and limit allowed uses on these acreages to passive recreational uses such as hiking, mountain biking, horseback riding, photography, etc. If agricultural or commercial uses are permitted, ensure mitigations are identified and enforceable.
8) Please make sure that policies in the Specific Plan are consistent in Wildlife Corridor Policies (p40), People/Wildlife Interface (p 41), and policy 2-25 (p 42).
9) Please ensure that policies in the DEIR, notably policies 2-21, 2-23, 2-25, 2-27, and 2-30 are consistent.

C153-4

I appreciate the work done to date. As a private citizen reading the documents and preparing this letter, I have recently spent over ten hours, so I fully support Commissioner Carr's imperative that more time is needed for the Planning Commission to do its job. I know that with the political will to make this project right, in line with community values, we can succeed together. C153-5

Sincerely,

Meg Beeler

---

[1] See DEIR map 3.16-2, page 681, for path of 2017 fire and "constraints." See Specific Plan map 3.4-1 for 30 acres of wetlands that are contiguous with the proposed road, and Tables 3.4-1, 3.4-2, 3.4-3 for sensitive species, pp. 230 to 243.

[2] See "Center for Biological Diversity SDC Specific Plan NOP" dated 3.4.22, referenced in full at the end of this letter.

Addendum Center for Biological Diversity SDC Specific Plan NOP" dated 3.4.22:

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

A literature review found that recommended buffers around aquatic resources for wildlife often far exceeded 100 meters (~325 feet), well beyond the largest buffers implemented in practice (Robins, 2002). For example, Kilgo et al. (1998) recommend more than 1,600 feet of riparian buffer to sustain bird diversity. In addition, amphibians, which are considered environmental health indicators, have been found to migrate over 1,000 feet between aquatic and terrestrial habitats through multiple life stages (Cushman, 2006; Fellers & Kleeman, 2007; Semlitsch & Bodie, 2003; Trenham & Shaffer, 2005). For example, California red-legged frogs have been found to migrate about 600 feet between breeding ponds and non-breeding upland habitat and streams, with some individuals roaming over 4,500 feet from the water (Fellers & Kleeman, 2007). Newts have been documented traveling up to a mile from breeding ponds (Trenham, 1998). Western pond turtle nests have been found up to 1,919 feet from aquatic habitats and individuals have been documented to move regularly between aquatic habitats with long-distance movements of up to 2,018 feet (Sloan, 2012). Accommodating the more long-range dispersers is vital for continued survival of species populations and/or recolonization following a local extinction (Cushman, 2006; Semlitsch & Bodie, 2003).

In addition, more extensive buffers provide resiliency in the face of climate change-driven alterations to these habitats, which will cause shifts in species ranges and distributions (Cushman et al., 2013; Heller & Zavaleta, 2009; Warren et al., 2011). This emphasizes the need for sizeable upland buffers around streams and other aquatic resources, as well as connectivity corridors between heterogeneous habitats. Again, the EIR must adequately assess and mitigate impacts to local, regional, and global wildlife movement and habitat connectivity.

CC: Senator Mark McGuire, Senator Bill Dodd, Assemblyperson Cecelia Aguiar-Curry, Sonoma County Board of Supervisors

district4@sonoma-county.org, james.gore@sonoma-county.org, district5@sonoma-county.org

susan.gorin@sonoma-county.org, david.rabbitt@sonoma-county.org, engage@sdcspecificplan.com , PlanningAgency@sonoma-county.org

Commissioner Greg Carr Greg.Carr@sonoma-county.org, Commissioner Caitlin Cornwall Caitlin.Cornwall@sonoma-county.org, Commissioner Patricia Gilardi Pat.Gilardi@sonoma-county.org, Commissioner Lawrence Reed Larry.Reed@sonoma-county.org, Commissioner Jacquelynne Ocana Jacquelynne.Ocana@sonoma-county.org, Commissioner Gina Belforte Gina.Belforte@sonoma-county.org, Commissioner Kevin A. Deas Kevin.Deas@sonoma-county.org, Commissioner Shaun McCaffery Shaun.McCaffery@sonoma-county.org, Commissioner Belen Grady Belen.Grady@sonoma-county.org, Kenwood Press, Sonoma Index Tribune, Santa Rosa Press Democrat, SF Chronicle, Eldridge for All

Meg Beeler
16100 Sobre Vista Court
Sonoma, CA
September 21, 2022

Mr. Brian Oh, Comprehensive Planning Manager, Permit Sonoma
County of Sonoma
2550 Ventura Avenue Santa Rosa, CA 95403
Brian.Oh@sonoma-county.org
Sent via email

Re: Comments on Draft EIR and Specific Plan for SDC

Dear Mr. Oh,

Like many in the community, I believe the County has a once in a lifetime opportunity to stand out and lead at SDC in these times of climate crisis.

Yet the DEIR fails in significant ways to offer clear goals and standards (policies) for protecting the riparian corridors, the rights of nature, and our precious natural resources. In fact, *there are no stated goals for the creeks, wetlands, or beautiful lakes on the property*, and minimal policies are included. The DEIR needs *significant* modifications to be used as a tool for systematic implementation, *as required by the State*. I'd like your help with this. C154-1

I am commenting as a neighbor (living five minutes south of campus), a long-time hiker and passionate defender of the property, and a participant in the planning process for nearly 10 years in my role as Chair of Sonoma Mountain Preservation. Thank you for the opportunity.

Water is life, and *by setting goals and policies* to protect wetlands and riparian zones as a resource and respite for the community, and to protect migrating Coho and Steelhead, *both the DEIR and Specific Plan can be enhanced, set precedent, and lead the State.* Two specific goal-setting areas are central: Elevate creek protection and wildlife corridor flexibility by expanding buffers significantly; and enhance and protect rare, vulnerable wetlands and species there through setting them aside and abandoning the road through them. Just because buildings and asphalt were placed too close to the creeks in C154-2

the past, there is no justifiable reason to continue outmoded practices. We know better, and the lack of studies done during this process is no excuse either. C154-2

If there were goals and policies that supported wetlands, there would be no proposed new road from Arnold Drive to Highway 12**.** A road will create substantive, adverse effects: on the protected wetlands that support documented endangered species, the wildlife corridor, and fire egress in the face of Diablo winds coming from the East (the road will be in the direct path of 2017 fires.)1 **These impacts are not mentioned or addressed in the DEIR; goals do not support the wetlands, and "best practices" do not address the cumulative effects of such a road; or the fact that roads and wildlife corridors do not mix well**. The approach of "We'll do needed studies later" gives developers no clear direction up front, and does not guarantee wetland and species protection or mitigation policy. C154-3

Riparian zone protection also lacks goals and policies to prioritize riparian protection.

The DEIR ignores current studies that say *creek setbacks should be up to 325 feet*.2 In addition, the DEIR and Specific Plan are in conflict. Sometimes they propose a 50-foot setback next to Sonoma Creek; sometimes they refer to existing County standards of 30-foot setbacks; sometimes they ignore Mill Creek setbacks entirely (P 41 people/wildlife interface policies). In fact, some of the proposed "Institutional development" (map 2.4-1) is right on top of Mill Creek. C154-4

I request that you please:

1) Analyze current studies relating to riparian protection, wetlands protection, and related groundwater sustainability to conform to State and County climate goals and best environmental practices.
2) Set goals and policies for protection.
3) Cite studies used to support your decisions on creek buffers, wetlands incursions, wildlife travel, and lake protection.

C154-5

[1] See DEIR map 3.16-2, page 681, for path of 2017 fire and "constraints." See Specific Plan map 3.4-1 for 30 acres of wetlands that are contiguous with the proposed road, and Tables 3.4-1, 3.4-2, 3.4-3 for sensitive species, pp. 230 to 243.

[2] See "Center for Biological Diversity SDC Specific Plan NOP" dated 3.4.22, referenced in full at the end of this letter.

4) Analyze the cumulative impacts and potential degradation of floral and faunal habitats, groundwater supply, and riparian zones caused by the increased housing density, noise, construction, traffic, and demolition proposed under the Preferred Plan. Provide analysis of the impacts of redevelopment on migratory fish species, such as coho and steelhead salmon. Also analyze whether these impacts would be mitigated by a smaller redevelopment such as the HPA. C154-6

5) In the DEIR, add creeks/riparian zones and wetlands to goals, significance criteria, and section 3.1.3.3 relevant policies, implementing actions, and policies. Note that in section 3.4.1.3, local land use regulations, Sonoma County General Plan 2020, the DEIR mentions policy LU10-a for establishing maximum densities and siting standards for wetlands, sensitive natural communities, and areas of essential habitat connectivity, yet the same DEIR offers none of these. C154-7

6) Adhering to the above studies, delineate—in both the Preferred Plan and the DEIR—clear boundaries for riparian setbacks, identify the entities that a developer must work with to facilitate creek and wetland protection, or explicitly require a developer to ensure that redevelopment of the core campus be done in such a way, and with sufficient buffers, as to protect the natural values of the open space. C154-8

7) Add specific, enforceable guidelines for riparian and wetland protections, specifying acreages and minimum boundaries on both the east and west sides of Arnold Drive, and limit allowed uses on these acreages to passive recreational uses such as hiking, mountain biking, horseback riding, photography, etc. If agricultural or commercial uses are permitted, ensure mitigations are identified and enforceable. C154-9

8) Please make sure that policies in the Specific Plan are consistent in Wildlife Corridor Policies (p40), People/Wildlife Interface (p 41), and policy 2-25 (p 42). C154-10

9) Please ensure that policies in the DEIR, notably policies 2-21, 2-23, 2-25, 2-27, and 2-30 are consistent.

I appreciate the work done to date. As a private citizen reading the documents and preparing this letter, I have recently spent over ten hours, so I fully support C154-11

Commissioner Carr's imperative that more time is needed for the Planning Commission to do its job. I know that with the political will to make this project right, in line with community values, we can succeed together. C154-11

Sincerely,

Meg Beeler

Addendum Center for Biological Diversity SDC Specific Plan NOP" dated 3.4.22:

> A literature review found that recommended buffers around aquatic resources for wildlife often far exceeded 100 meters (~325 feet), well beyond the largest buffers implemented in practice (Robins, 2002). For example, Kilgo et al. (1998) recommend more than 1,600 feet of riparian buffer to sustain bird diversity. In addition, amphibians, which are considered environmental health indicators, have been found to migrate over 1,000 feet between aquatic and terrestrial habitats through multiple life stages (Cushman, 2006; Fellers & Kleeman, 2007; Semlitsch & Bodie, 2003; Trenham & Shaffer, 2005). For example, California red-legged frogs have been found to migrate about 600 feet between breeding ponds and non-breeding upland habitat and streams, with some individuals roaming over 4,500 feet from the water (Fellers & Kleeman, 2007). Newts have been documented traveling up to a mile from breeding ponds (Trenham, 1998). Western pond turtle nests have been found up to 1,919 feet from aquatic habitats and individuals have been documented to move regularly between aquatic habitats with long-distance movements of up to 2,018 feet (Sloan, 2012). Accommodating the more long-range dispersers is vital for continued survival of species populations and/or recolonization following a local extinction (Cushman, 2006; Semlitsch & Bodie, 2003).
>
> In addition, more extensive buffers provide resiliency in the face of climate change-driven alterations to these habitats, which will cause shifts in species ranges and distributions (Cushman et al., 2013; Heller & Zavaleta, 2009; Warren et al., 2011). This emphasizes the need for sizeable upland buffers around streams and other aquatic resources, as well as connectivity corridors between heterogeneous habitats. Again, the EIR must adequately assess and mitigate impacts to local, regional, and global wildlife movement and habitat connectivity.

CC: Senator Mark McGuire, Senator Bill Dodd, Assemblyperson Cecelia Aguiar-Curry, Sonoma County Board of Supervisors
district4@sonoma-county.org, james.gore@sonoma-county.org, district5@sonoma-county.org susan.gorin@sonoma-county.org, david.rabbitt@sonoma-county.org, engage@sdcspecificplan.com , PlanningAgency@sonoma-county.org
Commissioner Greg Carr Greg.Carr@sonoma-county.org, Commissioner Caitlin Cornwall Caitlin.Cornwall@sonoma-county.org, Commissioner Patricia Gilardi Pat.Gilardi@sonoma-county.org, Commissioner Lawrence Reed Larry.Reed@sonoma-county.org, Commissioner Jacquelynne Ocana Jacquelynne.Ocana@sonoma-county.org, Commissioner Gina Belforte Gina.Belforte@sonoma-county.org, Commissioner Kevin A. Deas Kevin.Deas@sonoma-county.org, Commissioner Shaun McCaffery Shaun.McCaffery@sonoma-county.org
Commissioner Belen Grady Belen.Grady@sonoma-county.org
Kenwood Press, Sonoma Index Tribune, Santa Rosa Press Democrat, SF Chronicle

To: Brian Oh, Comprehensive Planning Manager Permit Sonoma
County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403
Brian.Oh@sonoma-county.org

From: Michael Gill, Glen Ellen resident

Thank you for the preparation of the DEIR and Specific Plan and earlier documents and for the opportunity to review and comment on them. I certainly am aware that outlining a future path for this valuable property is not easy, but we all need to get it right before redevelopment starts. My comments result from my experiences of working with environmental cleanup and land reuse issues at closed military bases around the Bay Area, as well as living part time in Glen Ellen.

C155-1

I look forward to receiving Permit Sonoma's responses to my comments and hope the final documents presented to the County are modified to reflect what I see is a very consistent call for a reduction in scope of the project. These changes will ensure that the open space is protected and the nearby small communities retain their charm and value, while meeting the goals of adding some needed housing.

Specific Plan General Comments.

SP-1. Reduce the Scale. I understand the State of California drivers for the turnover and redevelopment of this property (housing and financial stability). It is a valuable piece of land, which makes sense to reuse to help alleviate the shortage of housing stock for our residents. The question is how to most appropriately mesh it with the existing neighborhoods of Glen Ellen.

C155-2

According to wikipedia, the population of Glen Ellen is less than 1000 people (2010 census showed 784, in 2000 it was 992 people). If the proposal to build 1000 new residences happens, the estimate in the Specific Plan is that the town will grow by 2400 people. Or even more for the "High Development" alternative (1250 residences and 3000 people). This does not even include the 900+ workers. Given the current population and semi-rural makeup of the area, that growth will totally change Glen Ellen. Growth is predictably inevitable in most of California, but this kind of growth would strain existing services and from what I've read, isn't palatable for the existing residents. Given the need for housing, perhaps a more acceptable number of residences would be 300 units here, while other parts of the Sonoma County can share the load to provide additional housing. This would still amount to about 720 new residents, which almost doubles the current population. That alone is a challenge for all of the resource needs covered in the

Specific Plan and EIR (water supply, schools, utilities and services, roads, fire access/egress, etc.), but much less so than 1000 new units.

C155-2

A visual tool that Permit Sonoma could use to better illustrate what "x" residences looks like would be to provide a map overlay example of an existing neighborhood where 300 or 1000 or whatever housing units already exists. This is something people can envision and get a better idea of what the proposed numbers really mean.

One example is University Village in Albany, CA, which is a residential neighborhood of dense homes. This is the development where many UC Berkeley married grad students reside. It has 974 units (multi-family attached townhouse style) on 77 acres (per wikipedia). I'm uncertain of the population. Locally, an example might highlight the Madrone or Grove Apartments in Eldridge or the "Springs" area along Hwy 12. How many people reside in those homes over how many acres? Those comparisons could offer readers something tangible to envision what this proposal means for SDC.

C155-3

SP-2. Adjust the Mix. Understandably, there is a need to provide housing and that the plan be financially sustainable. To achieve that, I would propose that the SDC management more closely mimic the Presidio model in San Francisco. That is, a “Trust” would be created to oversee the mix of non-profits and some businesses that would co-exist with housing on the 200 acres. I would also propose that all housing be "affordable" housing, as that would provide a bigger dent than the current proposal. Three hundred affordable homes meet more need than 250 affordable homes (25% of 1000). They could be of medium/flex density as outlined in the Plan. Those people with the financial ability can still buy property in the Valley of the Moon. But they don't need the SDC. SDC housing should fill a bigger need and provide affordable housing.

C155-4

Part of the guiding principles in the Plan call for a mixed use scenario. I'd propose putting more weight on non-profits and small businesses than housing to utilize the existing 200 acres and keep the population lower. With today's world tending towards more work-at-home than in-office work for white collar jobs, less space per non-profit would be needed, therefore offering a quieter campus feel than what would have been possible pre-pandemic to support the venture.

Non-profits should be encouraged to put forth plans, not just a housing developer.

SP-3. Power. I'm glad to see that renewable energy is to be used on site, as mentioned in Section 6.2. Perhaps implicit in the text, it should be noted more clearly that current California construction rules require new homes in California to install solar as part of the project. The text should state that requirement for the SDC residential development. This "California Solar Mandate" took effect January 1, 2020.

C155-5

SP-4. Water. Water supplies are noted in Section 6.3, but it appears that the issue is not really settled. The text states:

"Determining the ownership and use of these water rights will be another critical decision for SDC's water supply going forward."

This is a huge challenge and needs early resolution. This could be a deal breaker and needs to be settled before approval of any plans. Has anyone from Permit Sonoma asked the VOMWD for data about water use and/or availability? VOMWD allows local residents to track our water use by the hour and this helps detect leaks. We are also asked to be diligent with our irrigation uses. It's clear they are concerned about limited supply due to the drought. Even with grey water and recycled water as part of the mix (Policy 6-10), can VOMWD actually supply enough water for the proposed development??

C155-6

SP-5. Open Space. I totally agree with the plan's protection of the 700+ open space acres. It is a valuable space that I have enjoyed many times and hope to in the future.

_____

Draft Environmental Impact Report Comments

DEIR-1. Safe Cycling. In both the Specific Plan and DEIR, multi-modal transportation alternatives are discussed often, including high quality bicycle facilities. This is a good thing, given the increased population and little new road infrastructure. The current roads are small and sometimes already busy. It is an important part of the transportation equation and very welcome. But any details and "regulatory teeth" to actually make this happen seem missing. Many of the improvement plans have been around for 10 years or more (e.g., 2010 Sonoma County Bicycle and Pedestrian Master Plan). They are outlined in Section 3-14.3 and include the Sonoma Valley Trail, Class II bike lanes along the entirety of Arnold Drive between Glen Ellen and Highway 116, and more. While implementing these plans would go a long way to making cycling safer in the SDC area, how will the SDC project actually make these proposals a reality? It's not difficult to envision waiting more years for the County and State to take action, which will result in longer term unsafe cycling from new traffic growth around SDC.

C155-7

The real safety improvements necessary are beyond the north/south borders of SDC. If the developer is serious about making SDC multi-modal, then bike routes north and south of SDC must be safe. It's not just about riding on the 200 acres. It needs to go beyond the borders. People will rides their bikes to and from SDC if it's safe. Maybe the SDC redevelopment can be the catalyst to get these projects rolling!

DEIR-2. Existing Bike Trails. These two policies are from the DEIR (page 438) and they appear elsewhere as well:

3-15 Establish a new community bikeway connecting Railroad in Eldridge to Carmel Avenue in Glen Ellen by removing barriers and installing appropriate signage and crossings.

3-16 Create a multi- use creek trail running parallel to Arnold Drive that connects to a greater Glen Ellen-Eldridge community bikeway.

I would note that this bikeway already exists. While a little work still needs to be done (open a gate and add signs), the Specific Plan isn't really presenting anything new here. Please recognize what's already there and don't take credit for something that is already done.

C155-8

DEIR-3. Support for Additional Comments. In addition to my cycling related comments above, I agree with the DEIR analysis provided by the following entities, who are much more articulate than me on many topics. I would defer to them for additional comments on the DEIR. We are consistent in concluding that no one wants the kind of proposed large-scale growth from the redevelopment of SDC. Some housing and other uses are needed and inevitable, but not the proposed amount. What they say makes total sense and I wish to add my voice to the comments from the following groups, which appear on the Save Our Space website.
http://www.eldridgeforall.org/

C155-9

North Sonoma Valley Municipal Advisory Council
Springs Municipal Advisory Council
Teri Shore, Environmentalist
Sonoma Mountain Preservation
Meg Beeler
State Alliance for Firesafe Road regulations (SAFRR)
Vicki Hill, MPA
Bennett Valley Community Association
Arthur Dawson
Mark Newhouser and Ellie Insley
Paul Rockett
Sharon Church

Sonoma Mountain Preservation

September 21, 2022

Brian Oh
Comprehensive Planning Manager
Permit Sonoma, County of Sonoma
2550 Ventura Avenue
Santa Rosa CA 95403
[via email]

RE: Draft Environmental Impact Report and Preferred Specific Plan for redevelopment of the Sonoma Developmental Center in Glen Ellen

Dear Mr. Oh,

We appreciate this opportunity to comment on the draft environmental impact report (DEIR) and preferred Specific Plan for redevelopment of the Sonoma Developmental Center (SDC).

While we acknowledge the conflicting directives laid out in the legislation authorizing the specific planning process for the property and recognize the difficulty of making meaningful connections with stakeholders in pandemic times, we must express our overall disappointment with the DEIR and Preferred Plan, which do not reflect community input as we've witnessed in public meetings and in letters over the years-long planning process. The scale of proposed redevelopment of the 180-acre core campus is fundamentally incompatible with the rural character of the surrounding community and the north Sonoma Valley, presents a clear danger to the safety of current and future residents of the Valley in the inevitable event of wildfire, and threatens the integrity of Sonoma Mountain's irreplaceable natural resources — habitats for keystone flora and fauna, the health of the Sonoma Valley Wildlife Corridor, water quality, air quality, recreational opportunities, and historic, tribal, and modern cultural values.

C156-1

The DEIR fails to adequately or clearly describe meaningful, enforceable mitigations for the environmental impacts of redevelopment at the scale proposed, as required by the California Environmental Quality Act (CEQA). It fails to clearly delineate cumulative

C156-2

impacts. It does not provide sufficient analysis to give decision-makers all the information they need to satisfactorily draw conclusions about the environmental consequences of the Preferred Plan. It is our hope that by addressing the questions that follow, applicable, effective, enforceable mitigations will be identified and instituted that materially decrease or eliminate those impacts.

C156-2

General concerns/questions

The DEIR indicates that, across the board, the environmental impacts of the Preferred Plan and the Historic Preservation Alternative (HPA), which is acknowledged as environmentally superior per CEQA, are "largely comparable." The DEIR also states that the HPA is less superior in terms of energy use, biological resources, and wildfire risk (ES.4.2). Given the significant differences in scale of the two alternatives — the HPA is half the size of the Preferred Plan — these conclusions defy logic.

C156-3

1) Please explain how construction of 1,000 homes occupied by 2,500 people has the same environmental impact across virtually every category studied in the DEIR as does providing 450 homes occupied by 1,125 people (a 55% reduction)? Which studies support this finding?

2) Please explain how providing workspace for 900 people has the same environmental impact across virtually every category studied in the DEIR as does providing workspace for 600 people (a 33.3% reduction). Which studies support this finding?

3) Please explain how the HPA—which translates to less demolition through adaptive reuse of historic structures, less construction, fewer vehicle miles traveled, and fewer people on the property—uses more energy, has a greater impact on biological resources, and increases wildfire risk than the Preferred Plan, as stated in the DEIR (ES 4.2). Which studies support this finding?

Impacts specific to Sonoma Mountain

The entire 945-acre SDC property, including the developed core campus, is located within one of the last rural regions on the Sonoma Valley floor, with the mostly undeveloped slopes of Sonoma Mountain forming the entire western boundary and serving as a viewshed/mountain backdrop; as an informal natural reserve/safe haven for native flora and fauna; and as an informal recreational resource for hikers, cyclists, and equestrians from throughout Sonoma County and beyond. Further, historic residential use of the SDC by individuals with developmental disabilities and their caregivers had minimal human-caused environmental impacts on the property's open spaces. Redevelopment at the scale in the Preferred Plan creates an urban footprint within this

C156-4

historically rural zone, significantly increasing human-caused environmental impacts on a number of areas identified under CEQA (i.e., Aesthetics [3.1]; Biological Resources [3.4], and Public Services and Recreation [3.13], to name a few). To mitigate impacts of any redevelopment on the historic, minimal-impact, rural quality of the property, and to ensure the viewscape is preserved, we request that:

C156-4

1) The DEIR include mitigation measures to compensate for the loss of the rural attributes of the property at its current baseline, or a baseline that dates back no further than 10 years. Please specify which measures in the current DEIR address these impacts, and which studies support them.

C156-5

2) Please study, provide mitigation measures, and document how incorporating adaptive reuse of buildings into the HPA proposal, with its smaller human footprint, would impact environmental goals.

3) The SDC's open space currently sees frequent use by recreationalists from all over Sonoma County and beyond. That use increased markedly during the pandemic, despite restrictions on travel. The level of use has remained high as the pandemic has waned. The addition of 2,500 residents, 900 workers, visitors to the proposed hotel and conference center, and their friends and family, as outlined in the Preferred Plan, will add an exponential burden on the property's open space, much of which is on the skirts of Sonoma Mountain. Please analyze what that increase in recreational use means for aesthetics, biological resources, cultural, tribal, and historic resources, and water and air quality, and identify mitigations for those impacts.

C156-6

4) Please analyze the cumulative impacts and potential degradation of floral and faunal habitats, groundwater supply, and riparian zones across the site, including the 750+ acres identified as open space, caused by the increased housing density, noise, construction, traffic, and demolition proposed under the Preferred Plan. Please provide analysis of the impacts of redevelopment on migratory fish species, such as coho salmon. Please also analyze whether these impacts would be mitigated by a smaller redevelopment such as the HPA.

C156-7

5) The intent to preserve and protect the 750+ acres of open space surrounding the 180-acre core campus has been codified by the state in its enabling legislation and has been promised by the county in the Preferred Plan. However, neither the Preferred Plan and nor the DEIR delineate clear boundaries for the open space to be transferred, identify a mechanism of transfer, clearly identify the entities that a developer must work with to facilitate transfer, or explicitly require a developer to ensure that redevelopment of the core campus be done in such a way, and with sufficient buffers, as to protect the natural values of the open space. Please add specific, enforceable guidelines for the open space

C156-8

transfers, specifying acreages and minimum boundaries on both the east and west sides of Arnold Drive, and limiting allowed uses on these acreages to passive recreational uses such as hiking, mountain biking, horseback riding, photography, etc.

C156-8

6) Agricultural and commercial uses should not be permitted in open space intended to be parkland. Please clarify that uses such as those identified in Table 4.3 will not be permitted in open space identified for transfer to park agencies, and that mitigations for such uses on other open space parcels are identified and enforceable.

C156-9

Thank you for the time and effort you have put into developing the DEIR and preferred Specific Plan for the property. We look forward to receiving Permit Sonoma's responses to our concerns, and hope the final plan and EIR presented to the Planning Commission for comment and to the Board of Supervisors for approval reflect substantive changes that ensure the integrity of the natural values of Sonoma Mountain, and the communities that surround it, remain intact.

Respectfully,

Meg Beeler, Chairperson
Sonoma Mountain Preservation
Traditional territory of Southern Pomo, Wappo, Patwin, and Coast Miwok

On behalf of Sonoma Mountain Preservation's Board of Directors
Kim Batchelder, Bob Bowler, Arthur Dawson, Avery Hellman, Nancy Kirwan, Larry Modell, Tracy Salcedo, Teri Shore, Helen Bates, Mickey Cooke, Marilyn Goode, David Hansen, and Lucy Kortum

cc:
Senator Mike Thompson, Assembly member Cecilia Aguiar-Curry, Senator Mike McGuire, Senator Bill Dodd, Sonoma County Planning Commission, Sonoma County Board of Supervisors, Springs Municipal Advisory Council, North Sonoma Valley Municipal Advisory Council, Sonoma Valley Citizens Advisory Commission, Sonoma City Council, Permit Sonoma, Department of General Services (Gerald McLaughlin)

From:	nancyeverskirwan@gmail.com
To:	Tracy Salcedo
Cc:	Brian Oh; Greg Carr; Caitlin Cornwall; Pat Gilardi; Larry Reed; Gina Belforte; Jacquelynne Ocana; Shaun McCaffery; Belen.Grady@sonoma-county.org; PlanningAgency; Logan.Pitts@sen.ca.gov; Senator.McGuire@senate.ca.gov; Senator.Dodd@senate.ca.gov; Wachsberg, Rebecca; Chaaban, Ezrah; Cecilia.Aguiar-Curry@asm.ca.gov; Gerald.McLaughlin@dgs.ca.gov; district4; James Gore; district5; Susan Gorin; David Rabbitt; SDC Specific Plan; Hannah Whitman; Arielle Kubu-Jones; Rebecca Hermosillo; Rep. Mike Thompson
Subject:	Re: Comments on DEIR and Preferred Specific Plan for SDC
Date:	Wednesday, September 21, 2022 10:22:00 AM
Attachments:	SMP_DEIR letter_FINAL_9-21-22.pdf

EXTERNAL

Thank you Tracy for your hard work, time and effort in putting this comment together for Sonoma Mountain Preservation. We are all hopeful that Permit Sonoma will in fact take community input seriously and consider the amount of oft repeated volunteer effort and informed and educated thought that went into most all the comments. After all it is our lives that will be impacted by this misconceived and miscalculated DEIR and Specific Plan.
Gratefully,
Nancy Kirwan

C157-1

NEK

> On Sep 21, 2022, at 10:36 AM, Tracy Salcedo <laughingwaterink@gmail.com> wrote:
>
> Hi Brian,
>
> On behalf of Sonoma Mountain Preservation, I have attached our comments on the draft environmental impact statement and preferrred specific plan for the Sonoma Developmental Center.
>
> Thank you for your consideration. We all hope, with the incorporation of community input into a plan that is truly community driven, we will create a wholesome, viable future for this very special place and for the people who love it.
>
> Kindly, Tracy
>
> **Tracy Salcedo**
> **Director**
> **Sonoma Mountain Preservation**
>
> (707) 246-0694
> laughingwaterink@gmail.com / laughink@vom.com
> laughingwaterink.com

C157-2

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

September 26, 2022

Mr. Brian Oh, Comprehensive Planning Manager
Permit Sonoma County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403
Brian.Oh@sonoma-county.org

Via E-mail Only

Subject: ***Review of Draft Environmental Impact Report Transportation Analysis***
Sonoma Developmental Center Specific Plan, Sonoma County, California

Dear Mr. Oh:

Griffin Cove Transportation Consulting, PLLC (GCTC) has completed a review of the transportation analysis completed with respect to the proposed Sonoma Developmental Center Specific Plan project (Project) in Sonoma County, California. Details regarding the Project are presented in the *Sonoma Developmental Center Specific Plan Public Review Draft* (Dyett & Bhatia, August 2022).

The proposed Project is the subject of a Draft Environmental Impact Report (DEIR) prepared for the County of Sonoma (Reference: Dyett & Bhatia, *Sonoma Developmental Center Specific Plan Draft Environmental Impact Report*, August 2022). Section 3.14 of the DEIR presents the transportation analysis. No separate technical report was prepared, although Appendix F to the DEIR is labeled "Traffic Model Data." We should note, however, that no traffic model data are actually presented in that appendix; instead, it simply provides a table that is virtually identical to DEIR Table 3.14-3: Projected Traffic Volumes in Plan Area. (DEIR p. 441)

C158-1

Our review focused on the technical adequacy of the transportation analysis presented in DEIR Section 3.14, including the detailed procedures and conclusions documented there.

BACKGROUND

The proposed Sonoma Developmental Center (SDC) Specific Plan project involves the potential redevelopment of the 180-acre "Core Campus" within the overall SDC site. According to the DEIR Executive Summary (p. 7), the Project would result in buildout of 1,000 housing units, 2,400 residents, and 940 jobs. More specific development plans are described in DEIR Section 3.14 – Transportation, as follows:

C158-2

- 435 single-family residential units,
- 345 multifamily residential units,
- 220 senior residential units,
- 40,000 square feet (SF) of commercial/retail space,
- 190,000 SF of office space,
- 70,000 SF of institutional space (described in DEIR Table 2.5-3 – Planning Area Non-Residential and Employment Buildout Summary (p. 80) as 30,000 SF of public space and 40,000 SF of institutional space),
- 120 hotel rooms, and
- 12.1 acres of recreational uses.

We note that the specific breakdown of housing unit types addressed in the transportation analysis is not presented in either the DEIR Project Description or in the Specific Plan document. Questions regarding the specific development plan are discussed in our comments below. C158-2

TRANSPORTATION ANALYSIS REVIEW

Our review of the DEIR transportation analysis for the proposed Sonoma Developmental Center Specific Plan project revealed several issues that must be addressed prior to certification of the environmental document and approval of the project by the County of Sonoma. These issues are presented below.

1. ***Flawed Analysis of Plan Consistency*** – Impact 3.14.4.5 (DEIR p. 443) addresses the issue of potential Project-related conflicts with "a program, plan, ordinance, or policy addressing the circulation system." Among the plans considered here is the Sonoma County General Plan 2020. The DEIR states that: C158-3

   > *Objectives CT-4.1 and CT-4.2 of the Sonoma County General Plan pertain to upholding vehicle level of service standards. As individual development projects occurring within the Proposed Plan complete traffic impact studies as required by the Sonoma County Department of Transportation and Public Works (DTPW), the potential exists for identification of locations where LOS* [Level of Service] *targets would be exceeded.*

   The General Plan objectives referenced here require operation at LOS C on roadway segments (except where exceptions have been adopted) and LOS D at intersections. Attachment 1 contains an excerpt from the General Plan, including the figure illustrating where LOS exceptions have been approved.

   The DEIR (p. 444) goes on to state:

   > *. . . while traffic congestion effects of the Proposed Plan or development of individual sites within the Planning Area may not comply with the LOS targets established in Sonoma County General Plan Objectives CT-4.1 and CT-4.2, for the purposes of the Proposed Plan's CEQA assessment this would not be considered an adverse environmental impact.* C158-4

   We believe this conclusion is erroneous. In fact, we believe that the failure to conform to level of service standards established within the County's adopted General Plan constitutes a clear "conflict with a program, plan, ordinance, or policy addressing the circulation system." Further, the failure to include any documentation within the DEIR regarding conformance to the General Plan LOS objectives is a significant deficiency.

   We note that a detailed traffic impact analysis has been conducted for the Project, although that document has not been included in the DEIR. Specifically, Footnote 118 (DEIR p. 410) references the *Focused Traffic Operations Analysis for the SDC Specific Plan* (W-Trans, August 2022 [actually July 6, 2022]). Although the traffic analysis is not part of the DEIR, we reviewed it to establish whether the Project conforms to General Plan Objectives CT-4.1 and CT-4.2. Our review revealed that the W-Trans report (p. 3) states: C158-5

   > *Under future conditions with implementation of the SDC Specific Plan, two intersections are projected to operate unacceptably if no modifications to the current roadway configurations are made. The intersection at Arnold Drive/Harney Street would operate unacceptably at*

> *LOS F during the p.m. peak hour . . . The future new intersection on SR 12 at the new SDC Connector Road would have unacceptable LOS E operation on the stop-controlled connector road approach . . .*

C158-5

Although improvements are identified that would remedy these deficiencies, no assurance is provided that those measures would be implemented.

The focused traffic study (p. 5) also says:

> *With the additional traffic generated by the buildout of the SDC Specific Plan, the segment of SR 12 between Arnold Drive and Trinity Road would continue to operate below the County's standard at LOS D, as would the segment of Arnold Drive between SDC and Madrone Road.*

C158-6

Although these road segments are also identified as falling short of the County LOS standard without the Project, no mitigation measures were proposed to allow operation at an acceptable LOS. In any event, it is clear that these two roadway segments will fail to meet the County LOS standard upon completion of the Project, thereby violating the General Plan objectives.

In conclusion, the information necessary to address conformance with General Plan Objective CT-4.1 and CT-4.2 exists, but was not included within the DEIR, which would have allowed public review. As described here, that information indicates that the Project fails to conform to the County's LOS standard, as two intersections and two road segments will operate at unacceptable levels of service upon completion of the Project, and no assurance was provided that these deficiencies will be remedied. Thus, a significant impact exists with respect to conflicts with the adopted General Plan.

Finally, the focused traffic study must be incorporated into the DEIR. The provision of this new information within the DEIR provides grounds for recirculation of the document.

2. ***Project Trip Generation is Underestimated*** – The DEIR (p. 440) states that the Project will generate 5,736 daily trips. Of that total, 1,398 of those trips (i.e., 24.4 percent of the total) will be "captured within the campus itself," resulting in net external trip generation of 4,338 trips. We believe the DEIR has substantially underestimated the volume of traffic associated with the Project.

   The DEIR's Project trip generation estimate was developed using the SCTM19 travel demand forecasting model maintained by the Sonoma County Transportation Authority (SCTA). The specific trip generation factors employed were not revealed in the DEIR. Consequently, it is impossible for the reviewing public to evaluate the reasonableness of either those factors or the resulting trip generation estimates.

C158-7

   Traffic impact analyses for proposed development projects commonly use information presented in the Institute of Transportation Engineers (ITE) document *Trip Generation Manual* (Eleventh Edition, 2021) to develop project-related trip generation estimates. Although we acknowledge that the ITE trip rates often differ from corresponding rates contained within travel demand forecasting models such as the SCTM19 model, comparison of an estimate based on the ITE information versus the estimate documented in the DEIR provides a valuable perspective on the credibility of the DEIR Project's transportation analysis.

Two scenarios are addressed here. The first employs the Project plan as described in DEIR Section 3.14 - Transportation, and the second considers a maximum residential development scenario based on information in the Specific Plan document.

DEIR Section 3.14 – Transportation Project Plan Scenario

Table 1 provides a trip generation estimate for the Project based on the plan as described in DEIR Section 3.14 - Transportation and on commonly-accepted procedures documented in the ITE *Trip Generation Manual*. That estimate reflects the following parameters:

- The land use values described in DEIR Section 3.14 – Transportation, including the specific housing type breakdown, were evaluated.
- The ITE *Trip Generation Manual* typically provides two methods to develop an estimate of project-related traffic: one using an average rate and one using a fitted curve equation. For this analysis, we have reported whichever of those two methods provides a lower value, so as to provide a conservative estimate of Project trips. The trip generation data sheets for this estimate are presented in Attachment 2.
- Within each housing type, it was assumed that 25 percent of the residential units would be inclusionary income-restricted units, in order to conform to Specific Plan Policy 4-14 (Specific Plan, p. 4-25). Because these units generally produce lower volumes of traffic, this assumption again results in a conservative trip generation estimate.
- Because the specific uses included within the public/institutional land use are not currently well-defined, no trip generation estimate was included for that land use category.

As shown in Table 1, the Project is estimated to generate 12,253 daily trips. This is obviously substantially (i.e., 114 percent) greater than the DEIR estimate of 5,736 daily trips. As we stated above, model-based trip generation factors often differ from the ITE trip rates. However, a difference of this magnitude is exceptional and is greater than we have ever seen. Consequently, we question the validity of the DEIR trip generation estimate.

C158-8

Table 1
Daily Trip Generation[1]
1,000 Dwelling Units (25 Percent Inclusionary Income-Restricted)

Land Use		Size	Daily Trips
Residential			
Single-Family Residential	Market Rate	326 DU[2]	2,993
	Affordable[3]	109 DU	524[4]
Multifamily Residential	Market Rate	259 DU	1,736
	Affordable	86 DU	414
Senior Residential	Market Rate	165 DU	711[5]
	Affordable	55 DU	178[6]
Residential Subtotal		1,000 DU	6,556
Non-residential			
Commercial		40,000 SF[7]	2,701
Hotel		120 Rooms	959
Office		190,000 SF	2,028
Public/Institutional		70,000 SF	--[8]
Recreation		12.1 Acres	9
Non-residential Subtotal			5,697
		TOTAL	**12,253**

Notes:
1 Reference: Institute of Transportation Engineers, *Trip Generation Manual,* 11th Edition, 2021.
2 Dwelling unit.
3 Affordable housing assumed to be 25 percent of all residential types.
4 Based on ITE Land Use Code 223 – Affordable Housing – Income Limits, which is defined as including only multifamily housing. This represents a conservative assumption regarding trip generation for this land use category.
5 Based on ITE Land Use Code 251 – Senior Adult Housing – Single Family.
6 Based on ITE Land Use Code 251 – Senior Adult Housing – Multifamily. This rate is conservative, since "Affordable Housing" rate is 48 percent higher than this.
7 Square feet.
8 No estimate is possible, given the lack of information regarding specific land uses in this category.

Maximum Residential Development Scenario

As we indicated above, we have questions regarding certain aspects of the proposed development plan. One such question concerns how many residential units will be constructed. Although the DEIR transportation analysis addresses development of 1,000 residential units, the Specific Plan indicates that a greater number of units is possible.

Table 4-2: Minimum and Maximum Housing Units by District (Specific Plan, p. 4-12) provides detailed information regarding how many housing units could be constructed within various subareas of the Project. That table reveals that the maximum number of housing units that could potentially be built is 1,210. Further, the notes to the table state that "[u]p to 10% deviations from the minimum and maximum by district are subject to approval by the Community Development Director." If such a deviation from the maximum values were to be approved, the total number of residential units would increase to 1,331 (1,210 X 1.10 = 1,331). C158-9

To assess the impacts of this maximum development scenario with respect to the volume of traffic associated with the Project we have performed a second trip generation analysis, as summarized in Table 2. The basic parameters of this analysis are similar to those described above for the Table 1 analysis. Attachment 3 contains the data sheets for the residential uses; the non-residential data sheets are unchanged from the previous analysis.

With consideration of the larger number of residential units, the Project's total daily trip generation increases to 14,290. This is 149 percent greater than the value claimed in the DEIR.

Summary

The analysis presented here indicates that the Project's daily trip generation has been substantially underestimated. This finding relates directly to the Project's impact with respect to vehicle-miles traveled (VMT). The DEIR acknowledges the relationship between trips and VMT at p. 447, where it says: C158-10

> *. . . trip reductions should in theory translate to roughly equivalent VMT reductions.*

Thus, trip increases, as we have described, will similarly translate to roughly equivalent increases in VMT. Further, as described at DEIR p. 425, the calculation of VMT:

> *. . . is based on the estimated number of vehicles* [actually, vehicle-trips] *multiplied by the distance traveled by each vehicle.*

If, as we have found, the number of vehicle trips is 2.14 – 2.49 times greater than the value considered in the DEIR, then the VMT values associated with the Project will also be 2.14 – 2.49 times greater than the DEIR findings.

Although the DEIR has already concluded that the Project's VMT impact will be significant and unavoidable, it has failed to accurately portray the magnitude of that impact. This is a serious deficiency in the DEIR, which suggests a need to reevaluate the Project's impact and recirculate the DEIR for further public review.

Table 2
Daily Trip Generation[1]
1,331 Dwelling Units (25 Percent Inclusionary Income-Restricted)

Land Use		Size	Daily Trips
Residential			
Single-Family Residential	Market Rate	434 DU[2]	3,894
	Affordable[3]	145 DU	680[4]
Multifamily Residential	Market Rate	345 DU	2,287
	Affordable	114 DU	548
Senior Residential	Market Rate	220 DU	948[5]
	Affordable	73 DU	236[6]
Residential Subtotal		1,000 DU	8,593
Non-residential			
Commercial		40,000 SF[7]	2,701
Hotel		120 Rooms	959
Office		190,000 SF	2,028
Public/Institutional		70,000 SF	???[8]
Recreation		12.1 Acres	9
Non-residential Subtotal			5,697
		TOTAL	**14,290**

Notes:
1 Reference: Institute of Transportation Engineers, *Trip Generation Manual,* 11th Edition, 2021.
2 Dwelling unit.
3 Affordable housing assumed to be 25 percent of all residential types.
4 Based on ITE Land Use Code 223 – Affordable Housing – Income Limits, which is defined as including only multifamily housing. This represents a conservative assumption regarding trip generation for this land use category.
5 Based on ITE Land Use Code 251 – Senior Adult Housing – Single Family.
6 Based on ITE Land Use Code 251 – Senior Adult Housing – Multifamily. This rate is conservative, since "Affordable Housing" rate is 48 percent higher than this.
7 Square feet.
7 No estimate is possible, given the lack of information regarding specific land uses in this category.

3. ***Internal Trips are Substantially Overestimated*** – As described above, the DEIR transportation analysis (p. 440) claims that 1,398 of the Project's total 5,736 daily trips will occur completely within the Project site. In other words, 24.4 percent of the vehicle-trips resulting from the Project would never leave the Project site. These trips, which are typically referred to as internal trips, would have no impact on any element of the transportation system beyond the Project boundaries. Because this a substantial percentage, it seemed appropriate to test the validity of this claim. C158-11

   Various tools are available to develop estimates of internal tripmaking at mixed-use developments such as the proposed Project. Three such tools have been employed here:

   - Institute of Transportation Engineers/NCHRP 684 Internal Trip Capture Estimation Tool – As described in the ITE *Trip Generation Handbook* (Third Edition, September 2017, p. 46), this approach is based on procedures documented in National Cooperative Highway Research Program (NCHRP) Report 684: Enhancing Trip Capture Estimation for Mixed-Use Developments. That report documents the extensive research, data collection, and analysis undertaken in developing and validating the recommended procedure.
   - U.S. Environmental Protection Agency (EPA) Mixed Use Trip Generation Model – As described at the EPA website (https://www.epa.gov/smartgrowth/mixed-use-trip-generation-model), this model was developed cooperatively between EPA and ITE. Six metropolitan regions were evaluated in detail and the resulting model was validated against actual traffic counts at mixed-use developments across the country. This model is in use in California, Washington, and New Mexico, and according to EPA the model has been adopted as a statewide standard by the Virginia Department of Transportation. C158-12
   - San Diego Association of Governments (SANDAG) Smart Growth Trip Generation Spreadsheet Tool – Similar to the EPA method, this tool employs trip generation rates specific to the San Diego region. Although the trip rates vary from the ITE rates, the internal trip capture results should be representative of a development similar to the proposed Project.

   The results of these analyses are summarized below.

   ITE/NCHRP 684 Internal Trip Capture Estimation Spreadsheet Tool C158-13

   Attachment 4 contains a copy of the spreadsheet illustrating the results of this analysis procedure. Although the spreadsheet tool allows for adjustments to be made to reflect transit usage and changes to vehicle occupancy, no such modifications were made. Doing so would simply reduce the number of vehicle-trips estimated (internal, external, and total) with no effect on the resulting internal trip percentages.

   As shown in Attachment 4, the model projects an internal capture percentage of nine percent (actually 8.8 percent). The gross total of 12,256 daily trips would be reduced to 11,180, with 1,076 internal trips estimated. (Note that three of the individual daily trip totals were rounded up to ensure equal numbers of entering and exiting daily trips in the spreadsheet. Thus, the total trip generation in the model is 12,256 instead of the 12,253 described earlier.)

EPA Mixed Use Trip Generation Model

C158-14

The results of this analysis are presented in Attachment 5. According to the EPA tool, the Project's 12,253 daily trips would be reduced to 11,291 external vehicle-trips (a difference of 962 trips). Those 962 internal trips include 796 vehicle-trips, 114 external walking trips, and 53 external transit trips.

Considering only vehicle-trips (and ignoring external walking and transit trips), the 796 internal vehicle-trips represent an internal capture rate of 6.5 percent.

SANDAG Smart Growth Trip Generation Spreadsheet Tool

C158-15

As described above, the SANDAG tool is very similar to the EPA tool, but with minor modifications to reflect local San Diego conditions. Nonetheless, it is believed to provide valuable perspective regarding the level of internal tripmaking at the proposed Project. The SANDAG results are provided in Attachment 6.

The SANDAG model estimates that a total of 996 trips will be in the form of 821 internal vehicle-trips, 120 external walking trips, and 55 external transit trips. The 821 internal vehicle-trips constitute 6.7 percent of the 12,253 gross total daily trips.

Summary

C158-16

The internal trip values derived from the three models presented here range from 6.5 to 8.8 percent, and all are substantially lower than the 24.4 percent value employed in the DEIR analysis. By substantially overstating the volume of traffic to be captured within the Project site, the number of external trips was excessively reduced. Consequently, the DEIR analysis has failed to accurately assess the off-site impacts of the Project.

Specifically, by underestimating the number of external trips, the analysis has similarly understated the Project-related VMT, which serves as basis for determining the significance of the Project's transportation impact. In short, the Project's transportation impact has been greatly understated due to a failure to provide an accurate estimate of the volume of traffic resulting from the Project.

Table 3
Internal Vehicle-Trip Percentage Summary

Source	Total Trips	Internal Vehicle-Trips	Net External Vehicle-Trips	Internal Vehicle-Trip Percentage
DEIR	5,736	1,398	4,338	24.4%
ITE Spreadsheet Tool	12,256	1,076	11,180	8.8%
EPA Mixed Use Trip Generation Model	12,253	796[1]	11,291	6.5%
SANDAG Smart Growth Trip Generation Spreadsheet Tool	12,253	821[2]	11,257	6.7%

Notes:
[1] EPA model also projects 114 external walking trips and 53 external transit trips.
[2] SANDAG model also projects 120 external walking trips and 55 external transit trips.

4. ***Flawed Project Traffic Assignment*** – DEIR Table 3.14-3: Projected Traffic Volumes in Plan Area (DEIR p. 441) presents traffic volume information for the three road segments that provide access to the site – Arnold Drive north and south of the site and the proposed Highway 12 connector. (Orchard Road connects to Jack London State Park to the west of the site, but would not be expected to carry a meaningful volume of Project traffic. That road is not included in the DEIR analysis.) Information is presented for various scenarios, both with and without the Project and with and without the Highway 12 connector. Based on this information, it is possible to derive the Project traffic assignment – that is, how many of the Project's claimed 4,338 external daily trips are estimated to be added to each of these three road segments. Table 4 below summarizes that information. (We should note that we were unable to confirm all of the existing traffic volumes, as DEIR p. 419, which apparently includes some of that information, was missing from the document that was available for downloading from the county website.)

C158-17

   In each scenario analyzed, the volume of Project traffic assigned to the regional access roads falls substantially short of the 4,338 external trips claimed to be generated by the Project. In both scenarios involving implementation of the Highway 12 connector, the volume of traffic projected on Arnold Drive between Harney and Glen Ellen is actually shown to be reduced upon completion of the Project, which seems unlikely. The volume of Project traffic and its relationship to the claimed Project trip generation is summarized as follows:

   - Existing + Project (With Highway 12 Connector): 4,070 Daily Trips (93.8% of Project trips)
   - Existing + Project (No Highway 12 Connector): 3,410 Daily Trips (78.6% of Project trips)
   - Future + Project (With Highway 12 Connector): 3,320 Daily Trips (76.5% of Project trips)
   - Future + Project (No Highway 12 Connector): 2,650 Daily Trips (61.1% of Project trips)

   The DEIR analysis apparently fails to include a substantial portion of the Project traffic. Oftentimes, this sort of oddity is described as being due to existing or "background" traffic being diverted to other routes when the Project traffic demand is added to the study area roads. This can occur in a travel demand forecasting model when the added traffic causes a particular route to become congested and have high travel times, so the model redirects traffic to other, less congested routes so as to create an equilibrium condition on the study area road network with respect to travel time.

C158-18

   In this case, though, no such alternative routes are available, so this explanation would not apply. The only explanation that does seem to apply is that the analysis is defective, and that it fails to accurately account for the full volume of Project traffic. The significance of this deficiency is magnified by the fact that the DEIR analysis only includes about 38 percent of the actual volume of Project traffic (i.e., 4,338 external trips compared to the corrected values of 11,180 – 11,291 documented in Table 3).

   The transportation analysis must be revised to remedy these substantial deficiencies, and the new analysis must recirculated for public review.

Table 4 **Project Traffic Assignment Summary**			
	Daily Vehicle-Trips		
Scenario	Arnold Drive – Harney to Glen Ellen	Arnold Drive – Harney to Madrone Rd.	Highway 12 Connector
Existing Conditions with Highway 12 Connector			
Existing No Project	6,330	7,150	--
Existing + Project	6,220	9,940	1,390
Project Only	-110	2,790	1,390
TOTAL PROJECT TRAFFIC	**4,070**		
Existing Conditions - No Highway 12 Connector			
Existing No Project	6,330	7,150	--
Existing + Project	7,400	9,490	--
Project Only	1,070	2,340	--
TOTAL PROJECT TRAFFIC	**3,410**		
Future Conditions with Highway 12 Connector			
Future No Project	6,730	7,670	--
Future + Project	6,310	9,960	1,450
Project Only	-420	2,290	1,450
TOTAL PROJECT TRAFFIC	**3,320**		
Future Conditions - No Highway 12 Connector			
Future No Project	6,730	7,670	--
Future + Project	7,410	9,640	--
Project Only	680	1,970	--
TOTAL PROJECT TRAFFIC	**2,650**		
Reference: DEIR, Table 3.14-3: Projected Traffic Volumes in Plan Area, p. 441.			

5. ***Defective Vehicles-Miles Traveled Analysis*** – The analysis of VMT impacts (Impact 3.14-2, DEIR p. 445) indicates that the Project will have a significant and unavoidable impact, with a significant impact relative to Household VMT and less than significant impacts regarding Employment VMT and Total VMT per Service Population. A significant impact was also found with respect to induced VMT associated with the proposed connector to Highway 12 (which is described as an "east-west emergency access connection from the site"). (DEIR p. 447)

C158-19

We believe the VMT analysis is flawed, as described in the following sections.

Transportation Demand Management Effects

C158-20

The VMT analysis is summarized in DEIR Table 3.14-4: Planning Area VMT Metrics. (DEIR p. 446) That table includes a section labeled "Proposed Plan with 15% TDM Reduction," which is described as being for informational purposes and "reflect[s] a theoretical 15% reduction in VMT associated with required TDM measures." We believe this information is misleading, as no support is provided with respect to the feasibility of actually achieving a 15 percent reduction in VMT. Further, based on this "theoretical" information the DEIR makes the questionable and conclusory statement that (DEIR p. 447):

. . . it is likely that actual VMT will be less than the projections above.

Our analysis has suggested that, to the contrary, the actual VMT will be substantially greater than those projections. In fact, only one paragraph later the DEIR contradicts itself and recognizes the questionable nature of the suggested TDM benefits (DEIR p. 447):

C158-20

However, the ability for individual development projects to achieve a 15 percent reduction in VMT is uncertain.

Clearly, any statement regarding the potential benefits of implementing TDM measures at the Project must be taken with a sizable grain of salt.

Employment VMT Analysis

C158-21

As noted above, the DEIR analysis found a less than significant impact with respect to Employment VMT (also referred to as "Home-Work VMT per Worker" in the DEIR), with a finding of 4.8 home-based commute VMT per worker. (DEIR p. 445) Table 3.14-4 lists values for other pertinent geographical areas near the Project, as follows:

- Planning Area Baseline Average: 7.1 home-based commute VMT per worker,
- Countywide Baseline Average: 12.4 home-based commute VMT per worker, and
- Regional Baseline Average: 16.9 home-based commute VMT per worker.

These values raise questions regarding the validity of the DEIR's employment VMT finding of 4.8 home-based commute VMT per worker. This value is about 67 percent of the corresponding value for the Planning Area, 39 percent of the Countywide value, and only 28 percent of the Bay Area Region value. Without further substantiation of the DEIR's VMT analysis procedures and background parameters and inputs, it is difficult to readily accept that the Project's VMT result would be so vastly different from the other areas referenced above.

Unfortunately, the reviewing public is expected to blindly accept the output of the SCTM19 travel demand forecasting model even though, as described above, the model has obvious flaws with respect to its ability to estimate Project-related traffic volumes. In short, we question whether the employment VMT value derived for the Project is credible.

Proposed Policies Reducing VMT Impact

C158-22

In recognition of the Project's significant and unavoidable VMT impact, the DEIR addresses ways to reduce that impact. The primary approach to achieving this goal is apparently Specific Plan Policy 3-41, which states, in part (Specific Plan p. 3-12):

Require all development to reduce vehicle trips by at least 15 percent below rates listed by the Institute of Transportation Engineers Trip Generation manual using transportation demand management strategies.

As we described above, however, the Project's supposed trip generation, as reflected in Section 3.14 – Transportation, is already extremely low. According to the DEIR, the total daily trip generation is 5,736 trips/day. This includes trips associated with 1,000 residential dwelling units and substantial

non-residential development types although, unfortunately, no trip generation breakdown is provided between the residential and non-residential land uses.

C158-22

For perspective, if we totally ignore the non-residential development (a frankly ridiculous notion, given that this ignores 190,000 SF of office space and 40,000 SF of commercial space), the Project's trip generation rate would be 5.736 trips per dwelling unit (i.e., 5,736 trips / 1,000 DU = 5.736). If the non-residential land uses were included, the overall Project trip rate would be substantially lower.

For comparison, the current ITE daily trip generation rates for various types of residential uses that are potentially applicable to the Project are as follows:

C158-23

- Single-Family Detached Housing: 9.43 daily trips/dwelling unit,
- Single-Family Attached Housing: 7.20 daily trips/dwelling unit,
- Multifamily Housing (Low Rise – Not Close to Rail Transit): 6.74 daily trips/dwelling unit.

Therefore, it appears that, if the Project's trip generation estimate is to be believed, the Project trip rate is already substantially less than 15 percent below the ITE trip rates. Two conclusions can be derived from this information:

- The Project's trip generation as presented in the DEIR is not to be believed, and
- Specific Plan Policy 3-14 is specious.

Summary

C158-24

As we have described above, the DEIR transportation analysis is significantly flawed and those flaws relate directly to the validity of the VMT analysis. To briefly summarize:

- The Project trip generation estimate substantially understates the volume of traffic that will result from the Project.
- The internal trip capture rate is excessive, resulting in further reduction of the Project's traffic volumes.
- Only a portion of the Project's trips have actually been assigned to the study area roads.
- The purported benefits of implementation of TDM strategies are unlikely to be realized.
- The Project's derived Employment VMT value is highly questionable, when viewed in light of corresponding values for nearby geographical areas.
- Specific Plan Policy 3-41, which is claimed as a means to reduce Project VMT, is virtually meaningless, unless the Project's trip generation estimate is substantially modified to reflect reality.

The VMT analysis must be modified to correct the deficiencies described above. Upon completion of that revised VMT analysis, the DEIR must be recirculated for further public review.

C158-25

CONCLUSION

Our review of the transportation analysis presented in the Draft Environmental Impact Report for the proposed Sonoma Developmental Center Specific Plan project in Sonoma County, California revealed several issues affecting the validity of the conclusions presented in that document. Particular deficiencies were identified with respect to the volume of traffic associated with the Project, how much of that traffic will be captured internally, the assignment of that traffic to the study area roads, and the validity of the estimate of Project-related vehicle-miles traveled. These issues must be addressed prior to approval of the proposed project and its environmental documentation by the County of Sonoma.

Sincerely,

GRIFFIN COVE TRANSPORTATION CONSULTING, PLLC

Neal K. Liddicoat, P.E.
Principal

Attachments

ATTACHMENT 1

Excerpt from Sonoma County General Plan 2020
Circulation and Transit Element

Sonoma County General Plan 2020

CIRCULATION AND TRANSIT ELEMENT

Sonoma County Permit and Resource Management Department
2550 Ventura Avenue
Santa Rosa, CA 95403

Adopted by Resolution No. 08-0808
of the Sonoma County Board of Supervisors
September 23, 2008

Amended by Resolution No. 10-0636 on August 24, 2010
Amended by Resolution No. 16-0283 on August 2, 2016

Policy CT-3ggg: Educate motorists, bicyclists, and pedestrians with regard to safety, rights, and responsibilities associated with use of the County transportation system.*

Policy CT-3hhh: Support constructive efforts from advocacy groups to address bicycle and pedestrian transportation issues.

Policy CT-3iii: Provide the option of flexible work schedules to County employees in order to accommodate commuting by bicycle, walking, or transit.*

Policy CT-3jjj: Develop a Guaranteed Ride Program for County workers and employees of other employers with participating programs who regularly bicycle, walk, vanpool, carpool, or use transit for their trip to work. The program would encourage use of alternative transportation modes by providing free transportation in the event of personal emergencies, illness, or unscheduled overtime.*

Policy CT-3kkk: Consider establishing greenhouse gas impact fees for new development. Use a portion of this fee to fund planning, design, and construction of bikeways and pedestrian facilities*.

Policy CT-3lll: Work with Federal, State, regional, and local agencies and any other available public or private funding sources to secure funding for bikeways and pedestrian facilities*.

Policy CT-3mmm: Encourage multi-jurisdictional funding applications for design, construction and maintenance of bikeways and pedestrian facilities that provide regional connectivity*.

Policy CT-3nnn: Develop a long range strategy to provide long term funding necessary to maintain and operate the Class I bikeway network*.

2.6 COUNTYWIDE HIGHWAY SYSTEM

GOAL CT-4:	**Provide and maintain a highway system capacity that serves projected highway travel demand at acceptable levels of service in keeping with the character of rural and urban communities.**
Objective CT-4.1:	Maintain LOS C or better on roadway segments unless a lower LOS has been adopted as shown on Figure CT-3.
Objective CT-4.2:	Maintain LOS D or better at roadway intersections.*
Objective CT-4.3:	Allow the above levels of service to be exceeded if it is determined to be acceptable due to environmental or community values, or if the project(s) has an overriding public benefit that outweighs lower

Footnote: *Mitigating Policy

levels of service and increased congestion.*

Objective CT-4.4: Utilize the American Association of State Highway Transportation Officials (AASHTO) functional classification system and guidelines for geometric design for the highway network.*

Objective CT-4.5: Consider developing a Heritage Road Program for Sonoma County. Heritage Roads would be subject to special design guidelines protecting their unique character, while meeting accepted AASHTO safety standards.

Objective CT-4.6: In recognition of the responsibility of the Cities and the County to contribute their fair share toward the mobility of County residents, coordinate with the Cities in the review of proposed development projects to identify a nexus between the project and impacts to the County transportation system, and to ensure that adequate mitigation is provided for impacts on the County transportation system.

Objective CT-4.7: Prioritize planned capacity improvements on Highways 101, 12, and 116 in recognition of the primary role that these highways play in providing mobility between communities. Prioritize capacity improvements to arterials over those for collector and local roads.

The following policies shall be used to achieve these objectives:

Figure CT - 3

Level of Service (LOS) Objectives

Level of Service (LOS) *

Level of Service D

Level of Service E

Level of Service F

* All other County roadway segments are LOS C or better during Weekday PM Peak Hour.

Windsor
Santa Rosa
Sebastopol
Rohnert Park
Cotati
Petaluma
Sonoma

WESTSIDE RD
WINDSOR RD
PLEASANT AV
SHILOH RD
AIRPORT BLVD
101
MARK WEST SPRINGS RD
RIEBLI RD
CALISTOGA RD
SAINT HELENA RD
RIVER RD
FULTON RD
PINER RD
STEELE LN
116
GUERNVILLE RD
HALL RD
3RD ST
BOHEMIAN HWY
GRATON RD
OCCIDENTAL RD
12
LUDWIG AV
BELLEVUE AV
SANTA ROSA AV
PETALUMA HILL RD
BENNET VALLEY RD
BODEGA HWY
TODD RD
MTN VIEW AV
SONOMA MTN RD
1
SNYDER LN
ROBERTS RD
ARNOLD DR
OLD REDWOOD HWY
RAILROAD AV
ROBLAR RD
STONY POINT RD
BOYES BLVD
VERANO AV
PETALUMA AV
5TH ST
NAPA ST
PETALUMA VLY FORD RD
PEPPER RD
ADOBE RD
ELY RD
LEVERONI RD
NAPA RD
WATMAUGH RD
S ELY RD
TOMALES RD
BODEGA AV
LAKEVILLE ST
D ST
RAMAL RD
121
37
LAKEVILLE RD

Base Map Data

City Boundaries

Highways

Roads

0 1.5 3 Miles

1:200,000

Note:
Map Scale and Reproduction methods limit precision in physical features displayed.

Author: PRMD Cartography: N. Najarian Date: 09/23/2008
File Number: S:\GIS-DATA\PRMD_BASE\PRMD Department Projects\Comprhensive Planning\General Plan 2020\GP figure CT-3.mxd

Sonoma County General Plan 2020
Circulation and Transit Element

Permit and Resource Management Department
2550 Ventura Avenue, Santa Rosa, California 95403
707-565-1900 FAX 707-565-1103

Sonoma County General Plan

ATTACHMENT 2

Project Trip Generation Data Sheets
1,000 Dwelling Units (25 Percent Inclusionary Income-Restricted)

(Source: Institute of Transportation Engineers,
***Trip Generation Manual*, Eleventh Edition, 2021.)**

Single-Family Detached Housing
(210)

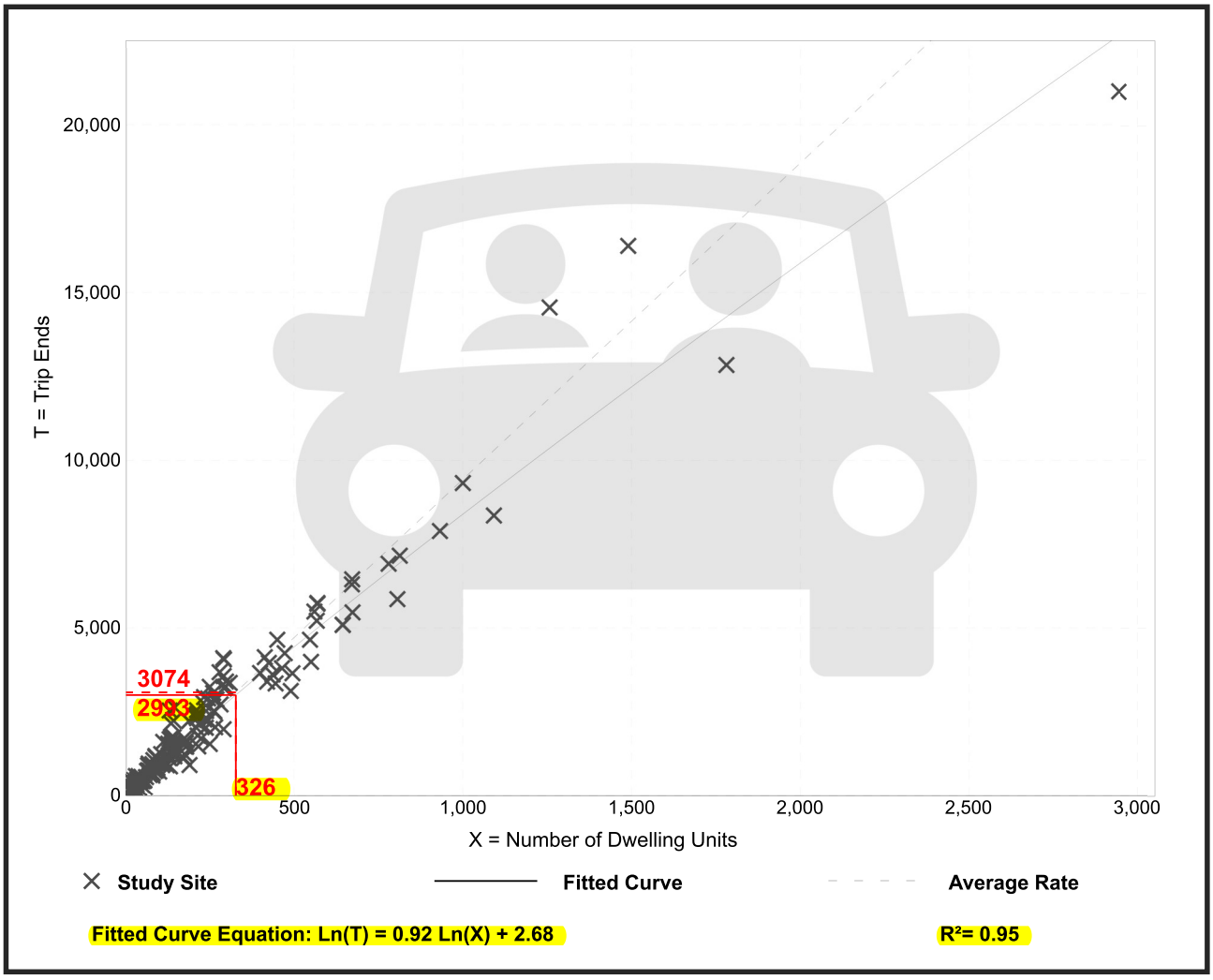
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Affordable Housing - Income Limits
(223)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

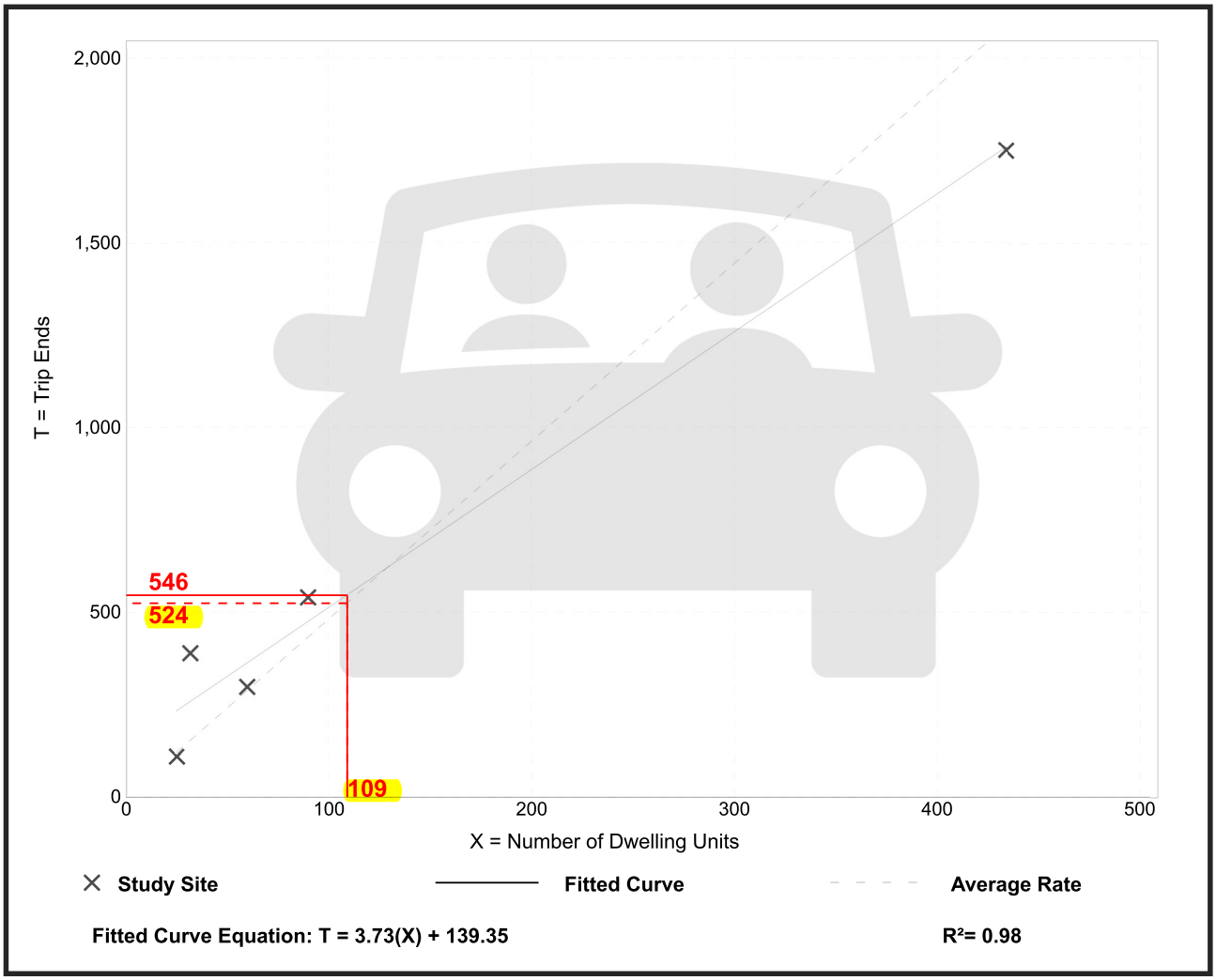
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Dwelling Units: 128
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.81	4.03 - 12.16	2.03

Data Plot and Equation

Caution – Small Sample Size



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

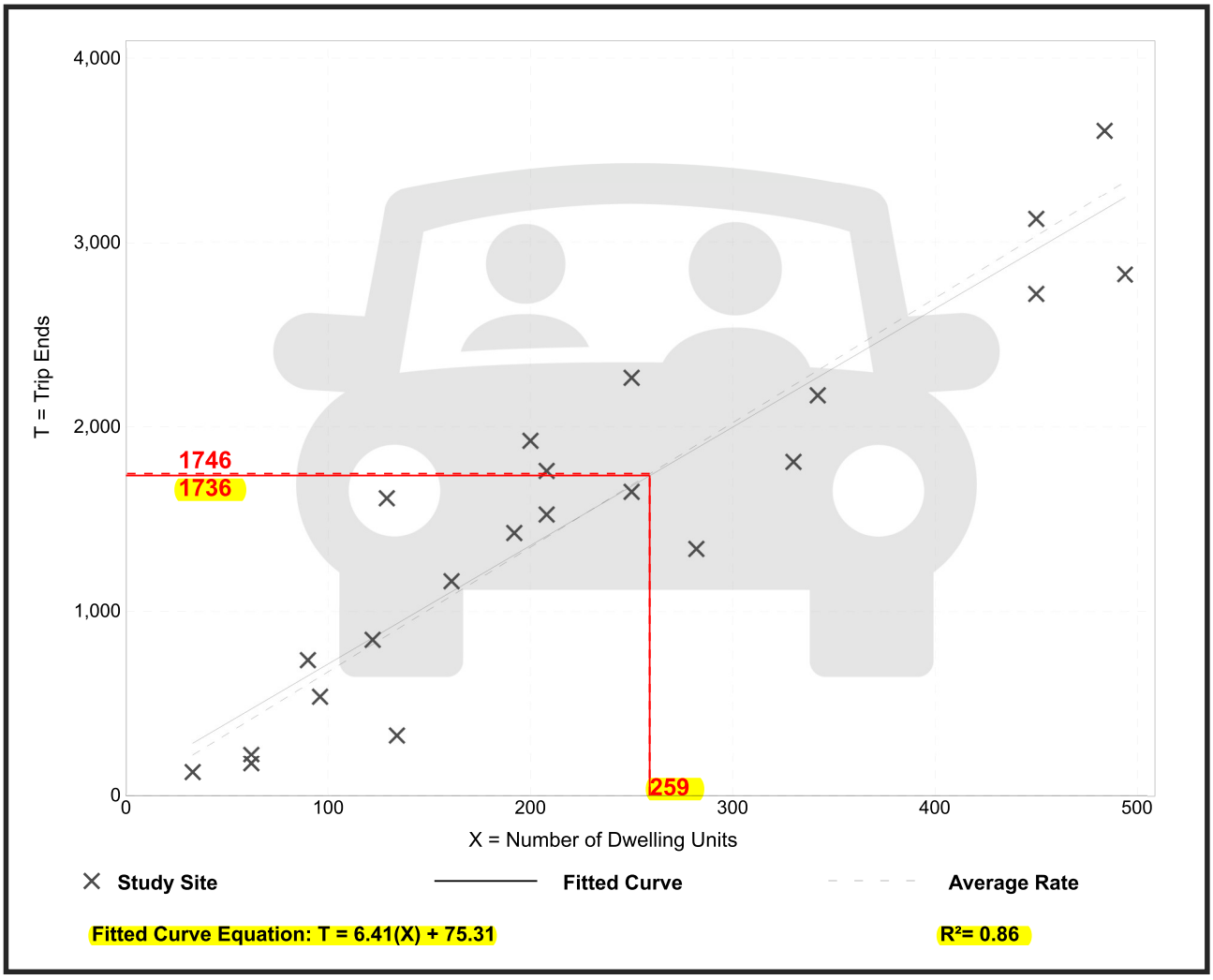
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 229
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Affordable Housing - Income Limits
(223)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

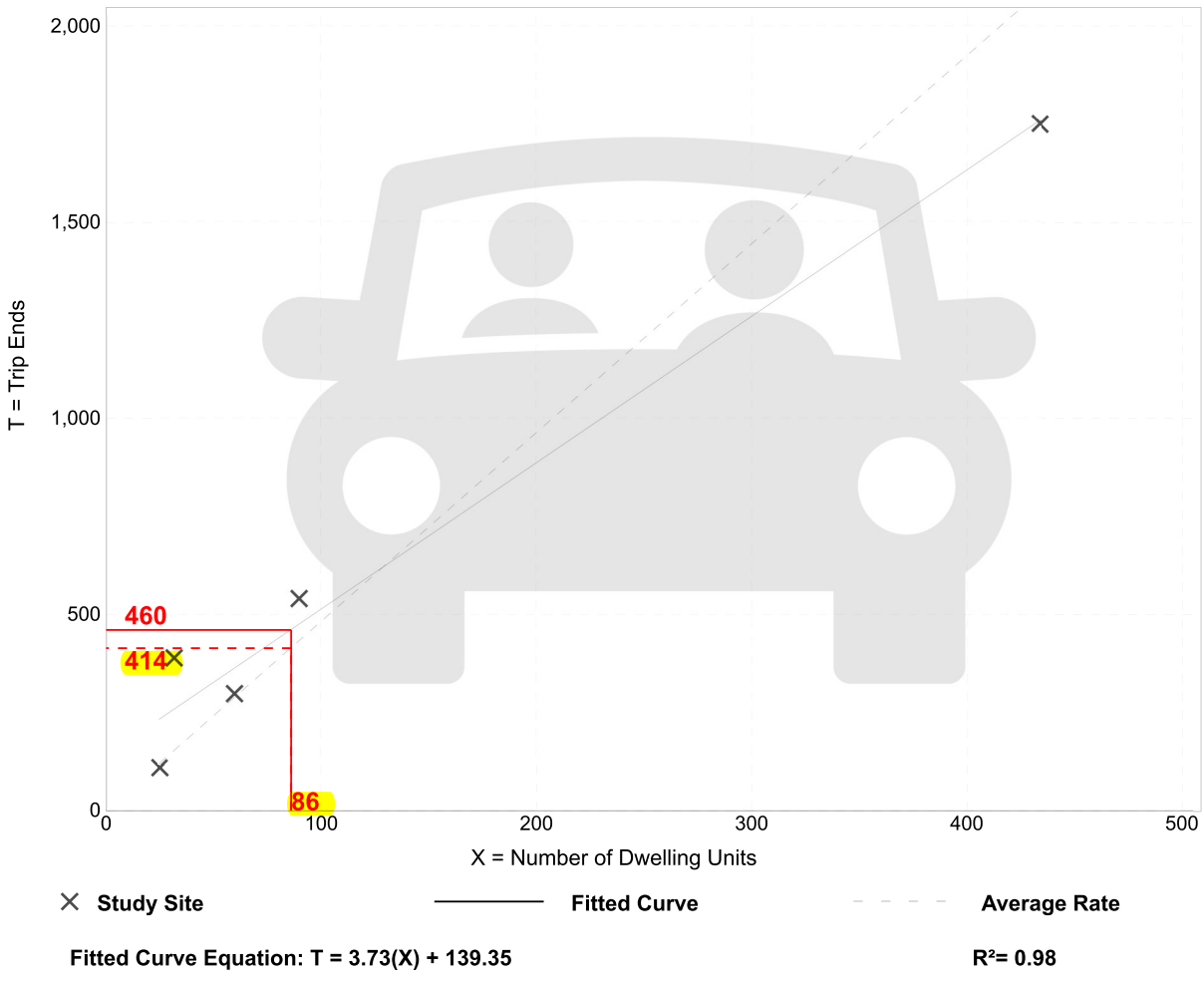
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Dwelling Units: 128
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.81	4.03 - 12.16	2.03

Data Plot and Equation

Caution – Small Sample Size



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Senior Adult Housing - Single-Family
(251)

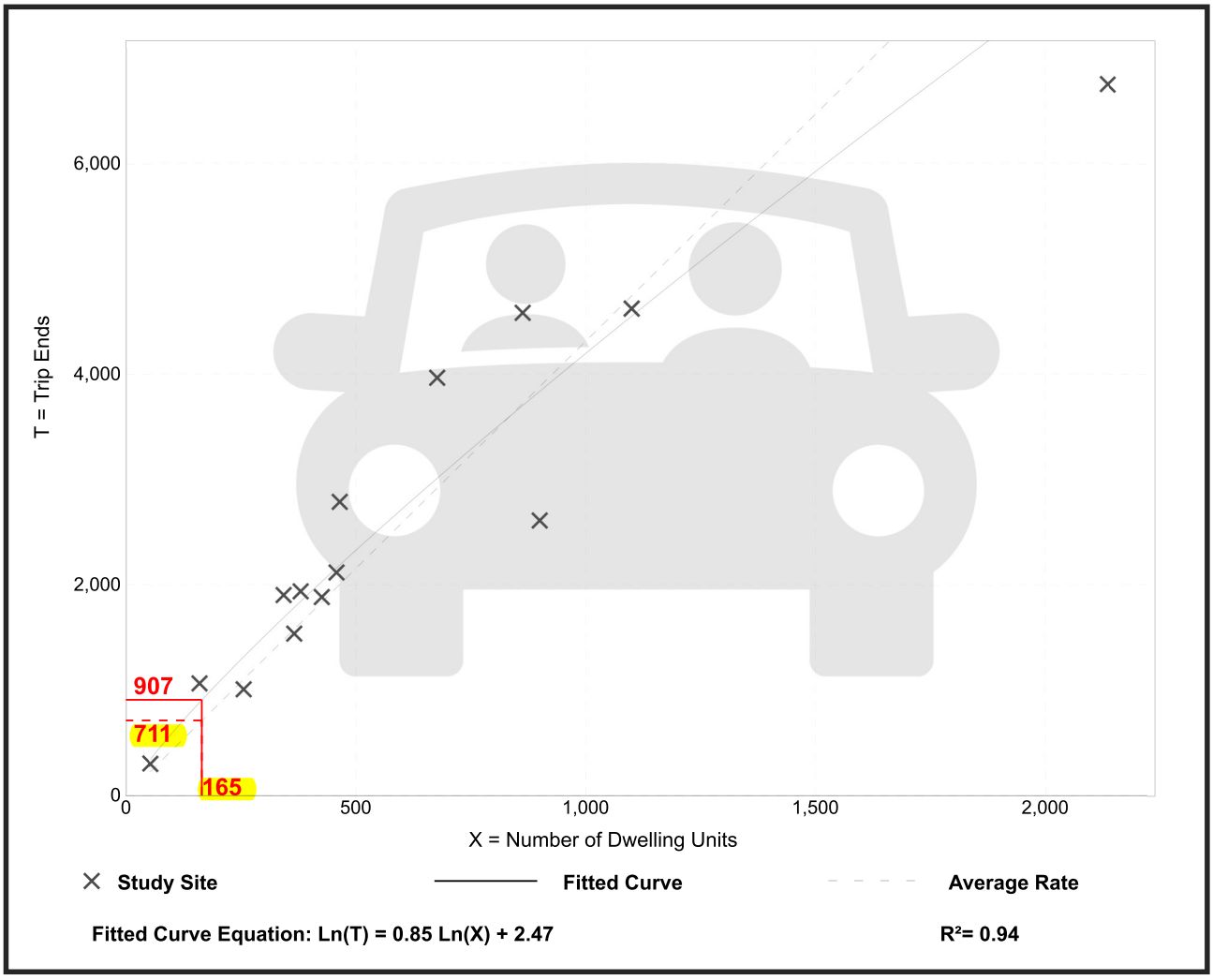
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 15
Avg. Num. of Dwelling Units: 646
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.31	2.90 - 6.66	1.07

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Senior Adult Housing - Multifamily
(252)

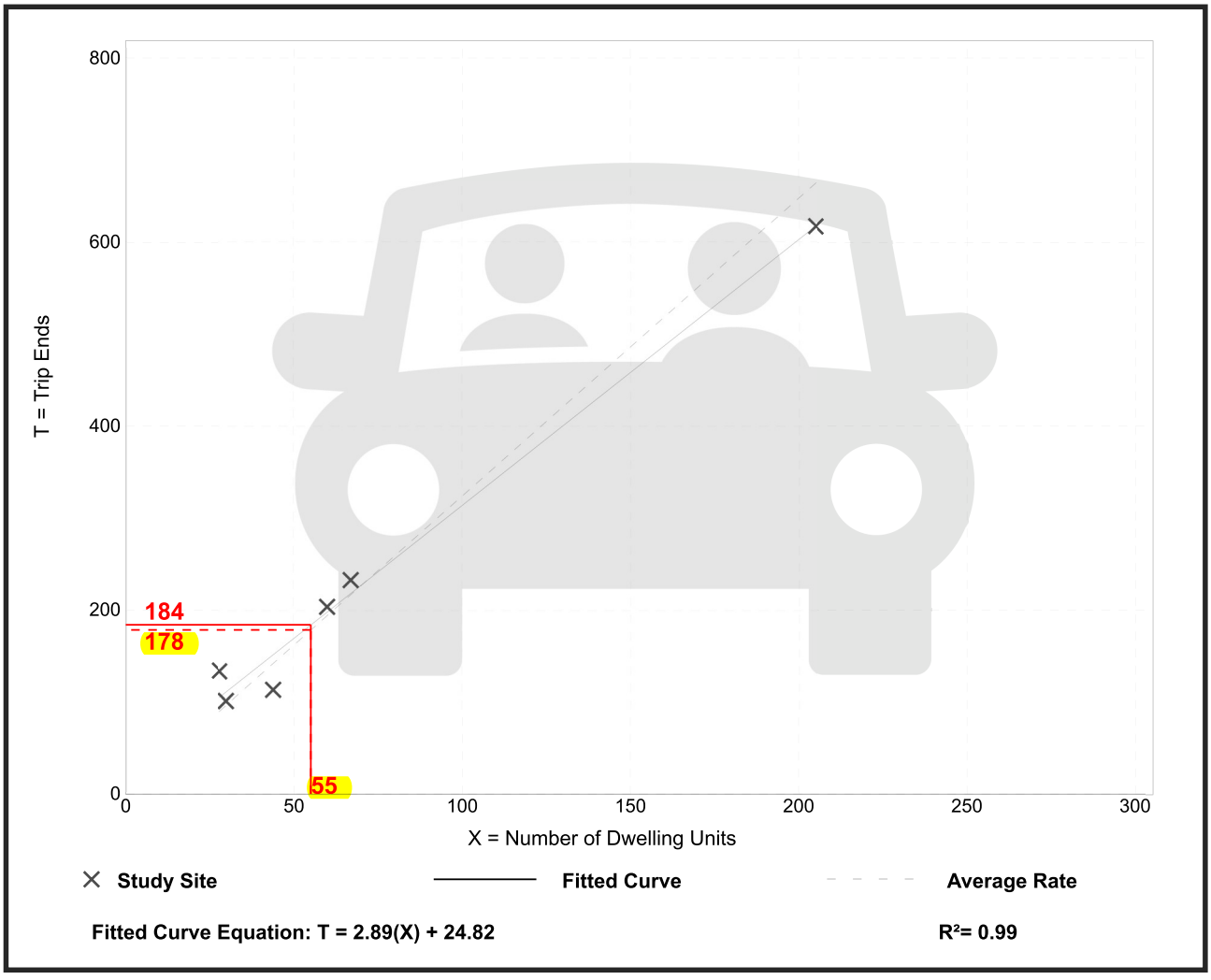
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. Num. of Dwelling Units: 72
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
3.24	2.59 - 4.79	0.53

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Shopping Plaza (40-150k) - Supermarket - No (821)

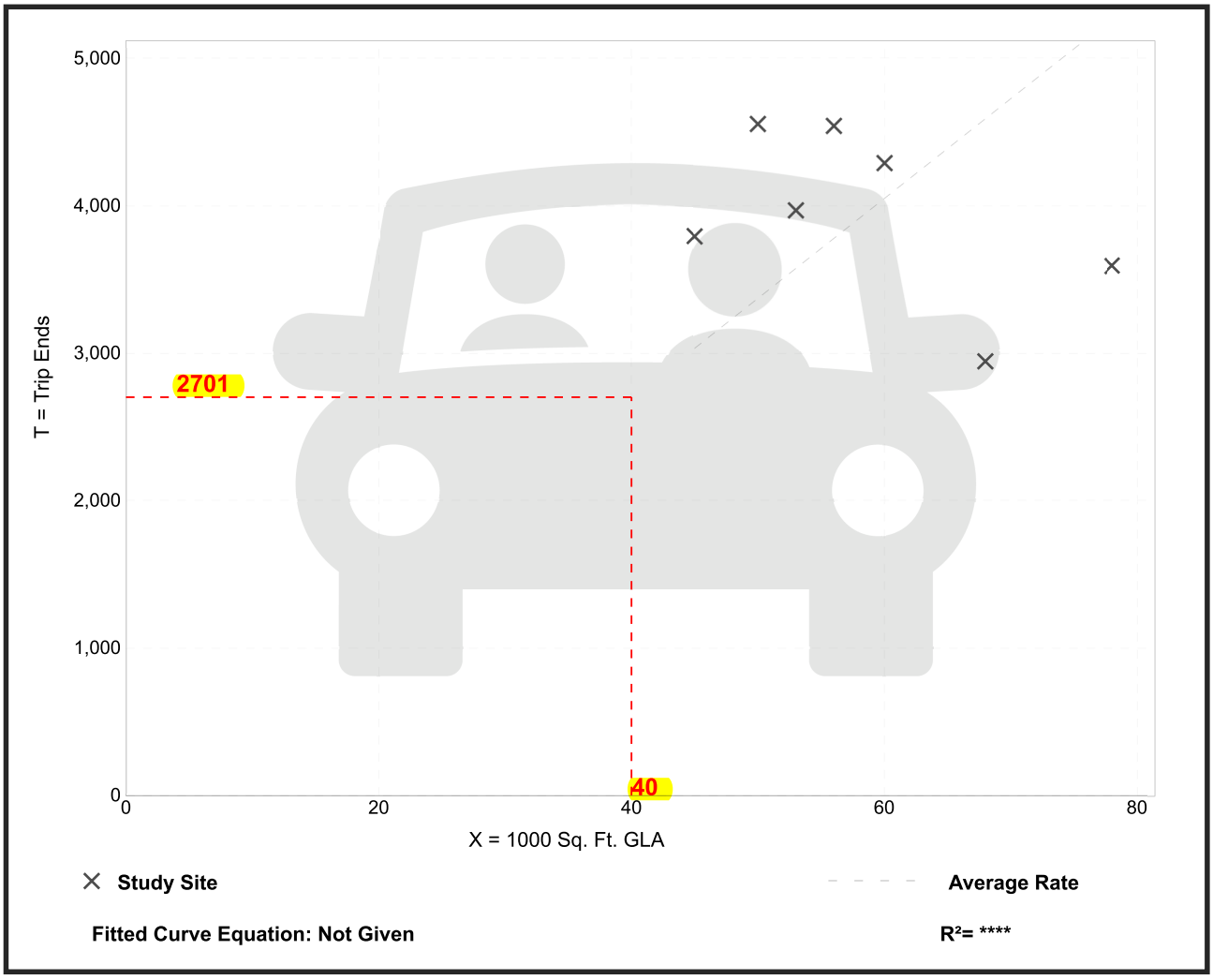
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 7
Avg. 1000 Sq. Ft. GLA: 59
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
67.52	43.29 - 91.06	19.25

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Hotel
(310)

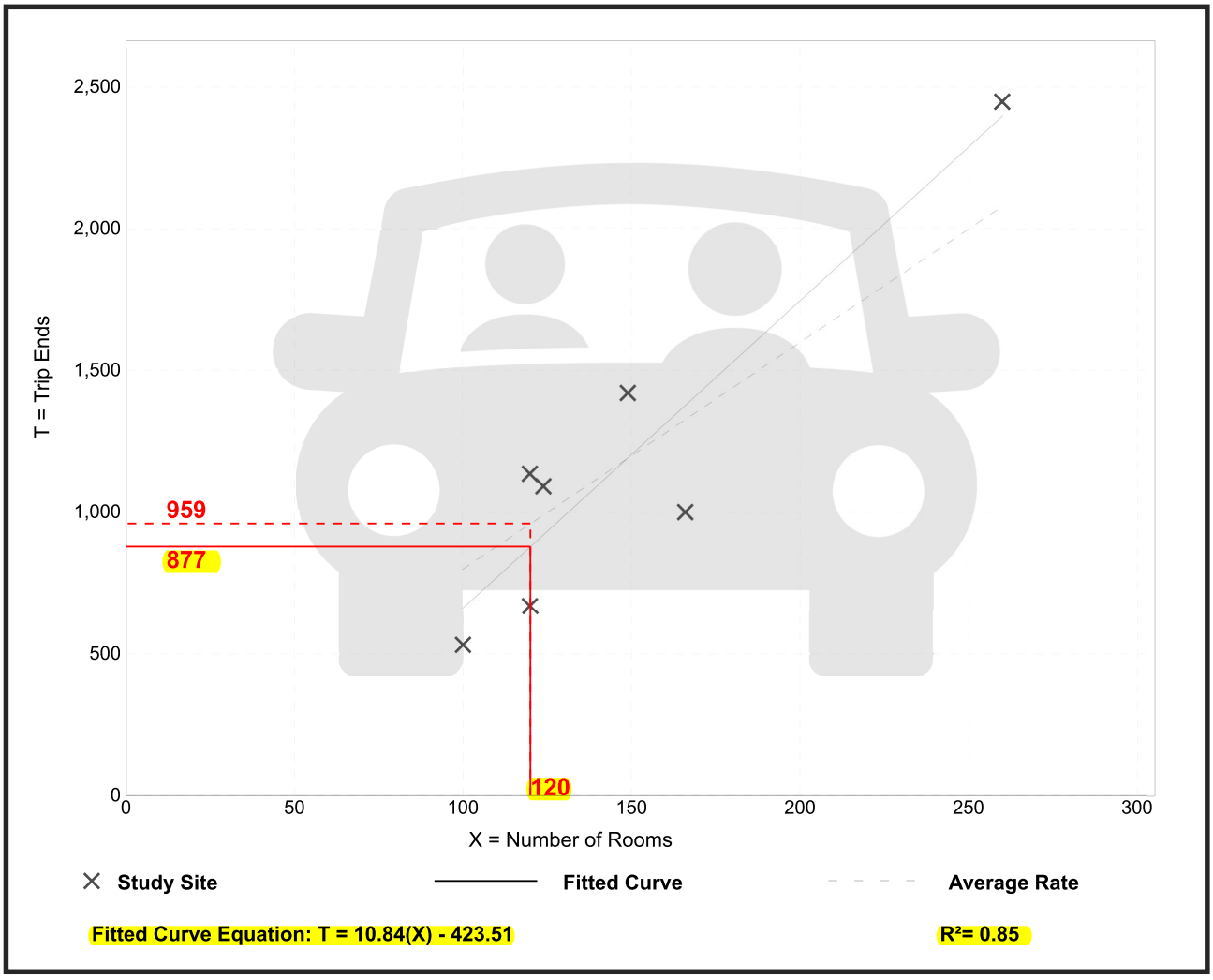
Vehicle Trip Ends vs: **Rooms**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 7
Avg. Num. of Rooms: 148
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
7.99	5.31 - 9.53	1.92

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

General Office Building
(710)

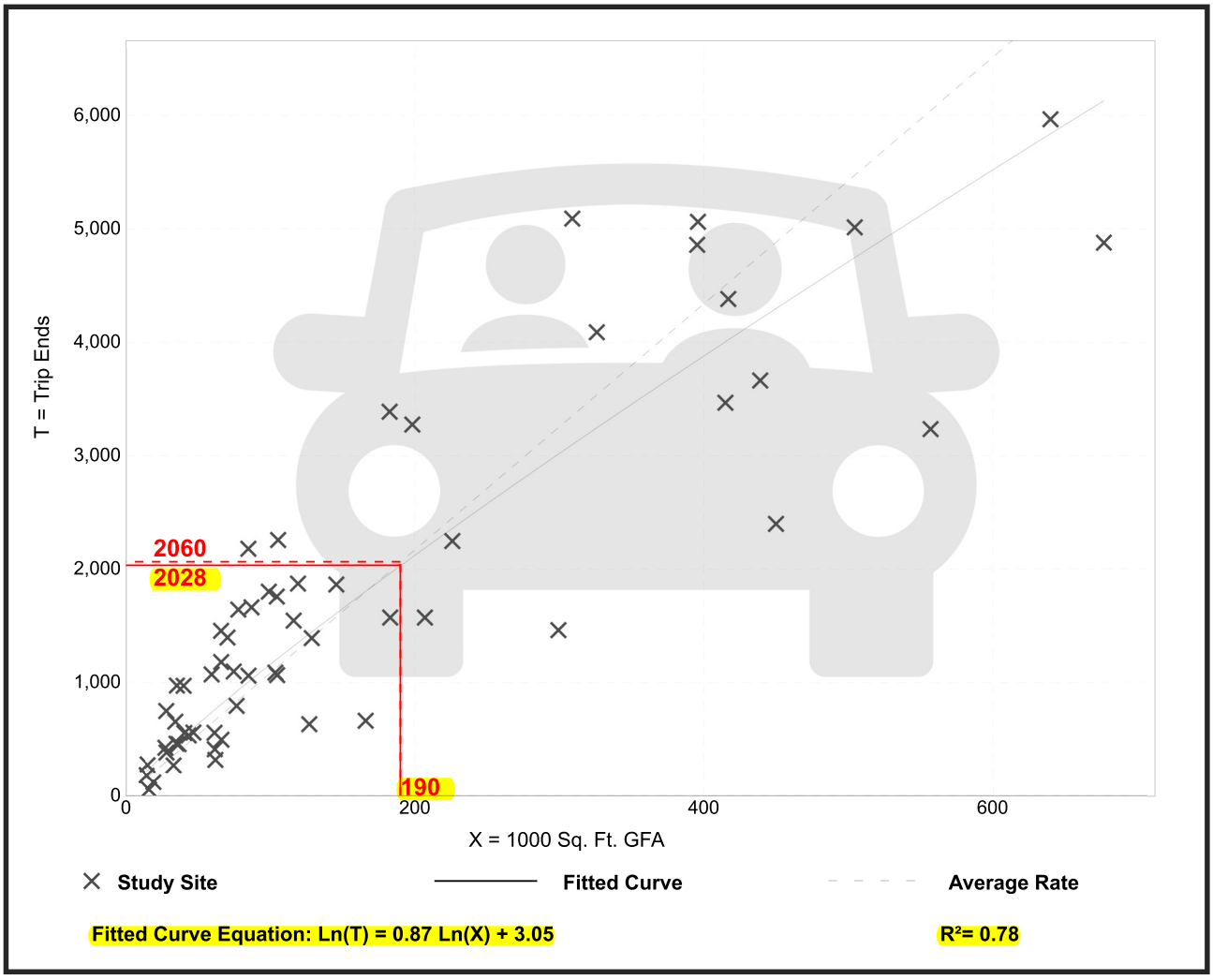
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 59
Avg. 1000 Sq. Ft. GFA: 163
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.84	3.27 - 27.56	4.76

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Public Park
(411)

Vehicle Trip Ends vs: **Acres**
On a: **Weekday**

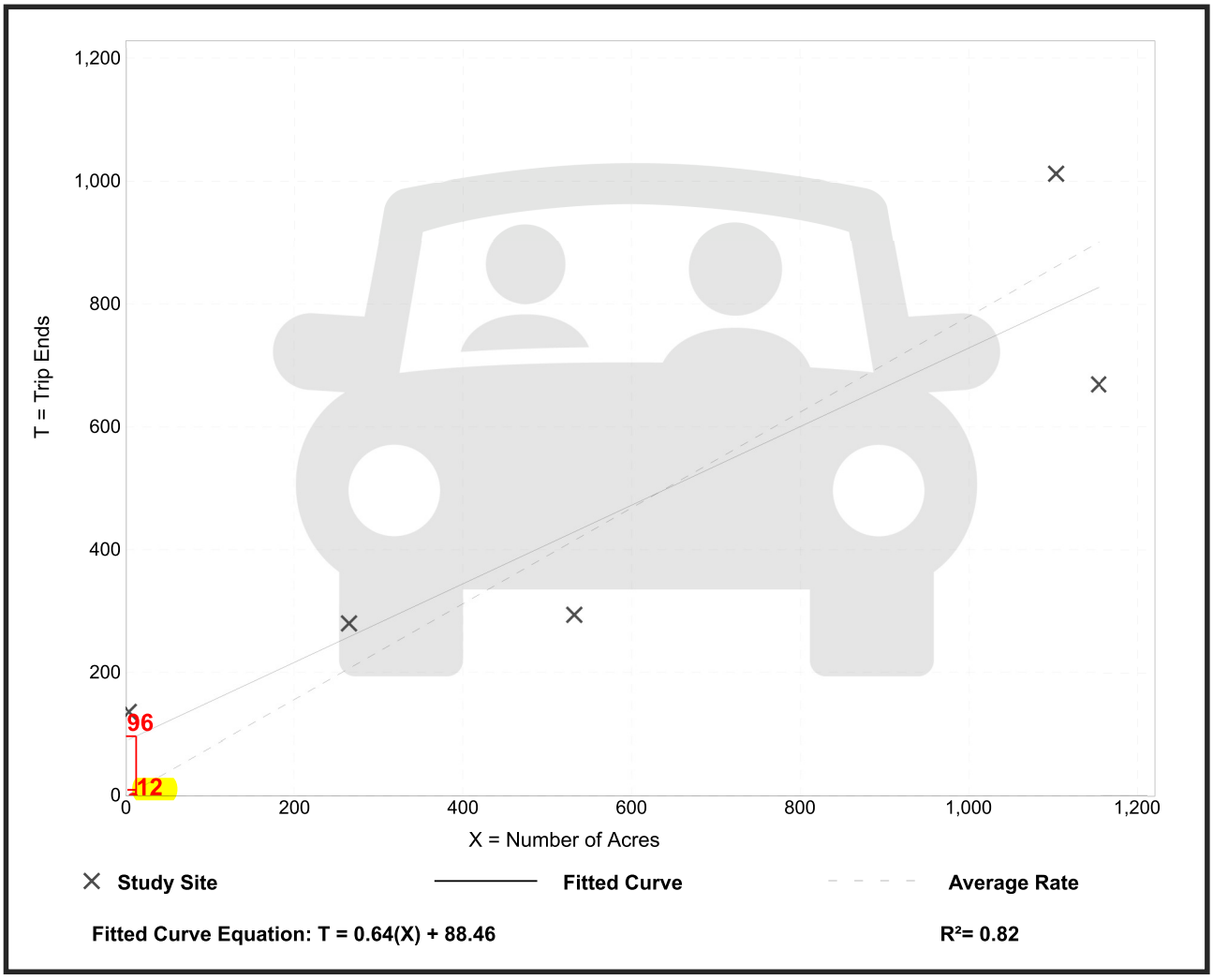
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Acres: 612
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
0.78	0.55 - 34.00	1.36

Data Plot and Equation

Caution – Small Sample Size



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

ATTACHMENT 3

Project Trip Generation Data Sheets – Residential Only
1,331 Dwelling Units (25 Percent Inclusionary Income-Restricted)

(Source: Institute of Transportation Engineers,
***Trip Generation Manual*, Eleventh Edition, 2021.*)**

Single-Family Detached Housing
(210)

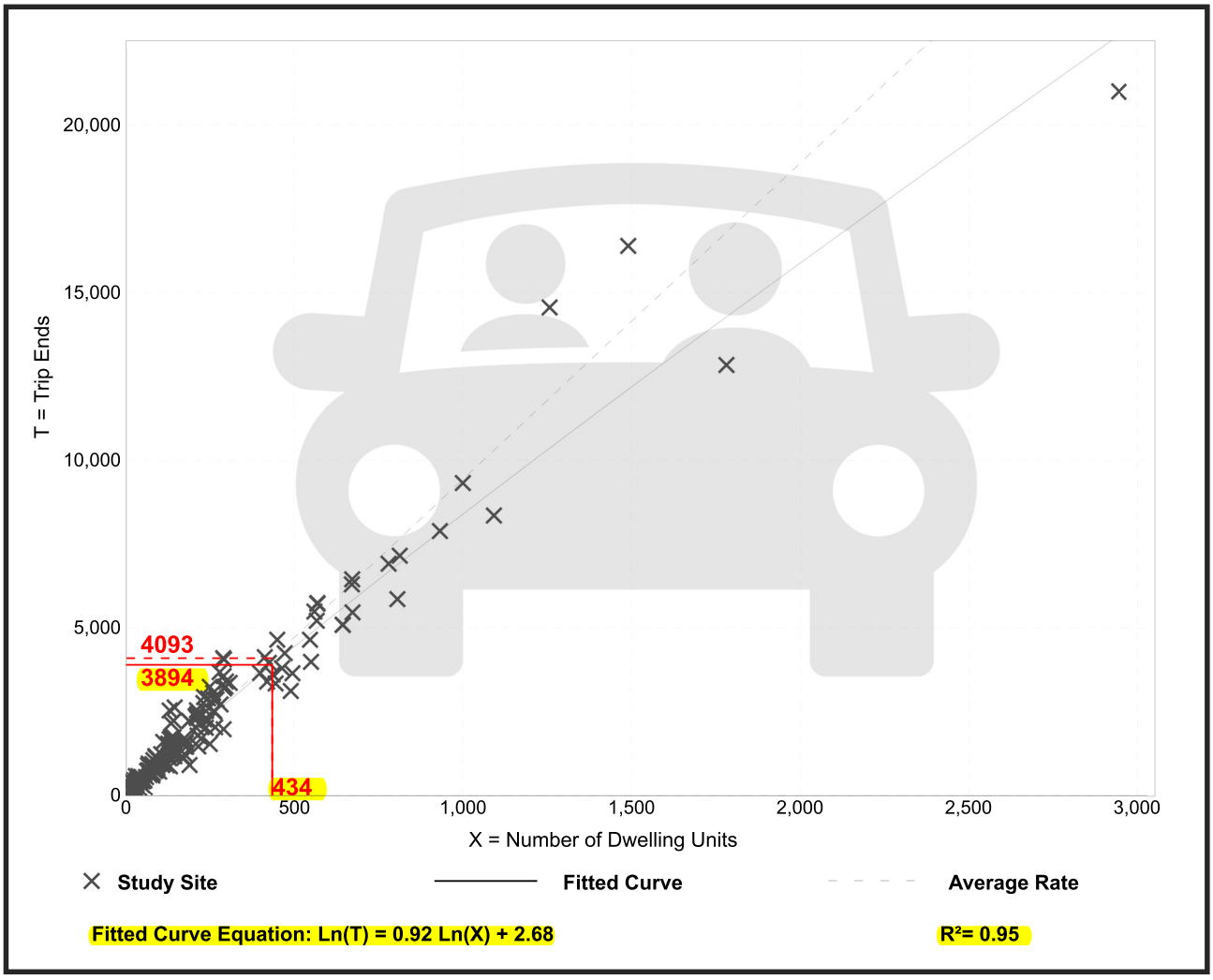
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Affordable Housing - Income Limits
(223)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

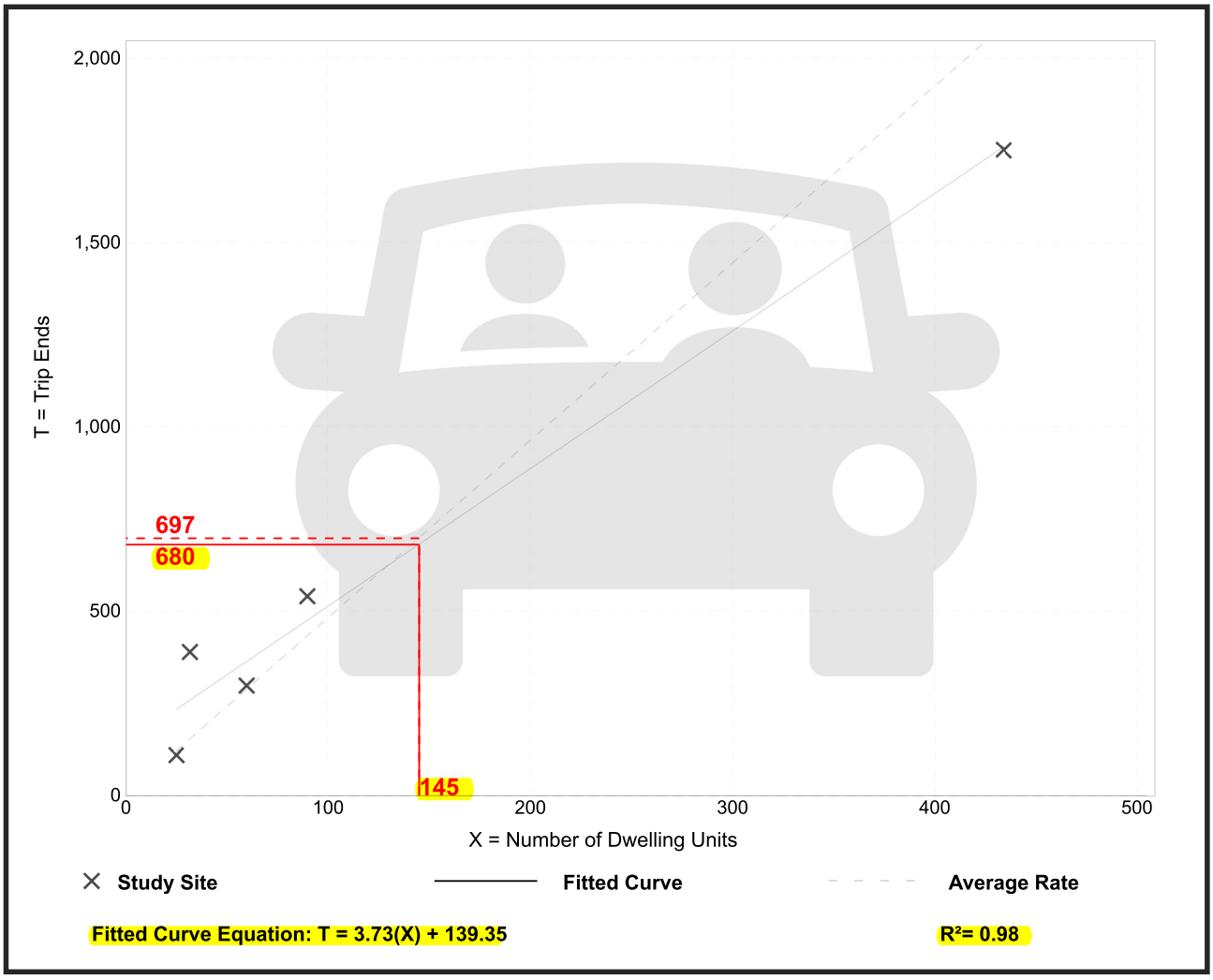
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Dwelling Units: 128
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.81	4.03 - 12.16	2.03

Data Plot and Equation

Caution – Small Sample Size



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

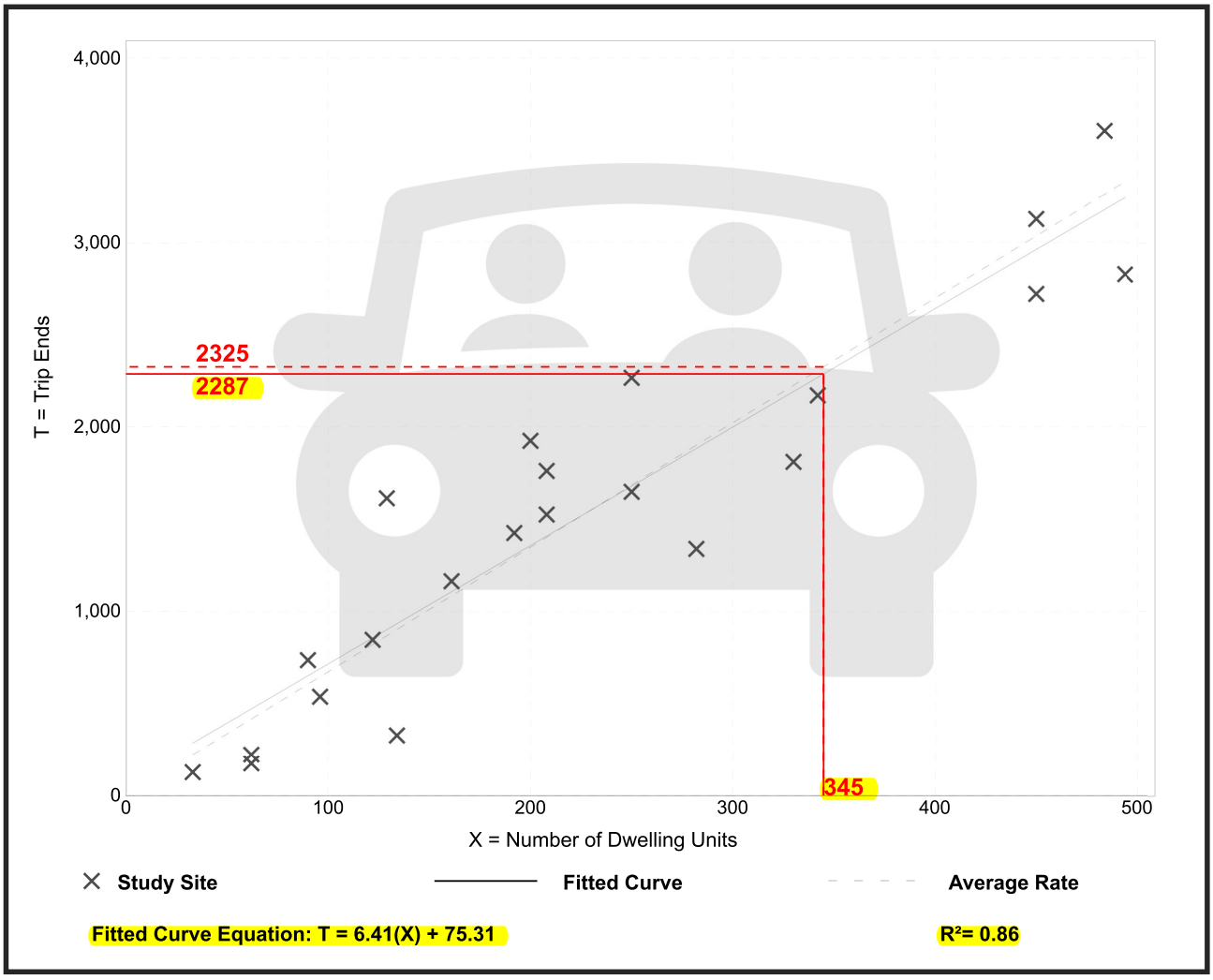
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 229
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Affordable Housing - Income Limits
(223)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

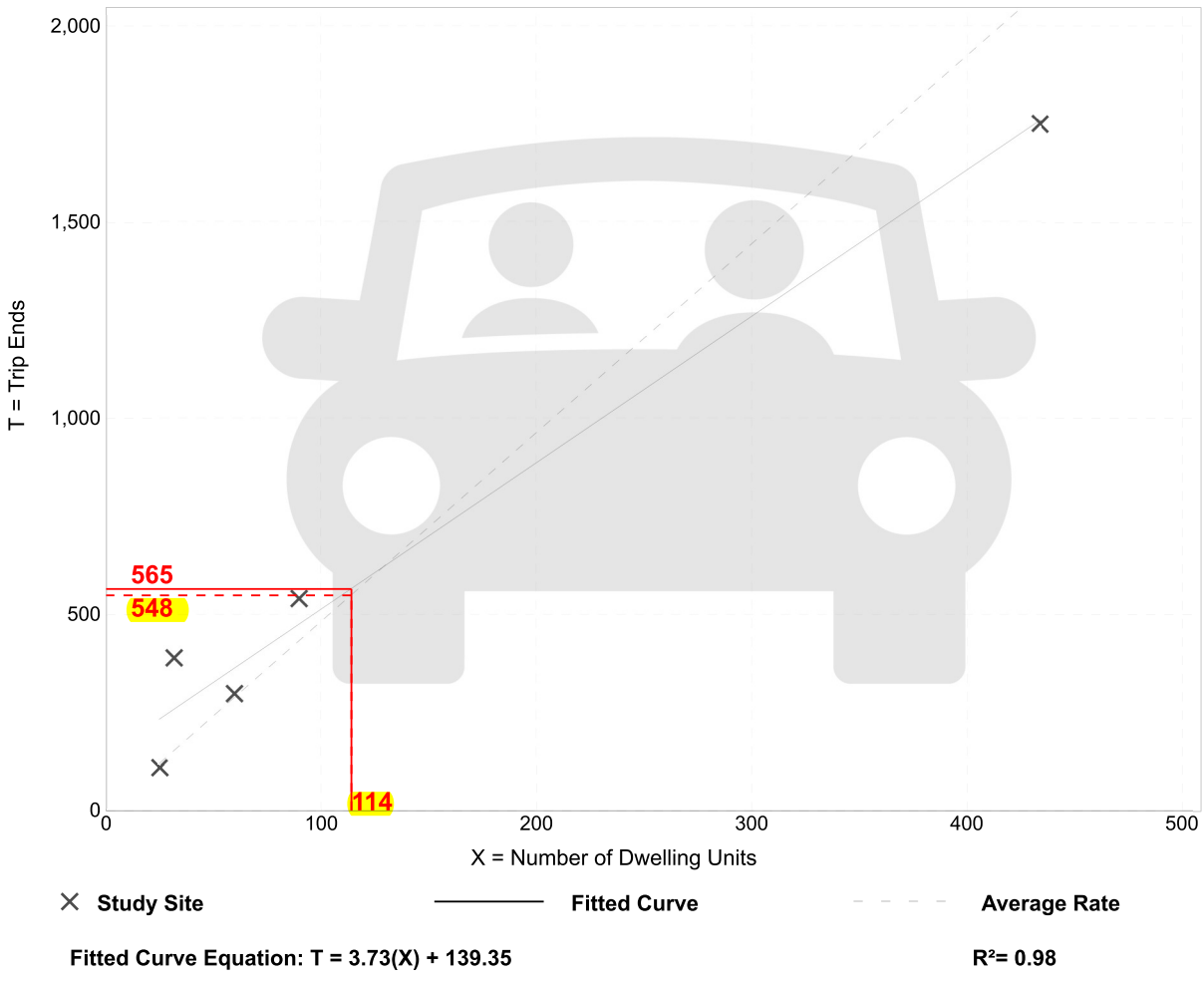
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Dwelling Units: 128
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.81	4.03 - 12.16	2.03

Data Plot and Equation

Caution – Small Sample Size



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Senior Adult Housing - Single-Family
(251)

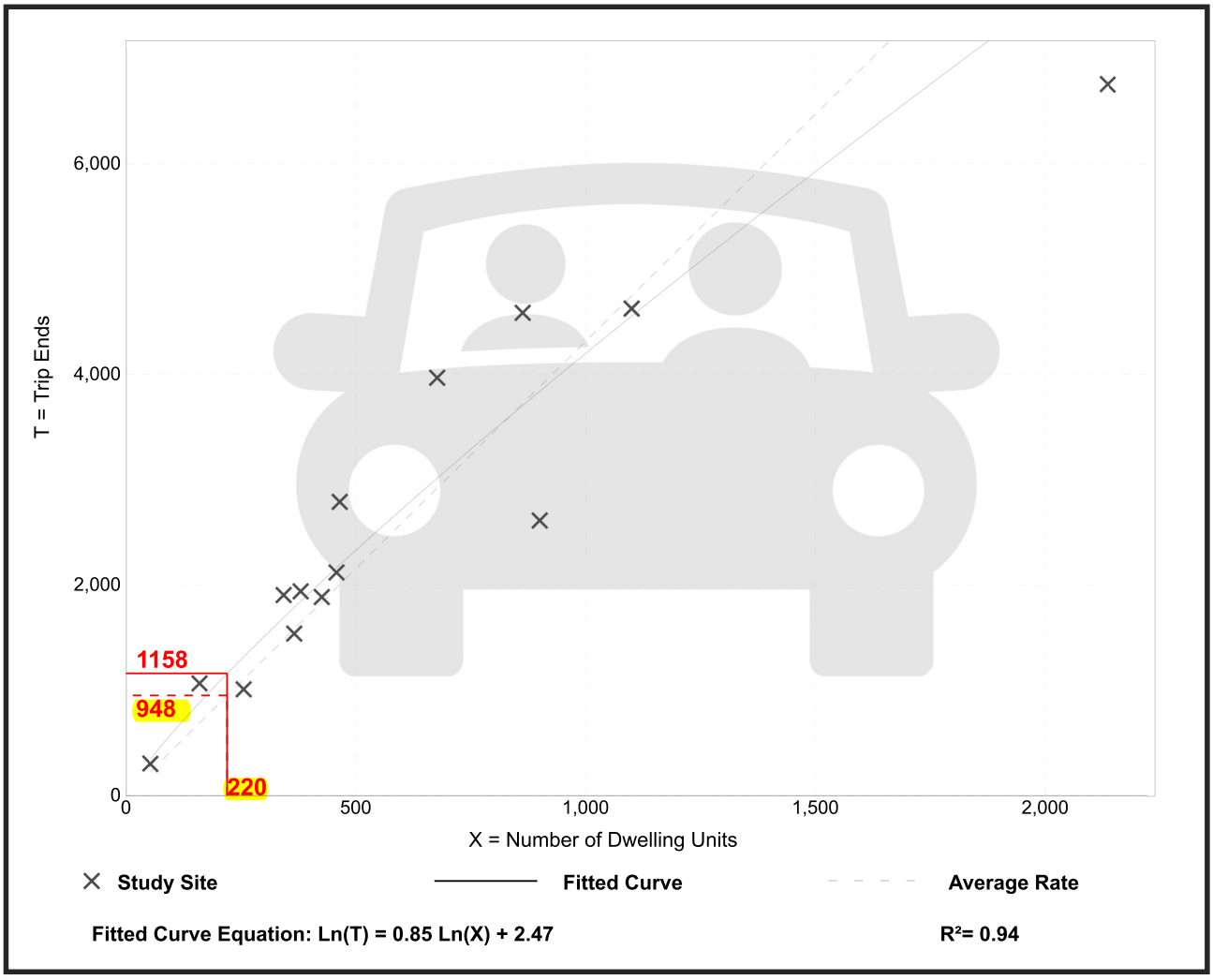
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 15
Avg. Num. of Dwelling Units: 646
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.31	2.90 - 6.66	1.07

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Senior Adult Housing - Multifamily
(252)

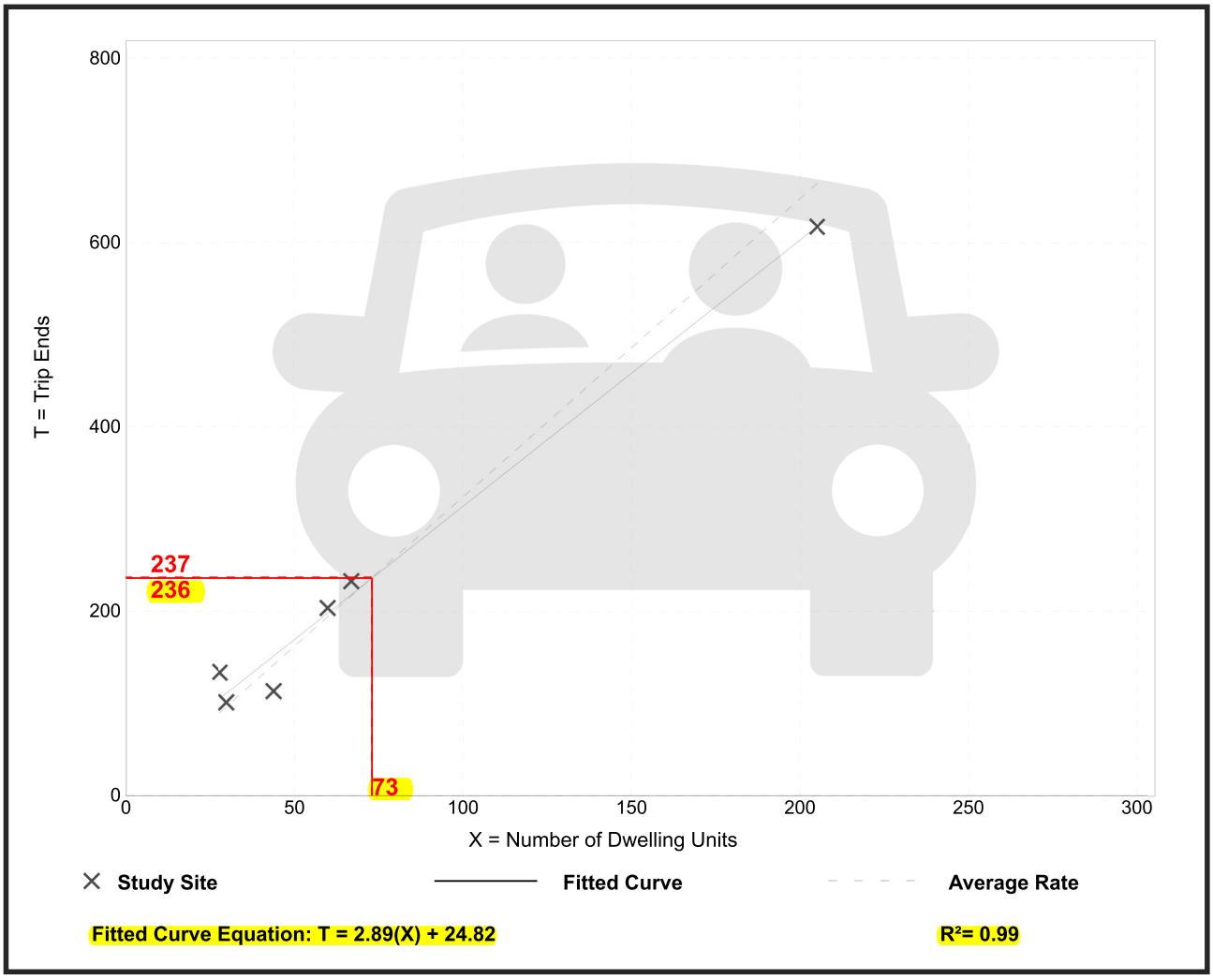
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. Num. of Dwelling Units: 72
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
3.24	2.59 - 4.79	0.53

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

ATTACHMENT 4

Institute of Transportation Engineers/NCHRP 684
Internal Trip Capture Estimation Tool

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Sonoma Developmental Center	**Organization:**	Griffin Cove Transportation Consulting
Project Location:	Sonoma County, CA	**Performed By:**	NKL
Scenario Description:	Project w/ 1,000 DU	**Date:**	16-Sep-22
Analysis Year:		**Checked By:**	
Analysis Period:	**Daily**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				2,028	1,014	1,014
Retail				2,702	1,351	1,351
Restaurant				0		
Cinema/Entertainment				0		
Residential				6,556	3,278	3,278
Hotel				960	480	480
All Other Land Uses[2]				10	5	5
				12,256	6,128	6,128

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		284	0	0	0	0
Retail	41		0	0	66	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	30	33	0	0		0
Hotel	30	54	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	12,256	6,128	6,128
Internal Capture Percentage	9%	9%	9%
External Vehicle-Trips[5]	11,180	5,590	5,590
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	10%	28%
Retail	27%	8%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	2%	2%
Hotel	0%	18%

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

ATTACHMENT 5

U.S. Environmental Protection Agency
(EPA) Mixed Use Trip Generation Model

EPA MIXED USE TRIP GENERATION MODEL - RESULTS

MODEL APPLICATION - ALL TRIPS

	Daily			
	HBW	HBO	NHB	Total
Baseline # of External Trips (ITE Model)	2804	6976	2474	12253
% External Trip Reduction (predicted by MXD Model)				
Internal Capture	3.71%	7.46%	6.93%	6.49%
Walking External	0.93%	1.24%	0.37%	0.99%
Transit External	0.23%	0.42%	0.86%	0.46%
# of Trips Reduced (predicted by MXD Model)				
Internal Capture	104	520	172	796
Walking External	25	80	8	114
Transit External	6	27	20	53
MXD Model # of Vehicle Trips	**2668**	**6349**	**2274**	**11291**

Results	**External Vehicle Trips**		
	Baseline	Adjusted	Reduction %
Daily	12,253	11,291	8%
AM Peak Hour	760	708	7%
PM Peak Hour	1,147	1,060	8%

MODEL APPLICATION - TRIP ENDS ASSOCIATED WITH HOUSES IN THE PROJECT ONLY

	Daily			
	HBW	HBO	NHB	Total
Baseline # of External Trips (ITE Model)	1282	4054	900	6235
% External Trip Reduction (predicted by MXD Model)				
Internal Capture	3.71%	7.46%	6.93%	6.61%
Walking External	0.93%	1.24%	0.37%	1.05%
Transit External	0.23%	0.42%	0.86%	0.44%
# of Trips Reduced (predicted by MXD Model)				
Internal Capture	48	302	62	412
Walking External	12	46	3	61
Transit External	3	16	7	26
Adjusted # (MXD Model) of Vehicle Trips generated by Project Residences	**1220**	**3689**	**827**	**5736**

	External Vehicle Trips		
Results	Baseline	Adjusted	Reduction %
Daily	6,235	5,736	8%
AM Peak Hour	487	452	7%
PM Peak Hour	602	556	8%

ATTACHMENT 6

San Diego Association of Governments (SANDAG)
Smart Growth Trip Generation Spreadsheet Tool

MIXED USE TRIP GENERATION MODEL V4 - RESULTS

MODEL APPLICATION - ALL TRIPS

		Daily			
		HBW	HBO	NHB	Total
Number of "Raw" SANDAG Rate Trips Subject to Model		3395	6453	2405	12253
Predicted Probabilities:					
	Internal Capture	3.89%	7.66%	8.10%	6.70%
	Walking External	1.00%	1.33%	0.39%	1.05%
	Transit External	0.30%	0.44%	0.87%	0.48%
Number of Trips:					
	Internal Capture	132	494	195	821
	Walking External	33	79	9	120
	Transit External	10	26	19	55
Net Number of IXXI Vehicle Trips		**3221**	**5854**	**2183**	**11257**

	External Vehicle Trips		
Results	Raw	Net	Reduction %
Daily	12,253	11,257	8%
AM Peak Hour	906	842	7%
PM Peak Hour	1,129	1,039	8%

MODEL APPLICATION - TRIP ENDS TO/FROM RESIDENCES IN THE PROJECT ONLY

		Daily			
		HBW	HBO	NHB	Total
Number of "Raw" ITE Trips Subject to Model		1320	4174	927	6420
Predicted Probabilities:					
	Internal Capture	3.89%	7.66%	8.10%	6.95%
	Walking External	1.00%	1.33%	0.39%	1.12%
	Transit External	0.30%	0.44%	0.87%	0.47%
Number of Trips:					
	Internal Capture	51	320	75	446
	Walking External	13	51	3	67
	Transit External	4	17	7	28
Net Number of IXXI Vehicle Trips generated by Project Residences		**1252**	**3786**	**841**	**5879**

	External Vehicle Trips		
Results	Raw	Net	Reduction %
Daily	6,420	5,879	8%
AM Peak Hour	514	475	7%
PM Peak Hour	621	571	8%

Comments for Planning Commission meeting re SDC EIR

Re Historical Alternative in the DEIR:

Comments on Historic Alternative appear to be written as a put-down to downgrade the Historic Alternative and boost the Preferred Plan, with comments prepared by the same author as proposed the Plan.

C159-1

Not appropriate to EIR process. Supposed to be dispassionate examination. Best done by a third party.

References to the "community alternative" are to the approach and plan in the proposal presented to DGS on September 9, 2022 by the community in Glen Ellen and the Sonoma Valley most affected by the impacts of the proposed Plan.

Comments/questions:

On page 561: assumes "a preference for more large lot, single family home to maximize financial feasibility". Based on what analysis or precedent? In fact community's alternative does not rely on large lot, single family homes, but contains a mix of all types of housing in a village community setting.

C159-2

On page 561: "open space available within the Core Campus would be less than in Proposed Plan due to lower densities in existing buildings and the location of buildings within areas reclaimed as open space in Proposed Plan". Based on what analysis? In fact, the community's alternative has more open space than the Proposed Plan and buildings do not interfere with open space.

On page 562, paragraph 2: Refers to "lower financial feasibility" of Historic Alternative. Based on what evidence? Community's plan shows more financial feasibility based on compact smaller scale layout rather than sprawling layout in Preferred Plan.

On page 562 Para 2: "lower potential for well designed active gathering spaces". Based on what analysis? Community plan has equal or more spaces for active gathering.

On Page 563, Para 2: "area available for habitat and movement would be … lower than the Proposed Plan". Based on what analysis? Community plan shows increase in space for wildlife habitat and movement over Preferred Plan.
"

C159-3

On Page 564, Para 2 & 4: "lower inefficiency of historic buildings for heating and cooling and difficulty of updating energy systems in existing buildings". Based on what evidence and what studies? Old fashioned thinking. Not true in light of European and US experience where existing buildings are often brought up to modern standards, producing an efficient, net zero, low carbon footprint using fossil fuel free heat pumps and "second skin" technologies like those suggested in the community plan.

On Page 564,, Para 4. "Would provide less support for an expanded transit system in the area". On what evidence? In fact there is virtually no transit system in the area. The community's plan

includes one, owned and operated by local people, part of the local community at village scale, connecting to County system and even SMART in its present and future service configurations. C159-3

On Page 565, Para 1: "Compared to the Proposed Plan, the Historic Alternative would have a similar degree of (energy and greenhouse gas emission) impacts". On what evidence or studies? In fact, a smaller village plan with a mix of adaptive use of existing buildings would have a smaller degree of impacts in those area than the massive 1000 or more unit and commercial space plan proposed as "preferred" in the draft EIR. C159-4

On page 565, Para 3: "somewhat greater exposure to hazardous materials, result in hazardous waste materials". Based on what evidence or analyses? With aging infrastructure left in the ground and "second skin" technologies sealing in old materials and replacing plumbing and electrical with new, the exposure is likely to be lower as evidenced by technologies cited here

On page 565, Para 4: "impacts on hydrology, drainage and water quality similar to Proposed Plan due to demolition still required for demolition of existing buildings". Again, based on what analysis and evidence? The Historic Alternative would, as in the community plan, result in less demolition and deconstruction where appropriate, resulting in lower impacts on the resources listed

On Page 566, Para 1: "Larger areas of Core Campus would likely remain developed with creek buffers and wildlife corridors maintaining their current areas instead of expanding as in the Proposed Plan." Again full of suppositions, and based upon what study or evidence? "Likely" is not a term that is appropriate to an evaluation under CEQA (argumentative and imprecise). In the community plan, the wildlife corridor and creek buffers arte greatly expanded and placement of a community of 2500 people in 1000 units with 1500 cars immediately adjacent to those sensitive amenities is avoided. C159-5

On Page 566, Para 2, Land Use and Planning: "Historical Alternative would reduce affordable housing, maximize historic preservation, focus on single-family detached residential units rather than other typologies of residential in order to support the high costs associated with the adaptive use of historic buildings, and limit stores, services and community amenities on the site". Based on what evidence, research or studies? Again, old fashioned thinking, when the community plan, while admittedly reusing historic buildings (a good thing), will increase the affordable housing available, provide a vibrant mix of types of housing and supporting uses (though in a rural village setting at a scale smaller than the PP), and will handle the supposed "high costs" by innovative means available to anyone who puts his mind to it.

On page 566, Para 3 & following page: "the opportunities (for enhancing th streetscape, improving bicycle facilities, and providing a network of paseos, parks and open spaces within the Core Campus) would be limited in this Alternative due to the increase in historic buildings retained which would limit the possible changes in the streetscape" and "alternative would have significantly less housing available for working families, students, seniors and households with low, very low, and extremely low incomes".

Again, where is the evidence to support this statement? Or is it supposition by the author stated to support the Proposed Plan? The community's plan has as many as 470 units of affordable housing able to support those residents while the Proposed Plan has 250 (maybe 275) – a 60% increase, and available to all of the mix referred to in the EIR. The village, even though smaller C159-6

in scale, would avoid the problem of squeezing all 1,000 units into the same space, likely reducing the opportunities for the amenities listed in the Proposed Plan.

On page 570. Para 2 Wildfire: “Impact from Wildfire would be greater than the Proposed Plan, longer evacuation time in certain scenarios”. Again, based on what evidence? Nor substantiated in fact. The Historic Alternative would add a substantially smaller population to the area, resulting in fewer dangers and impacts in a wildfire than the more than 1000 units added in the Proposed Plan. The Historic Alternative would function with or without the escape route to Hwy 12 included in other alternatives in the EIR and, with a smaller number of peole needing to escape, would shorten the evacuation time in case of a wildfire rather making it longer as claimed. C159-6

On page 570-572: “Significant impacts of the Proposed Plan and the Historic Alternative are largely comparable, but the HA would be less superior in environmental features such as energy use, biological resources, and wildfire risks, and would not support key objectives related to increased housing supply, varied housing opportunities, community vibrancy, and long term fiscal sustainability to the same degree as the proposed plan”. Where is the evidence for any of these claims? Evidence has been provided to the contrary in each of the categories in the EIR. Each of the summary claims is speculative, without supporting data or findings, and seemingly has been presented by the author to support his/her Proposed Plan. Not appropriate for a CEQA evaluation. C159-7

The draft EIR states “Overall, the Historic Preservation Alternative is the environmentally superior alternative”.

We agree, and we urge the Planning Commission to adopt it as the Preferred Alterative and Proposed Plan under the Final EIR. Thank you for the opportunity to testify.

Norman Gilroy,
2572 Acacia Avenue,
Sonoma CA 95476

RITCH FOSTER
PO BOX 477
Glen Ellen, CA 95442

September 25, 2022

TO: Brian Oh @ Permit Sonoma, Board of Supervisors and So.Co. Planning Commission
SENT VIA EMAIL to all parties listed below

Brian.Oh@sonoma-county.org; PlanningAgency@sonoma-county.org; Susan.Gorin@sonoma-county.org; district3@sonoma-county.org; District4@sonoma-county.org; David.Rabbitt@sonoma-county.org; Lynda.Hopkins@sonoma-county.org; Senator.Dodd@senate.ca.gov; Senator.McGuire@senate.ca.gov

RE: Public Comment on SDC Specific Plan and DEIR….SCALE IT BACK AND GET IT RIGHT!

I do not support any of the proposals submitted by Permit Sonoma for development of the SDC Specific Plan. It is MUCH TOO LARGE of a project to be sandwiched in between rural Glen Ellen. The proposals need to be SCALED BACK. Consider the North Sonoma Valley MAC proposal, which included Historic Preservation, increased protection of the wildlife corridor and reduced housing numbers. We need a proposal with fewer significant negative impacts on the surround communities of Glen Ellen, Kenwood and the Sonoma Valley. Why does it seem that you have not heard the majority of people that have spoken out against the huge overreach of the current proposal? C160-2

I would, however, support a development of 450 or fewer low-income and affordable homes (NOT market rate), especially if many of the buildings could be adaptively reused, and the Historic District preserved.

The inclusion of a hotel in this project is wrong for so many reasons. It would only exacerbate traffic and the need for low-income workers to be traveling long distances for work…we are supposed to be CUTTING BACK on traffic and our carbon imprint, not exacerbating it. Plus, the water use needed for a hotel is FAR beyond that of residences. We are already experiencing drought conditions and water levels/supply issues with multiple dry years affects our diminishing water supply. A large development (1000 C160-3

homes plus a hotel) would certainly dangerously diminish our water supply. The only reason to include a hotel in the project is its profitability enticement for a developer, and that is not compelling enough, considering the negative impacts of VMT and traffic that would create.

C160-3

Wildfire evacuations would be significantly negatively impacted with the addition of 1,000 new homes and 2,000+ additional vehicles. It is laughable to say that the impact would be insignificant! For those of us who were caught in real-time long traffic delays during previous evacuations, we would strongly disagree. Why are you ignoring the reality of the impact of overdeveloping this site will have on our small rural community?

C160-4

Why have you not considered or pursued outside or alternative funding sources or implementation of a public trust option?

Why is the state not being held responsible for the condition they are leaving the buildings, property and infrastructure in? Their neglect and the cleanup costs associated with developing the site seem to be a big factor in your feeling the need to significantly overdevelop the property in order to offset these costs which should not be the responsibility of our local community to absorb.

C160-5

Please consider all of the important points that so many have brought to you and do not accept this current plan.

Thank you,

Ritch Foster, Glen Ellen resident for 47 years

From:	Ritch Foster
To:	Brian.oh@sonomoa-county.org; PlanningAgency; Susan Gorin; district3; district4; David Rabbitt; Lynda Hopkins; senator.dodd@senate.ca.gov; senator.mcguire@senate.ca.gov
Subject:	Re:Public comment on SDC Specific Plan and DEIR...SCALE IT BACK AND GET IT RIGHT!
Date:	Monday, September 26, 2022 1:33:43 PM
Attachments:	SDC letter #2 Sept 2022 RF.docx

EXTERNAL

I am attaching a letter and would appreciate it being included in Public Comments as regards the SDC Specific Plan and the SDC DEIR. Thank you. C160-1

--

Ritch Foster

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Robert Baeyen
To:	Brian Oh
Cc:	Gregg Montgomery
Subject:	SDC plan comment
Date:	Monday, September 26, 2022 9:06:57 AM

EXTERNAL

Hello Brian:

No, no, no. Do not proceed another step with the current plan. The SDC property is worth far more to Glen Ellen, Sonoma Valley, the migrating wild life and the county than any development will ever be.

C161-1

The plan would alter the character of the entire area. I do not understand how our supervisors and permitting department could ever seriously consider such a plan. It is directly opposite to our own 2020 General plan.

Our Supervisors and voters just voted to extend the very nature of our beautiful county for another 20 year. Then they approve of this? No we do not.

There are dozens of examples of this in the 2020 plan, for example:

Policy OSRC-1a: Avoid amendments to increase residential density in Community Separators, since these densities were established based upon the policies set forth in other elements of this plan as well as the open space, separation and visual considerations identified in this section. The integrity of Community Separators cannot be maintained at densities in excess of one unit per ten acres. However, under no circumstances shall this policy be used to justify an increase in density from that designated on the land use map.

C161-2

How can the current plan be approved if we as a county have vigorously made it known that this plan is not wanted.

I haven't even mentioned the strain this would put on the infrastructure etc.

Thanks.

--

Robert Baeyen
sonomabob@fastmail.fm

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,

do not click any web links, attachments, and never give out your user ID or password.

From:	RO
To:	PlanningAgency
Cc:	Brian Oh
Subject:	Comments on the DEIR
Date:	Thursday, September 22, 2022 1:00:59 PM

EXTERNAL

Hello Sonoma County Planning Agency,

My name is Rowan, I live in El Verano and I have some concerns about pushing the SDC Project in a for-profit direction and I have a potential alternative.

You have done a great job weighing community and environmental needs.
As someone who lives downstream near the Sonoma Creek, the care and attention brought to this project is very comforting.

C162-1

The broader social and economic goals of creating a new gathering place is inspiring.

I fear that the wonderful plan put forward in the SDC Public Review Draft will be compromised in its execution.

The execution of the plan will reflect its funding; if a developer assumes responsibility for this project they will be compelled to complete it in the most profitable manner.
Construction would follow conventional production methodologies and produce a space with the heart and character of an outdoor mall.

C162-2

The quality and ethic of the execution of this project will ripple through Sonoma Valley and Sonoma County.
This land being left for profit would further entrench us in systems that do not provide the freedom to adequately respond to rising social inequality and changing climates.

I believe there is an opportunity for a different ethic to emerge: an attitude of respect and generosity already apparent in the Public Review Draft.

If we were to use the cooperative legal structure, we could create an entity more capable of representing the needs of Sonoma Valley and her people.

C162-3

The members of the cooperative would be the different organizations interested in engaging with the space.
These organizations would be responsible for funding the projects they were interested in, as well as contributing to the collective maintenance of the property.
Citizens of the Valley would have the opportunity to patronize the projects they are most

passionate about, creating a direct democracy measured in dollars. C162-3

There are several opportunities such an undertaking would facilitate:

1. The ancestral keepers of this land could be invited to participate in the decision making process. This particular land has been a place of intercultural relations prior to European arrival. This is a unique opportunity to honor the people who so masterfully tended this land and be able to build something new together.

2. It could provide a central organizing system for the various philanthropic, socially and environmentally active groups of Sonoma Valley. So much good work is being done here but it is scattered.

C162-4

3. The property could be developed as needed. This would lower upfront costs as well as reduce the strain on local roadways by construction workers. This would give the property a much more organic and welcoming atmosphere and allow it greater flexibility to precisely meet the needs of its residents.

4. The creation of a Library/Community information center. This center could provide local cloud storage and more equitable access to high powered computers. There are many young people who have been sucked into the internet, especially after the pandemic. Making a space for people to come together to work, learn and play would allow for these activities to be less inherently anti-social while making them easier to regulate.

5. A weekly open air market/festival showcasing craft and food from throughout the Bay Area. A blend between the Sonoma Farmers Market and the Plein Air Art Show, this would give local artisans greater opportunities while further distinguishing Sonoma Valley as a center of the arts.

6. A venue for hosting performances, from musical guests to local performers such as the Avalon Players, Broadway Under the Stars and Rhoten Productions.

The problems facing the SDC and Sonoma Valley are not unique.
Everywhere people are facing water shortages that force us to rethink how we use our resources and produce our food.
Our farmers need the most support so they can have the freedom to innovate, they are severely limited in their capacity to do this when their survival depends on profitability.
A rising cost of living prevents people from purchasing in line with their ethics and ideals, forcing them to choose the cheapest (and most exploitative) products.

C162-5

This cost of living is forcing young people like myself out of this region.

I (along with some peers) am starting an organization to be able to address these kinds of problems.
Broadly speaking, we are committed to learning how to adapt technologies to satisfy a particular use case.
I have spent quite a bit of time familiarizing myself with the cooperative structure in that endeavor, hence the enthusiasm about its potential application in this setting.
The first technology we are setting out to master is the personal computer.
We are not trying to innovate or redesign anything, just know what technologies are available and help people end up with the tools they actually need and make sure they know how to use and maintain them.
The goal of this organization is to be able to build the capacity to address some of the larger issues outlined above, naturally that will take quite a bit of time.

C162-6

Still, as someone who is very passionate about the Sonoma Creek, I cannot help pondering this issue of what technologies are needed to meet the needs of this valley.
The idea of a single entity providing the investment for the SDC project makes me deeply uneasy about the level of influence they would have in that situation.

Much of my family still farms and I am very acutely aware of the pressing need for our food system to evolve if my future children are going to be well fed.
It seems foolish to me to not draw on the wisdom cultivated over centuries and millennia for coexisting and thriving with this land, but all too often it seems that wisdom and those practices are flaunted by European Legacy institutions with no connection to the people who actually practice and developed it.

C162-7

I know it is likely far too late for such a proposal to be considered for this project, especially in such an undeveloped form.
If there is any chance of such an organization emerging I would gladly contribute in any way possible.

Thank you for taking the time to engage with my concerns, your responsibility and service is greatly appreciated.

Rowan Schneider

Omninaut Integrated Technology

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,

do not click any web links, attachments, and never give out your user ID or password.

Sonia E. Taylor
306 Lomitas Lane
Santa Rosa, CA 95404
707-579-8875
Great6@sonic.net

24 September 2022

Brian Oh, Comprehensive Planning Manager
Permit Sonoma County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403

Via email

Re: Sonoma Developmental Center Specific Plan
Comments on the Draft Environmental Impact Report

Dear Mr. Oh:

This letter will provide limited comments about the Draft Environmental Impact Report (DEIR) prepared for the Sonoma Developmental Center (SDC) Specific Plan.

C163-1

This letter is not intended to be an inclusive examination of the DEIR, but is intended to address key deficiencies in the DEIR, and specifically includes a comment about one unacceptable purported "policy"/"action."

Specific Plan Standard Conditions of Approval

The DEIR prepared for the SDC Specific Plan is a "self-mitigating" DEIR, and relies on the SDC Specific Plan's "Standard Conditions of Approval," as well as other federal, state and local regulations, rules, laws and policies[1] for other "conditions" that will allegedly be required of any future development, instead of proposing mitigation measures and a mitigation monitoring program.

This is unacceptable for multiple reasons.

C163-2

First, there appears to be no framework requiring that the Specific Plan Standard Conditions of Approval (hereinafter "Conditions") actually be undertaken, or requiring compliance with any existing federal, state and local regulations, rules, laws and policies (hereinafter "Policies"), and there certainly is no way for any interested member of the public to monitor whether those Conditions/Policies have been demanded of any future development, since there is no required reporting process.

[1] Reliance throughout the within DEIR on Sonoma County's expired General Plan is unacceptable. Among many issues is that mitigation measures required in the FEIR prepared for that General Plan have been eliminated/removed over years of extensive amendments to that General Plan, rendering that General Plan – at best – noncompliant with CEQA.

Second, there is no way to evaluate whether any of those Conditions/Policies are feasible, will have the purported result reported in the EIR and/or are enforceable.

Third, many of those Conditions/Policies defer analysis to some later future time, which is impermissible under the California Environmental Quality Act (CEQA), particularly since some or all proposed developments on SDC may not require any future CEQA review. This could lead to a result where the CEQA required analysis of both impacts and cumulative impacts will never have been completed prior to development on the SDC property.

C163-2

Finally, it's astounding to me that many of the Conditions that the DEIR relies on to make its findings – most of which indicate either "less than significant" impact or "no impact" – are NOT included in the required Standard Conditions of Approval. This means, of course, that those missing Conditions are not actually required, and therefore that any reliance on those Conditions to somehow mitigate impacts, resulting in those findings of "less than significant" impact or "no impact," is contrary to the purpose of CEQA, and renders the DEIR worthless.

Future Analysis Conditions:

Some of the many Conditions contained Exhibit A of the SDC Specific Plan that defer analysis to some later future time include, but are not limited to:

1. Almost all of the Utility Conditions, including "UTIL-3 Complete an analysis of the capacity of SVCSD trunk sewer to serve the SDC at full buildout." Obviously, this future analysis could result in information that the proposed future development would overload the SVCSD trunk sewer, which would be a significant impact requiring specific mitigation, if possible, and/or would cause significant unmitigatable impacts.

C163-3

2. Many of the Biological Conditions. For instance, the future required analysis of "presence of special-status species and sensitive habitats at proposed development sites" must be conducted now, as part of the DEIR, as that information would inform whether there are significant unmitigatable impacts of the proposed Specific Plan.

Missing Conditions:

As just one example of missing Conditions, in DEIR Section 16.1.3.3 "Relevant Policies and Implementing Actions" regarding Wildfire Hazards, the DEIR lists a number of "implementing actions" (hereinafter Actions) that are not contained In the Specific Plan Standard Conditions of Approval, and are not otherwise required by other Federal, State or local regulations, rules, policies, etc., including, but not limited to:

C163-4

Policies 2-31, 2-34, 2-35, 2-37, 2-39, 2-42, 2-54, 6-1, 6-19. 6-21, and 6-27

If there are Federal, State or local regulations, rules, policies, etc. that require[2] that any of the Actions listed in the DEIR, including those listed above, be implemented, specifically set forth the exact regulations, rules, policies, etc. for each said Action.

C163-4

To make matters worse, some of the Actions relied on by the DEIR in its finding of "less than significant" impact or "no impact" are vague and unenforceable, including but not limited to by leaving significant discretion to individuals/jurisdictions considering future approvals (which means that any given individual/jurisdiction in the future could make a decision that the Action required by the DEIR doesn't have to be met). This, of course, would render the DEIR's findings of "less than significant" impact or "no impact," which required the Action to be taken to make said finding, worthless, and would require reevaluation of the DEIR's findings and conclusions.

There is no question that these Conditions/Actions must be implemented for the DEIR's findings to be accurate and for the DEIR to be considered adequate. Because there is no requirement for these Conditions/Actions to be implemented, there is a very real possibility that they will be neglected or disregarded, which renders this DEIR fatally flawed.

C163-5

The DEIR's conclusions of "less than significant" impact and/or "no impact" either hangs together as a whole, with every Condition/Policy/Action required to be met, or those conclusions fail if any one single Condition/Policy/Action is not met.

One specific Policy/Action that has no basis in law and cannot be accomplished is the allegedly required "Shelter-In-Place" facility, discussed below.

C163-6

"Required" Shelter- in-Place Facility

In Chapter 3.16: Wildfire, the DEIR contains the allegedly required Action that:

> 2-54 Ensure that the project sponsor proactively plans for emergency wildfire safety by:
> . . . .
> b. Building or designating an on-site shelter-in-place facility, to be open to both SDC residents and the general public, prior to construction of the 200th housing unit, with specifications for the facility to be included as part of the Emergency Preparedness and Evacuation Plan;
> . . . .

In spite of the laundry list of Federal, State and location regulations, rules, policies, etc. listed in Section 3.16 Wildfire preamble, according to my research there is not one single United States or California regulation, rule, policy, or ANY other specific guidance about shelter-in-place facilities with regard to wildfires.[3] This complete lack of law and guidance renders this alleged required Action impossible to meet.

[2] Any such Federal, State and/or local regulation, rule, policy, etc. that either is "recommended" or allows discretion in the decision making as to whether to require compliance cannot be relied on by the DEIR to make its legally required findings.

[3] Australia has multiple regulations, rules, policies, etc. about shelter-in-place, etc. with regard to wildfires, as well as significant experience to rely on. Needless to say, CEQA does not allow reliance on a foreign country's regulations, rules, policies, etc.

Specifically, at the Federal level, there are materials covering shelter-in-place for hurricanes, tornadoes, high wind events, chemical attacks and other chemical issues, and similar situations, but not a single direction regarding shelter-in-place facilities for wildfires.

C163-7

Further, this complete lack of regulations, rules, policies, etc., let alone any guidance whatsoever, is true at both the California State and local Sonoma County level.[4]

It is clear that this Action is "required" because it will be – after construction of 200 residences – impossible to safely evacuate everyone living/working on the SDC site, requiring them to "shelter-in-place" to attempt to survive a wildfire impacting the area. However, given the complete lack of a California definition of shelter-in-place during wildfires (as well as any rules/regulations/guidance about how a shelter-in-place facility for wildfire should be constructed/utilized, etc.), I have no idea how this purported facility will save lives. Perhaps this proposal should actually be for a "temporary refuge" or for a "refuge of last resort," although that clearly is not what is being proposed.

Please state explicitly what allegedly required "specifications" for this shelter-in-place facility would render it an acceptable "mitigation measure" allowing findings of "less than significant" impact in this Wildfire section of the DEIR. Because, frankly, there is literally no evidence that specifications exist, except in a foreign country – Australia, specifically. Clearly California, and the United States, have not adopted any of Australia's rules, regulations and policies regarding shelter-in-place, stay and defend, refuge of last resort, etc.[5]

C163-8

Since this is one essential required Action for the Wildfire section of the DEIR, and there are no standards or any evidence that it mitigates evacuation during a wildfire, it cannot be achieved, and therefore every conclusion of "less than significant" impact is rendered meaningless, causing the DEIR to fail with regard to the Wildfire section.

Attached for your information please find information I gathered about shelter-in-place earlier this year.

Additional comments about Section 3.16 Wildfires:

C163-9

1. In Impact 3.16-1, the DEIR states that any future project:

> [W]ould also explore the feasibility of providing an additional east-west emergency access connection from the site to SR 12 in order to improve access to the emergency evacuation route (Policy 3-5).

[4] In response to this specific comment, I demand that the response include each and every Federal, State and local regulation, rule, policy, etc. that provides proof that the proposed shelter-in-place facility will in any way mitigate anything with regard to the wildfires that are inevitable in this property's future. I further demand that the response include each and every Federal, State and local regulation, rule, policy, etc. that provides direction and/or guidance on construction of and use of a shelter-in-place facility during wildfires. Reliance on a foreign country's regulations, rules, policies, etc., and/or experience is impermissible.

[5] Apparently California was considering "stay and defend" as a possibly acceptable policy for wildfire evacuation mitigation until the death of 173 people in Australia in 2009 who were sheltering in place, etc. and California then abandoned any consideration of same. See, among other sources: https://laist.com/news/climate-environment/this-is-why-fire-officials-dont-want-you-to-stay-and-defend-your-home

Policy 3-5 states:

> Reuse existing street network to the greatest extent feasible. Improve multi-modal access from the SDC to SR 12 by exploring the feasibility of providing an additional east-west emergency access connection from the site that includes high quality pedestrian and bicycle facilities.

C163-9

(Curiously, in Section ES.2 "Areas of Known Controversy" of the DEIR, it is stated that "The Proposed Plan features a new connection from SDC to Highway 12," which is flatly untrue – the DEIR only proposes "exploring" if said connection is "feasible.")

Again, this is a proposed "mitigation measure" Action that relies on some future possible Action that may never happen or may not be feasible (clearly the use of the word "explore" in this proposed policy does not require any action), and therefore this is an impermissible deferral of analysis to some future time.

2. The evacuation times listed in Table 3.16-1 would be hilarious if the consequences of their gross underestimate weren't so potentially dire.

C163-10

While I have never evacuated in the Sonoma Valley, I had to evacuate in the very early morning during the Tubbs fire in 2017 in Santa Rosa. It took me over 10 minutes to just drive three blocks.

There is not a chance that the evacuation times listed in Table 3.16-1 are an accurate reflection of reality during a wildfire disaster.

Please state what modeling evaluation methods were used to arrive at the DEIR's evacuation times. The purported "evacuation analysis for this EIR prepared by Kittelson & Associates" will apparently not be made available for public review; I explicitly requested that analysis and my request was denied. This renders it impossible for any decision maker or member of the public to adequately evaluate this analysis and comment effectively.

After receiving this denial, I did a little research on Kittelson & Associates, learning that of all the many listings on their website of work they have performed/ideas they have, only two items had anything to do with evacuations: "Capacity and Strategy Assessment of North Carolina Hurricane Evacuation Routes" and "Emergency Evacuation Strategies for Every Community." The first item is categorized as "work," and the second item as "ideas."

C163-11

In the description of the first item, which obviously isn't relevant except in the most general sense, since it's discussing freeway behavior and there's generally a great deal of advance notice of hurricanes, Kittelson's website states that they modified the analysis tool Freeval with North Carolina Department of Transportation tools and strategies to evaluate reversal of North Carolina's freeway lanes to allow evacuation during a hurricane. Freeval's website states that it is "powerful macroscopic freeway analysis tool based on Highway Capacity Manual (HCM)." The Freeval website also only lists the North Carolina freeways as a specific use.

Did Kittelson use Freeval to evaluate evacuation from SDC during a wildfire event? I have no idea.

For Kittelson's "Ideas" listing about emergency evacuations in general, their website states that they partnered with Stephen Wong, Ph.D., who does research on (among other things) emergency evacuation strategies.

C163-12

Interestingly, in a 2022 paper co-authored by Dr. Wong on California wildfire evacuee behavior, the following statement is made:

> While extensive research has been conducted on hurricane evacuation behavior, little is known about wildfire evacuation behavior.
>
> https://scholar.google.com/citations?view_op=view_citation&hl=en&user=Y7LlCiAAAAAJ&citation_for_view=Y7LlCiAAAAAJ:Tyk-4Ss8FVUC

Did Kittelson partner with Stephen Wong to evaluate evacuation from SDC during a wildfire event? I have no idea.

It is unacceptable to not release the actual Kittelson & Associates evacuation analysis. Because of this refusal to release this analysis, the public has had no opportunity to evaluate same and provide comments. It's not the public's job to provide an alternative analysis; it's the DEIR's job to prove that its analysis is accurate, and in this regard the DEIR has failed.

3. The DEIR is internally inconsistent with regard to its conclusions of "less than significant" impact regarding Impact 3.16-1. As stated above, and by other commenters, the alleged "additional east-west emergency access connection" is not required by the DEIR, and is only to be "explored" for possible feasibility of same. However, Impact 3.16-1 clearly states that a condition for the finding of "less than significant" impact is that the project must:

C163-13

> "[Ensure] that every parcel within the Core Campus has two routes for ingress and egress during an emergency"

Without the additional access to the property, I believe this is impossible to accomplish. If you believe that every parcel will have two means of ingress/egress without the possible "additional east-west emergency access connection," please explicitly show how that will be accomplished.

4. Also in Impact 3.16-1, the following is stated:

> "Historically, a fire approaching from the west may be less likely, and therefore did not warrant further specific analysis."

C163-14

While a fire approaching the SDC site from the west "may" be less likely, that is not an adequate reason for not evaluating and analyzing the impacts therefrom. If the DEIR had stated that this possibility "is" less likely, perhaps the conclusion that no analysis was needed could have been reached, but "may" certainly implies that it is possible, and therefore the possibility should have been addressed and evaluated.

Thank you for your consideration. Please do not hesitate to contact me if you have any questions.

Very truly yours,

Sonia E. Taylor

Attachment

Cc: Tennis Wick, Director, Permit Sonoma
Sonoma County Board of Supervisors
Sonoma County Planning Commission
Emma Murphy, Press Democrat
Phil Barber, Press Democrat

Sonia E. Taylor
707-579-8875
great6@sonic.net

8 March 2022

SHOULD "SHELTER-IN-PLACE" DURING WILDFIRES EVER BE CONSIDERED AN ALERNATIVE TO EVACUATION AND/OR AS AN ACCEPTABLE MITIGATION MEASURE?

C163-15

The short answer is an emphatic "no."

I'm starting to hear people talk about "Shelter-In-Place" as an equivalent alternative to wildfire evacuations, or even as a CEQA mitigation measure to allow development in fire prone communities.

Sheltering in place during a wildfire conflagration should never be a first choice, as review of information from communities who have Shelter-In-Place policies and experience makes clear, and that is backed up by the opinion of experienced fire professionals. Everyone agrees that while sometimes it can be the only solution for people who have waited too long to evacuate or who are caught with a wind driven wildfire bearing down when it could be even more dangerous to attempt to drive out, it should never be considered the first choice. Ever.

In fact, Shelter-In-Place is the last resort.

Critical Experience-Driven Shelter-In-Place Lessons:

C163-16

1. There is no guarantee of safety or survival while sheltering in place.
2. Shelter-In-Place is not a passive experience; instead it requires physical, mental and emotional fitness, and those who Shelter-In-Place must actively work hard to survive.
3. Shelter-In-Place comes with high risks and should always be a last resort.

Locations with Shelter-In-Place Experience:

In California, there are two locations with Shelter-In-Place experience: Rancho Santa Fe in San Diego County and Pepperdine University in Malibu. Australia also has many years of Shelter-In-Place experience. I'll discuss each location's policies, recommendations, experiences and the unintended consequences, below.

<u>Rancho Santa Fe</u>

Rancho Santa Fe, in San Diego County, is often brought up as an example of how "Shelter-In-Place" is an alternative to providing adequate evacuation routes and planning.

C163-17

Nothing could be further from the truth. In Rancho Santa Fe, the community was built to have the best odds possible of surviving wildfires – although it was built to 2003-04 Building/Fire Codes, and we know much more now than we did then, raising the question of whether the community is still adequately protected.

Moreover, Shelter-In-Place is **not** considered the first or safest choice for residents, as the Rancho Santa Fe Fire Department made clear on December 7, 2017:

C163-17

> "Clarification for our Shelter-in-Place communities: While your communities were built to a specific standard designed to withstand wildfires, they will still be evacuated if a wildfire is threatening. **If evacuation orders are issued for your community, please evacuate and evacuate early. That is still the safest scenario for residents and emergency personnel.** Only if you are unable to do so **may** it be safer to stay in your home, or shelter-in-place, than to evacuate under hazardous conditions." (Emphasis added)
>
> https://www.rsf-fire.org/shelter-in-place/

Further, the materials distributed to residents of Rancho Santa Fe's "Shelter-In-Place" communities make clear that evacuation is still the best option, and that sheltering in place is not. (https://www.rsf-fire.org/wp-content/uploads/2016/09/SIP_for_web.pdf)

Following is the checklist distributed to residents in these communities considering whether to evacuate or Shelter-In-Place:

C163-18

> "Should I stay or should I go Quiz":
>
> - Are you physically fit to fight spot fires in and around your home for up to *10 hours or more*?
> - Are you and your family members mentally, physically and emotionally able to cope with the intense smoke, heat, stress and noise of a wildfire while defending your home?
> - Can you protect your home while also caring for members of your family, pets, etc.?
> - Do you have the necessary resources, training, and properly maintained equipment to effectively fight a fire?
> - Does your home have defensible space of at least 100 feet and is it cleared of flammable materials and vegetation?
> - Is your home constructed of ignition resistant materials?
>
> If you answered "No" to *any* of these questions, then plan to *evacuate early*.

In addition, CalFire's "Ready Set Go Plan" reiterates multiple times that you should **evacuate**, not "Shelter-In-Place," and has a section titled "If You Are Trapped – Survival Tips." That checklist for people who are trapped includes "Patrol inside your home for spot fires and extinguish them," and "Patrol your property and extinguish small fires." (https://www.fire.ca.gov/media/4996/readysetgo_plan.pdf)

C163-19

Obviously, sheltering in place is NOT a passive experience. Individuals/families can't remain in their house and just safely wait for the fire to pass. Individuals must be able to fight spot fires, be mentally, emotionally and physically fit, and have adequate resources and training to have a chance of surviving sheltering in place (and even then, there are no guarantees). Having a structure built to the best fire safety codes, even with "perfect" defensible space, is not enough.

During a life threatening event, most people are not going to have the training, physical, mental and/or emotional endurance, or the resources and abilities to be able to cope with sheltering in place, which will not only be dangerous for those individuals, but for the Fire Department, who will likely be called in to rescue them.

C163-19

Sheltering in place should never be the first choice, should never be considered an acceptable substitute for safe and sufficient evacuation routes and planning, and should never be considered an acceptable CEQA mitigation measure in lieu of adequate evacuation routes and planning.

Australia

Australia historically had a "Prepare, Stay and Defend or Leave Early" policy, which has undergone significant reevaluation after the 2009 Black Saturday fires, when people died in their homes while sheltering in place. Currently the Australian policy is known as "Prepare. Act. Survive." and promotes evacuation as the safest option – well before a fire is a threat.

C163-20

The genesis of Australia's policy is that oftentimes their fires are explosive and unpredictable, leaving residents with no time to evacuate. They have identified "Bushfire Safer Places" and "Bushfire Last Resort Refuges" for those emergency situations.

A "safer place" is a "place of relative safety," that "may save your life but they do not guarantee safety," and may be subject to "sparks, embers and smoke which may start secondary fires in vegetation, gardens and structures." A "last resort refuge" is to be used "only if you cannot reach a Bushfire Safer Place," and is "not suitable for extended use," providing only limited protection, with no guarantee of safety. (See, as one example of many, https://www.cfs.sa.gov.au/prepare-for-a-fire/be-prepared/bushfire-safer-places/)

Because of Australia's development patterns, and because of human nature (which is unpredictable, at best), Australia's policy for the times when residents either will not or cannot evacuate called "Prepare. Act. Survive.", which is essentially "Shelter-In-Place."

C163-21

To stay in a building during a fire, however, is acknowledged by Australian officials as requiring significant preparation, including a written and practiced bushfire plan, as well as available water with pumps and hoses and a power source. Of course, the first crucial decision about whether to Shelter-In-Place involves ensuring that the building has been constructed for best survival probabilities during a fire, along with having perfect defensible space. After that, though, the Australian literature for "Prepare. Act. Survive." emphasizes similar issues as does Rancho Santa Fe.

The first priority is always to evacuate early. Only if you get "caught" should you stay, and if you stay, you should be prepared, with a plan. The recommended preparation includes being mentally, emotionally and physically capable, because individuals will likely experience spot fires, smoke, heat and darkness. Individuals will also likely not have power or running water, and may not have Internet or cell phone connections.

C163-22

Prior to the arrival of the fire, Australian materials state that individuals sheltering in place will have to fight spot fires, prepare their home, and patrol inside and outside extinguishing embers and fires. When the fire arrives, individuals sheltering in place will have to take shelter inside the house, while also patrolling inside the house putting out embers and fires. After the fire has passed, individuals sheltering

C163-22

in place are told they will have to continue to put out spot fires, continue patrols inside and outside their house, and hose down the house as needed.

Australia has multiple resources about bushfires, including at https://www.dfes.wa.gov.au/site/ and https://www.abc.net.au/emergency/plan-for-emergency-bushfire/12412042 plus many more (It's important not to refer to anything dated 2010 or earlier, since policies changed after 2009).

In other words, Australia does not consider sheltering in place to be a passive activity. "Being in a bushfire could be the most traumatic experience of your life. You may have to fight spot fires for hours, even days at a time." Their bottom line recommendation is: "The best way to survive a bushfire and avoid radiant heat is to leave early and be away from the threat."

Pepperdine University

C163-23

When Californians cite Shelter-In-Place policies, Malibu's Pepperdine University comes up most frequently, since some of their students sheltered in place during the 2018 Woolsey fire. Unfortunately, I see little evidence that Pepperdine's policy is a realistic one that should be applied elsewhere.

Pepperdine allegedly has a "detailed shelter-in-place plan," but I have been unable to find any evidence of said detailed plan – all I can find are general policies. Pepperdine's 2010-11 Emergency Preparedness Guide discusses their Shelter-In-Place policy in general terms (it is not the "detailed plan"), but also states:

> "Have an evacuation plan in place and identify two exit routes from your neighborhood. If you are asked to evacuate by fire or police officials, do so immediately."

(the 2020-21 Guide is apparently only available to students, requiring student ID to review)

The President's August 2020 letter states: "Through diligent training, equipping, studying, staffing, and commitment, we are prepared to be our own first responders **until** local and state agencies reach campus." (emphasis added)

C163-24

Clearly Pepperdine's Shelter-In-Place plan relies on the LA Fire Department's assistance on the Malibu Pepperdine campus, which is confirmed in their web-based general policies. Pepperdine's own firefighting resources are two "fire trucks" and their " expertly trained staff" "able to respond 24/7" (https://pepemergency.files.wordpress.com/2020/09/fy21-presidents-letter.pdf), but their general web-based policies state that Pepperdine will "host the Los Angeles County Fire Department's Incident Command Post (ICP) on the Malibu campus for wildfires in the area." Further, their Emergency plans state: "University officials maintain and develop relationships with first responders, government officials, utility providers, and others who could assist the University during emergencies." (See, https://emergency.pepperdine.edu/brush-fires/, https://emergency.pepperdine.edu/emergency-operations-committee-eoc/, https://emergency.pepperdine.edu/shelter-in-place/)

This makes clear that Pepperdine is "hoping" that the LA Fire Department will be on the campus pursuant to the relationships Pepperdine has with them, so Pepperdine won't have to rely on their own staff for protection of life and property, or at least only until the Fire Department arrives on site.

Although Malibu has prepared an August 2020 Mass Evacuation Plan, Malibu's General Plan is dated 1995, and I presume the associated FEIR/DEIR is equally old (it's not readily available online). This means that Malibu doesn't have a city-wide EIR that complies with current CEQA requirements to evaluate potential impacts to existing wildfire evacuation plans, which I consider a significant problem, because all of Malibu is designated as a Very High Fire Hazard Severity Zone. C163-25

Malibu's 2020 Mass Evacuation Plan unfortunately mentions Shelter-In-Place as if it's a "safe" option, without any discussion of the critical difficulties with doing so, or any indication of when orders to Shelter-In-Place might be issued. The Plan also identifies "Safe Refuge Areas," all of which are on Malibu's beaches – Pepperdine's campus is apparently not considered a "Safe Refuge Area." The Plan makes clear, however, that these areas, no matter how named, are not necessarily "safe" and that evacuation may be necessary:

> "Safe Refuge Areas are temporary staging areas in a mandatory evacuation. They may also be used to help move traffic off the road to speed up the movement of people out of the immediate danger area. Residents seeking refuge in a Safe Refuge Area will be notified that the Safe Refuge Area is not a 'hard or permanent shelter' and in the event, the evacuation order involves the Safe Refuge Area, those residents will be required to evacuate."
>
> (https://www.malibucity.org/DocumentCenter/View/26832/FINAL-Evacuation-Plan-8192020)

I grew up in Malibu, so am familiar with Malibu in general, as well as the Pepperdine campus. Pepperdine established their Shelter-In-Place policies because: 1) Pepperdine is – for Malibu – in a relatively "open space," 2) their 3000 +/- students may not have the ability to evacuate (many don't have individual vehicles on site), and 3) any significant wildfire in Malibu will likely cause gridlock on the 2 lanes each way Pacific Coast Highway (the only real way to evacuate away from a typical wildfire). Notwithstanding these reasons, I believe Pepperdine's Shelter-In-Place policy has significant downsides. C163-26

First, any Fire Department will always default to protecting people over buildings, and when people are sheltering in place, that will divert Fire Department resources to protect those people, as appears to have happened during the 2018 Woolsey fire (I've reviewed multiple newspaper articles about the Woolsey fire, as well has had personal communications with Malibu residents). Second, even though Pepperdine is (relatively) open space and has (relatively) fire safe buildings, that cannot protect students from smoke inhalation, from radiant heat, from fear, or from the possibility that they might have to run for their lives if a fire conflagration were to invade the campus. C163-27

There also is no available evidence about who will take the necessary active roles required during Shelter-In-Place. While the University has two "fire trucks" (the photo online is not of full size fire engines), there is no indication of the number of staff assigned to those trucks or about their training, and, frankly, since the campus is 830 acres, there is no possibility that those two trucks could effectively put out all embers and spot fires, or effectively respond should a more significant fire start or enter the property. Unless, of course, the LA Fire Department is already also on site doing that actual work, which seems to be Pepperdine's assumption. C163-28

There is also no discussion of whether the students and staff sheltering in place are physically, mentally and/or emotionally capable of doing so.

In fact, in spite of Pepperdine's 30+ year old Shelter-In-Place policy, during the 2018 Woolsey Fire apparently many of the students did evacuate. And, as a result of the Woolsey Fire, it appears that there will be a reevaluation of Pepperdine's Shelter-In-Place policies, although there is no evidence I can find of any such reevaluation to date. C163-29

As we've seen around the state, when faced with a life threatening situation such as a wildfire, the odds that residents and personnel will behave in a logical fashion is decreased, oftentimes substantially, and when a large portion of the population consists of very young adults, it should not be surprising when things don't go as planned.

Shelter-In-Place can be a "tool" in the "tool kit," but should never be the first choice. It should only be used when evacuation has become impossible. I believe Pepperdine should be required to keep adequate buses, with trained employees available to drive them, to fully evacuate the entire campus as early as possible, and should keep their Shelter-In-Place policy only for instances where there is not adequate time to evacuate. C163-30

I will be watching closely to see how Pepperdine will prepare for a future of wildfires with their University full of young adults in a very high fire danger zone now that fire season is 12 months long, and will be watching to see how they change their Emergency plans.

I can find no evidence that Pepperdine has a realistic Shelter-In-Place policy, and do not believe their policy should be used as an example for any other situations.

Conclusion:

Shelter-In-Place is not an appropriate solution for most people. C163-31

As one Australian website states: "Being in a bushfire could be the most traumatic experience of your life. You may have to fight spot fires for hours, even days at a time." (https://mybushfireplan.wa.gov.au/stay-and-defend)

If California communities, or California in general, want to consider using Shelter-In-Place as an tool for what is now our Climate Change driven year-round fire seasons, they should first carefully consider the realities and requirements of Shelter-In-Place.

Shelter-In-Place as a Mitigation Measure:

C163-32

Shelter-In-Place should never be considered an acceptable mitigation measure to allow the construction of buildings or location of businesses in high/very high fire danger areas without adequate evacuation routes, personnel and planning.

Shelter-In-Place requires each individual to assess their own personal physical, mental and emotional fitness and their ability to fight spot fires, survive darkness, heavy smoke and heat, and more. Therefore, no development can either require or assume that the residents/employees and visitors will qualify to Shelter-In-Place.

As an example, let's assume that a development of homes is permitted in a high fire danger zone, but only one means of egress is required, and that road is narrow, because instead of requiring the

development to be constructed so everyone can safely evacuate in an emergency, the project approval instead permits the development to have one or more locations where the residents will Shelter-In-Place.

C163-32

These are the questions that logically arise: Do all purchasers/renters of the homes have to guarantee that they are physically, mentally and emotionally capable of sheltering in place, will do so during any fire, and will always remain capable? What happens if a resident is injured, develops an illness, or just gets older – would they then be required to move out of the development? What if someone has one or more children – would they be required to move because the children couldn't qualify as capable? What about visitors or employees at the development – would they also be required to agree that they are physically, mentally and emotionally capable of sheltering in place before they visit or take a job in the development?

C163-33

> "Do not underestimate what is required to maintain your house as a place of safety during a bushfire. Actively defending your property will take huge physical and mental effort for many hours before, during and after the fire, as conditions will be unbearably hot. You need the right equipment, protective clothing for all your family or household members, and a property prepared to the highest level."
>
> https://www.parliament.wa.gov.au/publications/tabledpapers.nsf/displaypaper/3814042a195d0712a147f5514825791a00045feb/$file/4042.pdf

As it would be legally impossible to require any individual to be capable of sheltering in place at any time – again, it is an **active** activity, not a passive activity – Shelter-In-Place should never be used as a mitigation measure.

Shelter-In-Place as a "Tool":

Currently, California courts are starting to issue decisions requiring adequate evacuations and planning, supported by California's Attorney General, and I believe that's where we should be focusing our time and attention – on safe evacuations and evacuation planning.

C163-34

However, if California communities want to consider using Shelter-In-Place as a tool, in addition to evacuation, It would be wise for them to thoroughly educate themselves about what Shelter-In-Place actually consists of. As is made obvious above, sheltering in place requires a building – and all surrounding buildings – constructed to the highest fire resistant standards with perfect defensible space. Then, the individuals sheltering in place will be physically, mentally and emotionally challenged for many hours, with no guarantee of their survival or safety.

Identification of "Safer Places" and/or "Last Resort Refuges" may make sense to give people a place to go if they have attempted to Shelter-In-Place but then have to run, or for people who are caught because they wait too long to evacuate, but there's no question that those areas should only be used if absolutely necessary. Therefore, those areas – if identified – would need to be explicitly identified as areas where people's safety is not guaranteed, and where they might, in fact, have to run for their lives.

C163-35

If identification of those locations will make individuals feel like they don't really "have" to evacuate, I believe their identification would be a disaster in the making. With human nature the way it is, I have

deep concerns that identification of “Safer Places” and even “Last Resort Refuges” would make individuals complacent and less likely to evacuate when requested to do so. C163-35

While firefighters will always try to first protect against loss of life, I believe that adding to their burdens by putting individuals in what are really unsafe locations, instead of focusing on safe evacuations, is a very bad idea. Sheltering in place puts not just the individuals sheltering in danger, but also the firefighters, and is very likely to delay essential fire suppression efforts. Time spent rescuing people just allows wildfires to grow larger.

The bottom line is that as Climate Change impacts cause more intense, frequent and fast moving wildfires, with devastating losses to lives and property, we should be focused on data-supported analyses of existing road capacity and impacts to evacuation response times during wildfire emergencies. We must – instead of trying to find a magic bullet to allow more development in high fire danger areas – mitigate existing evacuation hazards and ensure adequate evacuation routes and planning, not create new evacuation hazards that will likely result in loss of lives. C163-36

I believe that Shelter-In-Place is a terrible idea, and should only ever be used as an absolute last resort.

SCTLC

SONOMA COUNTY TRANSPORTATION & LAND-USE COALITION

September 23,2022

Mr. Brian Oh
Comprehensive Planning Manager
Permit Sonoma
2550 Ventura Ave.
Santa Rosa, CA 95403

Via email to Brian.Oh@sonoma-county.org

Re: Sonoma Development Center Draft Specific Plan and Environmental Impact Report

Dear Mr. Oh —

The Sonoma County Transportation and Land-Use Coalition Appreciates this opportunity to comment on the Draft Specific Plan for the Sonoma Development Center (SDC) and to raise questions regarding its Draft Environmental Impact Report (DEIR). Our comments come in the shadow of legislation recently signed by the Governor to address the Climate Crisis by reaching state-wide carbon neutrality, and improvements in available funding for this purpose. We also note that the goal of the Sonoma County Regional Climate Protection Authority is to reach net zero greenhouse gas emissions by 2030. C164-1

We have queries and concerns about two issues in the Specific Plan and DEIR:

How seriously would construction of a thousand new housing units at the SDC impact greenhouse gas emissions and the County's plans to reach carbon neutrality?

State law (SB 375 - Steinberg - 2008) calls for reductions in driving (VMT) in order to address the climate crisis. The draft environmental analysis finds that the SDC plan to reduce driving by 15% is <u>not</u> likely to succeed. Sonoma County's Regional Climate Protection Authority aims to reach carbon neutrality by the year 2030, which will require annual reductions in driving at a rate of up to 6% per year. (Please respond to the attached detailed discussion) C164-2

How does the plan to demolish SDC structures impact greenhouse gas emissions at the SDC, as compared with reuse?

Although the reconstruction of a building may be proportionately more labor intensive than its replacement, the resulting GHG emissions may be significantly increased. (Please respond to the attached detailed discussions) C164-3

SCTLC, 55 Ridgway Ave., Suite A, Santa Rosa, CA 95401-4777
Address correspondence to willard@sonic.net

Authors of the DEIR note that failure to deliver a specific plan to the Department of General Services within the next few months might upset the effort to retain local control of the future of the property. However, much has changed recently. The State is now committing $54 billion over the next five years to address the climate crisis. This funding is to be matched by $9 billion per year of federal climate investments in California.

C164-4

In the light of these changes in the fiscal outlook, shouldn't the State Department of General Services be much less concerned about the need to fund $100 million worth of remediations to the existing SDC property?

Wouldn't proposed project alternative units at the SDC affect the environment in cumulative ways not yet discussed in the Program DEIR, such as the potential redevelopment of the nearby Hanna Boy's Center and other North Sonoma Valley projects currently in the permitting process or planned within Permit Sonoma? The County's concerns should now be focused on limiting suburban sprawl, and salvaging existing structures wherever possible.

C164-5

For these reasons the SCTLC recommends that Sonoma County act now to develop the environmentally superior project, which is Historic Preservation/Reuse. The timeline should be re-negotiated, and the Specific Plan for the SDC should be refocused on reducing greenhouse gas emissions, HISTORIC PRESERVATION AND REUSE, and on protection of the site from wildfire risks.

If you wish to discuss any of these issues, please contact me at scbaffirm@gmail.com, or call me at 707-5766632.

Cordially,

Steve Birdlebough, Chair,
Sonoma County Transportation and Land-Use Coalition

cc: Senator Mike McGuire
Supervisor Susan Gorin
Commissioner Jacquelynne Ocana

ATTACHMENT

WHY IS A PLAN PROPOSED THAT IS INCONSISTENT WITH LONG-ESTABLISHED COUNTY AND VOTER APPROVED COMPACT GROWTH POLICIES THAT PROTECT THE ENVIRONMENT?

The DEIR is inadequate, because it fails to recognize that the Proposed Plan is inconsistent with the County's long-standing land use and open space protection policies, with its compact development goals, and with its voter-approved urban growth boundaries. The DEIR fails to justify a major reversal of the County's existing land use policies that have served to maintain its rural character and protect the environment. C164-6

Page 14 of the DEIR does acknowledge that: "Overall, the Historic Preservation Alternative is the environmentally superior alternative." However, without being specific, it goes on to assert that the environmentally superior alternative "would not support key project objectives related to increased housing supply . . . and *long-term fiscal stability* to the same degree as the Proposed Plan." What is meant by "fiscal stability?"

The DEIR fails to mention that there are nine cities and many urbanized areas in Sonoma County that offer more environmentally beneficial housing sites than the SDC. Why does the DEIR fail to admit that the Proposed Plan is in grave conflict with established Sonoma County policies to direct major residential developments into its cities and urbanized communities? The history of these policies is described on the Permit Sonoma web page as follows: C164-7

"The 1978 General Plan included land use policies intended to focus development within the urban areas, which included the eight incorporated cities. The concept of "community separators" was also first introduced in the 1978 General Plan, which maintained open space between the cities and preserve their distinct community identities along the Highway 101 corridor. A total of 9,300 acres of land considered under pressure for development were designated as community separators: areas north of Santa Rosa; areas north of Rohnert Park and south of Santa Rosa; and Meachum Hill, just north of Petaluma."

"The primary focus of the 1989 General Plan was the preservation of the County's agricultural and resource lands that form the scenic resources of the County. Additional policies were added to the Open Space Element for the protection of designated streams. Community separator policies were strengthened and additional Scenic Resources protections were added to include designated Scenic Landscape Units and Scenic Corridors. Allowable densities were reduced in rural areas while other areas identified as unincorporated communities were allowed higher densities." C164-8

"In 1996, the Community Separator policies became the genesis of the Community Separator ballot measures that required voter approval of any changes in land use density or intensity if the cities had adopted urban growth boundaries. In 1998, an amendment to the General Plan was adopted adding another Community Separator south of Petaluma."

"The County's efforts in preserving rural landscapes had a profound effect of encouraging the cities to adopt urban growth boundaries (UGBs) as part of their General Plan updates. Today all nine cities have adopted urban growth boundaries that were subsequently enacted by voter

initiatives. The Local Agency Formation Commission has followed the County's lead by adopting policies that mirror the city-centered growth policies of the Sonoma County General Plan."

C164-8

"GP 2020 continued the principals of city- and community-centered growth, with compact boundaries and community separators, and protecting agricultural land. GP 2020 includes robust policies preventing the expansion of urban services. The Agricultural Resources Element precludes converting agricultural lands to nonagricultural uses and establishes policies to increase the economic viability of agricultural properties. The Circulation Element emphasizes alternative modes to automobiles. GP 2020 also updated eight area plans and called for repealing all others where policies have already been implemented or could be incorporated into the General Plan. Sonoma County currently has eight specific and area plans that remain in effect as follows, and one that is currently being developed: - Airport Industrial Area Specific Plan (update in progress) - Bennett Valley Area Plan - Franz Valley Area Plan - Penngrove Area Plan -Petaluma Dairy Belt Area Plan -The Springs Specific Plan (draft) - Sonoma Mountain Area Plan - South Santa Rosa Area Plan - West Petaluma Area Plan." [1]

C164-9

WHY IS A PLAN PROPOSED THAT IS INCONSISTENT WITH SONOMA COUNTY GOALS TO ADDRESS THE CLIMATE CRISIS BY REDUCING VEHICLE MILES TRAVELED?

Sonoma County has been a leader in efforts to reduce greenhouse gas emissions, and at page 218, the DEIR recognizes that in 2021 the County's Regional Climate Protection Authority (RCPA) has set a goal of carbon neutrality by the year 2030. This Is an ambitious goal, and California law recognizes that success will depend strongly on reduced driving as well as shifts to electric vehicles.[2]

According to the Authority, the transportation sector is responsible for 60% of the county's GHG emissions.[3]

C164-10

The DEIR also acknowledges that Sonoma County Resolution 18-0166 calls for reductions in greenhouse gas emissions, and that "reducing travel demand through focused growth" is the second-identified strategy for such reductions. (DEIR, p. 217) Why does the DEIR neglect to explain the need for the SDC project to actually accomplish significant reductions in vehicle miles traveled (VMT).

The DEIR "conservatively" states that despite the extensive discussion of VMT reduction goals and policies in the Proposed Plan, it must be assumed that the construction of one thousand

---

[1] https://permitsonoma.org/longrangeplans/proposedlong-rangeplans/generalplanupdate/generalplanhistory

[2] See SB 375 - Steinberg - 2008, Sec.1. (c) "Greenhouse gas emissions from automobiles and light trucks can be substantially reduced by new vehicle technology and by the increased use of low carbon fuel. However, even taking these measures into account, it will be necessary to achieve significant additional greenhouse gas reductions from changed land use patterns and improved transportation. Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32."

[3] See, https://rcpa.ca.gov/wp-content/uploads/2020/12/Sonoma-Climate-Mobilization-Strategy-Adopted-2021-03-08.pdf at page 9)

dwelling units on the SED's rural landscape would result in significant and unavoidable increases in VMT. It finds that "no other feasible mitigation measures are available," and, "These impacts would also be cumulatively considerable." (DEIR, p. 9)

C164-10

Three years ago, agencies in Sonoma County began announcing climate emergency goals that focused on 2030 as a target year to reach "carbon neutrality." More recently, an analysis of Sonoma County driving habits by the County Transportation Authority has revealed that merely providing bicycle-pedestrian trails and bridges are not sufficient to reach those goals. We will need changes in culture as great as those of the recent pandemic.[4]

C164-11

The DEIR shows that the policies and the proposed SDC Specific Plan will undermine local, regional and state policies and commitments to address the climate crisis due to the significant and unavoidable *increases* in VMT. The DEIR shows no way to offset or mitigate the extra driving generated by the new housing, retail, and commercial development proposed for the SDC. The County must not approve this project as proposed with these impacts if it is serious about addressing the climate crisis.

Taking this approach would fail to meet the standards contained in CEQA because an increase in VMTs *can* be avoided by focusing the construction of new housing in existing compact communities rather than building many housing units at the SDC, and renovating all of the useable existing buildings, The DEIR and Specific Plan must be revised to provide for steady reductions in VMT, consistent with

Our pre-COVID driving habits caused transportation to become the largest source of the greenhouse gas emissions (GHGs) that feed the climate crisis. Long commutes in single-occupant vehicles have been a major source of GHGs, although most car trips are less than 5 miles.

C164-12

Please describe the justifications for the Proposed Plan, which would locate a thousand families in a sprawling suburban landscape that would hamper all of the above efforts.

State Route 12 is already at capacity, and Caltrans has commented that it does not support an additional road connecting Arnold Drive and SR-12. Please describe the effects of a failure to provide this connection.

---

[4] The *Mobilization Strategy*, *id,* at page 14 states: "To address the land use challenges, the municipalities and County will need to continue to focus development near transit and in Priority Development Areas. For example, Santa Rosa's recent update to its Downtown Station Area Plan was designed to facilitate more development in its downtown core."

WHY ARE EMBEDDED GREENHOUSE GAS EMISSIONS IN EXISTING STRUCTURES AT THE SONOMA DEVELOPMENT CENTER LEFT OUT OF THE ENVIRONMENTAL CALCULATIONS?

C164-13

Why has County Staff/Consultants done the following, and what are your mitigation recommendations?:

The EIR & SP preparation violates BPC6731, without a Civil Engineer in responsible charge of Planning?

The EIR has committed the County to a course of action, new development, prior to EIR's Certification?
Historic Reuse appears proper, yet each price consequence results in expanded project impacts.
What is the economic obsolescence impact to the Springs/Glen Ellen of the proposed project?

The EIR and SP propose demolition of 1.2M sq-ft of buildings, along with the 1M+0.35M gal fresh water tanks, see Figure 4.3-1: "Historic Assets", without reference to local Wildfire protection. Why?

The EIR & SP propose demolition of Historic Firehouse (c1932) without wildfire impact consideration?
EIR & SP neglect wildfire consideration, as not "High Fire Risk", though analysis excluded SDC?

Why does EIR & SP use uncalibrated (unrealistic) models, eg without reference to actual fire evacuation?

C164-14

The EIR develops a series of conclusions as analysis, beginning after point in time of project completion?
The EIR assumes no cumulative effects to the proposed project; eg. GHG's and solid waste, but does not include project specific demolition, nor constructed lifecycle, GHG's & wastes? Why?

The EIR assumes no cumulative effects from combining the proposed project wastewater into a down-stream waste treatment facility when a historic facility is located on site to recharge the wetlands/creek.

SDC is an Historic opportunity to propose and develop an integrated environmental & climate protective response to wildfire, in a traumatized and sensitized area, without which this proposal has a significant cumulative negative impact to the local & regional environment due to unrealized wildfire protections.

Why is EIR & SP preparation biased in favor of Standard-Operating-Procedure for new development?

Why does it appear the SDC EIR and associated Specific Plan (characterized by the County's preferred Proposed Project Alternative) have defined and committed the County of Sonoma, as Lead Agency under CEQA, to a series of specific decisions, plans, and/or alternatives without fully considering other acceptable plans (under legislation 14670.10.5), alternatives, mitigation measures, and the Null Project.

C164-15

Please explain why the County (Permit Sonoma) has allowed the EIR to be produced which does not address the mitigatable cumulative effects of waste generated by the proposed alternative over the Null Project hypothesis, to the extent where recommended building demolition of ~1.2M sq-ft produces a minimum of 161,000 cy of debris equal to 67 years of operation of the Proposed Project Alternative in addition to the equal amount of debris produced by the eventual demolition of the Proposed 1.2M sq-ft Project (∑=322,000 cy, or 134 years at the rate of the Proposed Project at completion); together with the project waste there will be an average cumulative waste of 19.8 tons/day or 1.5% of daily averages

C164-16

(2016-2020, per SP pg 603) ? Since we are already transferring all our solid waste away from Sonoma County because we do not have local landfill capacity, and our waste charges ($135/ton) are double the charge for Hazardous Waste ($50.97/ton asbestos waste) taken to Kettleman Hills landfill, this must be considered a significant mitigatable impact by Reuse and Historic Preservation of the existing buildings. At the local waste costs, this represents >$960,000/yr = ~$65M over the 67 years, from these 3 sources. C164-16

Why is no mention made in the EIR or SP of GHG's which were imbedded and carried within the existing constructed buildings which will be released into the atmosphere by their demolition, nor is any mention made of the GHG emissions which are imbedded in the production of the new materials and resources which are expected to replace the demolished SDC buildings, these are significant long term mitigatable cumulative effects? Why has the EIR not addressed either of these cumulative GHG effects, from demolition, neither the before demolition GHG emissions sequestered in the existing buildings which will be released, nor the GHG emissions released in the production of the replacement 1.2M sq-ft of buildings together with their own lifecycle emissions released upon their demolition? These GHG's must be considered a significant mitigatable impact by their Reuse. C164-17

Why is no mention made in the EIR or SP of the cumulative effects of the opportunity lost to lead this community and the Global Community in re-visioning the future, from the past that we have, into the future that we need while using the existing buildings and infrastructure you demolish?

Why is Historic Preservation of the existing buildings considered by the EIR & SP to be financially infeasible and unmitigatable? This is not a fact, nor is it a reasonable conjecture from any basic set of reasonable assumptions, other than a prejudice against Historic Buildings in preference to the Cult-of-the-New. Historical Preservation and Reuse of these buildings is relatively simple. In particular, historic lumber is dimensionally greater and structurally superior, providing more insulative cavity, and other materials were more dense historically. History teaches us that the oldest buildings are the most energy efficient for their locations; such as Kiva & Adobe Structures of the America Southwest are stone or adobe to insulate against the heat, raised pole structures in the Indus Valley Civilization and Mounded Structures of the Mississippian Culture prevent flood inundation, Northern Long Houses of the Iroquois in the East and the Suquamish of the West are large multifamily dwellings and made of wood frames and bark covering to insulate against the cold, even Igloos of the Eskimo. Why have you neglected the consideration that almost every older building uses less energy than that which replaces it, despite the efficiency of the New Building? C164-18

Why is scant consideration, even superficial avoidance, of the topic of Hazardous Materials mitigation and removal given within the EIR and SP as a direct consequence of the building demolition, as opposed to "In-Situ" mitigation in place through reuse and Historic Preservation of the existing buildings; Diesel Tanks, Film Development, Chemical Storage, Paint Shops, Corporate Yards and Transportation buildings, all have significant potential for Hazardous Materials impacts, as well as, the asbestos insulation and lead based paint in the buildings? C164-19

Each of the above considerations, taken individually are significant impacts not covered by the EIR and SP, but there is also a cumulative effect of the above neglectful preparation of the EIR and SP, "a death by 1000 cuts" to the Historic Preservation (stated to be unmitigatable). Why has the cumulative effect of this neglectful preparation not been addressed within the EIR and SP, which then augers for and streamlines the process for replacement by the preferred Proposed Project Alternative as opposed to Historic Preservation? Can you explain how you are mitigating this neglect, in producing a cycle of C164-20

demolition and reconstruction which has a cumulative effect on the environment due to exploitative expectations, the expectation that 'everything I have should be new', 'we need the new', 'I need the new'? Again, why does the EIR and SP neglect the positive environmental impact the development could have by leading, rather than following old worn-out traditions of thinking, that have cumulatively placed us in our Climate Crisis? C164-20

County's evidentiary record is anecdotal @best. Sonoma Valley represents a national treasure, as described as, "The Valley of the Moon". Sonoma is the Native Indigenous American name for the valley. When White settlers asked what Sonoma meant, Natives pointed to the trace of the Moon setting and rising behind the eastern ridgetops during certain times of the year, the White's interpretation was that "Sonoma" meant 'the valley that the Moon touches' ("The Valley of the Moon"). My Anthropology studies and linguistic avocation has taught me to hear the phonetic sounds (the basic phonemes), particularly for significant language words, words that have cultural, spiritual, or international usage, such as words which are adopted into a language from another. The basis of this study is Multi-critical analysis as opposed to diacritical analysis. Typically there will be very little understanding of the actual meaning of an adopted word. Then, if it retains a high referential standing, it indicates it's an adopted word, not merely a forgotten word. Typical adopted words with high Referential standing and forgotten meanings are: Alleluia, precious, and Amen. C164-21

In this case we have Sonoma: what are the phonemes for "Sonoma", they are "Tsu" (not Tso) & "Noma"; so in this case our supposition is correct, because these are two very important international words. "Tsu" or "Tzu" represents the name given by the Chinese to one of their greatest Philosophers, "LaoTzu" the founder of Taoism (from UCI Anthropology studies "Chinese, Taoism & Confucianism", 1983), "LaoTzu" was originally named "LoTzu", meaning "Man-Master" (Philosopher) and when he was older it was changed to "LaoTzu", meaning "Old-Man-Master" (or Great Philosopher): Therefore "Tzu" means "Master". "Noma" is the Aramaic word for 'name' establishing the identity and essence of a thing and thereby giving man control over the substance, and in the Greek "Nomo" means "law or control", again, in Western parlance the essence is unknowable but the manifestation is controllable by the 'name': so control and name are the same thing, therefore "Noma" means "name" (from participation in Antiochian and Greek culture, which develops from a multi-critical analysis as opposed to diacritical).

"Sonoma" therefore means "The Master's Name", and in a Spiritual sense, it means the highest name above all names. "The Master's Holy Name", in an Eastern Spiritual sense describing God's, the Creator's, or Great Spirit's control over the location by the Moon's contact with the Earth, not Man's control over God by invocation of the Name. This we hear many times from Joseph Campbell, man's search for control vs man's search for God.

Analysis of EIR Historical Asset discussion:

The Program Draft EIR is silent on the above discussion, while reporting Environmental Impact Report - County Summary "5.3 Significant and Unavoidable Impacts: According to CEQA Guidelines 15126.2(b), an EIR must discuss any significant environmental impacts that cannot be avoided under full implementation of the proposed program...However the Proposed Plan aims to be self-mitigating. Thus, all proposed policies aim to address environmental impacts (to the, sic) to the greatest extent feasible and no mitigation measures are required. The analysis in Chapter 3 determined that the Proposed Plan would result in significant impacts to the cultural/historic resources and transportation (home-based work trip vehicle miles traveled per capita) that, even with implementation of mitigation measures, would remain significant and unavoidable". This language neglects real analysis of the Null Hypothesis Project, and only considers the Proposed Plan impacts which it states (along with all other alternatives) have similar impacts [without discernment as to avoidable, mitigatable, or unmitigatable], which is entirely untrue in the Null Hypothesis case.

C164-22

Continuing; "5.3.1 Cultural, Historic, and Tribal Resources: new construction under the Proposed Plan has the potential to disconnect the remaining contributing resources in the Core Campus from those in the Community Separator and Regional Parks lands to the east and west, disrupting the SSHHD's overall integrity to the point that it would no longer be eligible for listing in the National Register of Historic Places, CRHR, or as a California Historic Landmark. This impact, in addition to demolition of the aforementioned resources would result in a substantial adverse change to the significance of the historic district such that the significance of the historic district would be materially impaired pursuant to Section 15064.5. Implementation of goals 2-I and 2-J and policies 4-20 through 4-32 as well as Standard Conditions of Approval (LU1 through LU6) would partially compensate for the impact associated with the demolition of historically contributing resources and physical alteration of the historic district to the maximum extent practicable; however, because these measures would not be enough to avoid or reduce the impact completely, the Proposed Plan's impact would remain significant and unavoidable". No mention is made of the Tribal Resources, because no artifacts remain or they could be recovered in a project excavation, but this does not address the transcendent value of the space and place name as a World Heritage Cultural Site, which can be subsumed in the potential Project construct, where we have heard discussed 2-3Msf of Commercial Construction.

C164-23

Again, the Program Draft EIR's considerations of the impacts, mitigations, and alternatives appear limited to the Proposed Plan Project Alternative, and do not address the Alternatives, nor the Null Hypothesis Project, continuing a foregone conclusion (see 2-3Msf of Commercial Construction discussed above, is that unmitigatable?).

C164-24

Please see the following analysis of project conceptual iteration for planning and design.

Please see pg4 p3 San Mateo Gardens, re "substantial evidence in the record, is a predominantly factual question...for the agency...drawing on its particular expertise"; here we are bringing your attention to the word "expertise".

C164-24

Friends of the College of San Mateo Gardens v. San Mateo County Community College District

https://law.justia.com/cases/california/court-of-appeal/2017/a135892.html

We want to accept the presumption of legal operation, but we must also accept and correct the illegal condition when evidence is presented to the contrary. In a County system, Engineering is not conducted without Accounting. But if the Accounting fails such as for Northwestern Pacific Railroad, the sad evidence must be accepted, and correction immediately made or we suffer the loss of funding or function. No one was there to accept the Trucker's weighmaster's tickets when the washout deliveries were made in the upper NWP line, none could be found, none ever delivered, no NWP.

The reason we approach the initial determination of a project this way, using California Supreme Court's remand for San Mateo Gardens, is, here we equate the Court EIR analysis process to the Engineering process, in that there are a sequence of iterative steps involved. This process is best exemplified from the CA Supreme Court's remand expressed in San Mateo Gardens, where a series of back-and-forth evaluations and propositions are made in analyzing a project (one such method is CPM,Critical Path Method), which is the same process we use in conceptual design or planning.

A comparison is made by question; does the "initial concept" with its features fit the need and the existing space, then we may have to adjust the concept's features to the needs, or to the space? Conceptual planning designs forward & backward many times.

This comparison is not to decry the effort expended or the information obtained through Planning education or product, but a marathon runner prepares for a marathon, not Law or Engineering. Preparation for a marathon may be great preparation for someone wanting to become a Lawyer, Doctor, or Engineer, but by itself does not make one a Lawyer, Doctor, or Engineer. Nor is an Urban Planner a qualified Civil Engineer, and therefore is unable to make professional judgments in respect to the Planning of "fixed works" identified in BPC 6731.

C164-25

[See Licensing BPC 6730-6730.2(a); 6731; 6734; 6735(a). See also Administrative Mandamus case, Morris v Harper (2001) 94 Cal.App.4th 52 . "After all, '"'[i]t is the refusal or neglect to perform an act which is enjoined by the law as a present duty that serves as the very foundation for the [mandamus] proceeding.' " (Morris v. Harper, supra, at p. 60.)"]

San Mateo Gardens; "Instead of resting on whether a project is new "in an abstract sense," the "decision to proceed under CEQA's subsequent review provisions must . . . necessarily rest on a determination—whether implicit or explicit—that the original environmental document retains some informational value." (Id. at p. 951.) Such an inquiry "is a predominantly factual question . . . for the agency to answer in the first instance, drawing on its particular expertise." (Id. at p. 953.)"

From where does this "expertise" derive, Planners require no Science education?

The EIR standard is, if/when there are significant environmental impacts, then a review of impacts and mitigations must obtain (other than stating overriding or unmitigatable conditions), and a "judicial review must reflect the exacting standard that an agency must apply". San Mateo (ibid) pg 8.

C164-26

What this is referring to is, that the evidence must be prepared to a very high standard, from the beginning, in order for it to be considered "substantial evidence in the record". Where is the “exacting Standard” & “expertise”?

According to the National Society of Professional Engineers code of ethics, Professional Engineers may disagree without a single outcome obtained, but must remain decorous.

["The Supreme Court in San Mateo Gardens provided guidance for how to apply the subsequent review provisions. It explained that whether “major revisions” will be

required as a result of project changes “necessarily depends on the nature of the original environmental document,” i.e., whether it was an EIR or a negative declaration. (San Mateo Gardens, supra, 1 Cal.5th at p. 958.) It further explained that the appropriate standard of review also depends on the nature of the original environmental document. Although an agency’s determination of whether major revisions are required is reviewed for substantial evidence, “judicial review must reflect the exacting standard that an agency must apply when changes are made to a project that has been approved via a negative declaration,” as opposed to the deferential standard that applies when the project was originally approved by an EIR. (Id. at p. 953; see Committee for Re-Evaluation of TLine Loop v. San Francisco Municipal Transportation Agency (2016) 6 Cal.App.5th 1237, 1247, 1251-1252 [applying San Mateo Gardens in case where project originally approved by EIR]; Latinos Unidos de Napa v. City of Napa (2013) 221 Cal.App.4th 192,"]

In planning, we have said, the process is intensely exhaustive and iterative, and what is described as the Court EIR review process is also exhaustive and iterative.

C164-27

The Court ceding competency to the local agency is similar to the process of presenting a case to a Court of Competent Jurisdiction. A Court of Competent Jurisdiction is composed firstly of a trained lawyer, either by a Law School or by preparation and passing the Baby Bar. Then of course, the prospectant Judge must pass the National Bar Exam locally administered, next the Judge must practice law for a minimum of 10 years. At some point the Judge is appointed or runs for election, and finally, the Judge is selected to hear a case by the Chief Judge. The Court itself must also be of Competent Jurisdiction, meaning it is the proper venue, as established by our system of Jurisprudence. These are significant tests.

If someone went to College and studied English or Political Science, they could learn a lot of laws, but they would not be presumed to know how to practice Law,

And they did not go to Law School or pass the Baby Bar, and they have not prepared to be a Lawyer, let alone a Judge.

Engineering is one of the most complex problems in supply & demand, as evidenced by the number of divorces in custom home remodeling and construction, and why Public Works requires Licensed Civil Engineers.

C164-28

Our critique is not meant to characterize the work of any Engineers having completed reports for the SDC EIR-SP, since we do not know what instructions they were given.

But we contend that recommended demolition for over 1.2Msf without analysis of 400,000sf, and recommended demolition of ~75,000sf of Hospital Treatment Building rated at "not requiring any updates", represents an incomplete analysis at best, and certainly a neglect of the impacts on the resources being analyzed.

As we spoke of backward-and-forward analysis in design, this is required in Planning as well, unless a truncated process is employed. It is far easier to make the facts fit the design, than to make the design fit the facts. If your timeline is short, it is far easier for you to establish the Project, and make the analysis fit the Project by not addressing impacts except in a standard way, such as, "(h)owever the Proposed Plan aims to be self-mitigating". "from Program Draft EIR 5.3 Significant and Unavoidable Impacts"

Subsequent to the very specific State Law being passed to sell SDC, incorporating significant intent for community participation, many meetings were held with studied interest and good comments. Comments were sent to Permit Sonoma and the Planners involved in SDC's NOP of Program Draft EIR & SP, but these comments were not incorporated in the evaluation nor in the Proposed Alternative Project SP, nor were they forwarded to the Planning Commission, nor were they provided to other participants or commenters to the EIR & SP.

C164-29

This is not standard practice, and violates CEQA Code 15300(a)&(b)(1)-(3); "(a) Before granting any approval of a project subject to CEQA, every lead agency or responsible agency shall consider a final EIR or negative declaration or another document authorized by these guidelines...(b) Choosing the precise time for CEQA compliance involves a balancing of competing factors, EIR's and negative declarations should be prepared as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment."

(b)(1) "With public projects, at the earliest feasible time, project sponsors shall incorporate environmental considerations into project conceptualization".

C164-30

The timeframe window for "cumulative impacts" evaluation was limited to after Proposed Alternative Project completion, leaving out the demolition and construction of the entire project, let alone the life cycle embedded costs, GHG's and energy to be demolished as a consequence from the new construction.

This time frame results in unsubstantiated conclusions for the Proposed Project Alternative in ES.3 Alternatives to the Proposed Plan, "As discussed in Impacts 3.6-2, the Proposed Plan would thus support and reflect the increasingly stringent State and local goals and regulations that seek to increase energy efficiency, reduce energy consumption, and prioritize renewable energy – reinforcing that the Proposed

Plan would not result in cumulatively considerable impact with respect to wasteful, inefficient, or unnecessary consumption of energy resources." They left out 161,000 tons of waste.

C164-30

15300 (b)(3), "With private projects, the Lead Agency shall encourage the project proponent to incorporate environmental considerations into project conceptualization, design, and planning at the earliest feasible time."

This truncated analysis appears to be the type that establishes priorities, goals, and objectives before the certification of the EIR is complete, therefore "limiting alternatives or mitigation measures".

C164-31

This truncated analysis would violate CEQA Code 15300 (b)(2), "public agencies shall not undertake actions concerning the proposed public project that would have a significant adverse effect or limit the choice of alternatives or mitigation measures, before completion of CEQA compliance";"and for example, agencies shall not:(b)(2)(B)", "Otherwise take any action which gives impetus to a planned or foreseeable project in a manner that forecloses alternatives or mitigation measures that would ordinarily be part of CEQA review of that public project".

Given that Permit Sonoma will only provide the public's comments to the Planning Commission upon final EIR Certification, and a series of comments have been made to the SDC Comprehensive Planning Manager which has not incorporated the public's comments into the Proposed Project Alternative, "at the earliest feasible time", they appear to have violated Sec's 15300(a)&(b)(1)-(3), inclusive.

What we contend here is, that the proper "back-and-forth" process has not occurred, as within the planning process proper, within the design process proper, within the EIR process, as would be the same within the Court's evaluation of the EIR process itself, from San Mateo Gardens remand from the California State Supreme Court, which constitutes proper Authority to all jurisdictions within California.

C164-32

We also contend that "particular expertise" and "the exacting standard that an agency must apply" is not available to the review that the "judicial review must reflect", without a Licensed Civil Engineering in Responsible Charge of "Fixed Works" Planning, BPC 6731.

Also, in another form of Transcendence, both "Tsu" and "Noma" mean "control", so they are like conjoined twins, in a simple manifestation of the "Rosetta Stone". Looked at separately, we call this a "Translation", but conjoining them is a form of transcendence in the physical plane of existence. The name "Sonoma" appears to be used as a descriptive tool, by connecting physical transcendence (translation of place) with the location of a Spiritual Transcendence (in reference to the verticality of the Moon's touching the Earth), it again mirrors the "Rosetta Stone" representing two kinds of Transcendence, with the Earthly "T" crossing the Spiritual vertical demarcation.

C164-33

More than the mere analysis of the word and its application to the space, is the significance of "Sonoma" in the cross-cultural linguistic representation of deification using ancient language references from across the sea, and linked only by many thousands of years. There is no other place name which connects so perfectly the unity of man, the Name itself transcends both the ages and the seas, thus we have the essence of a World Heritage Cultural Site. Like many other UNESCO World Heritage Sites, which are in disrepair and in danger of destruction, Sonoma's "Valley of the Moon" is suffering an existential threat from the Proposed Project Alternative. Located at near the exact geographic center of Sonoma Valley, 10 miles from it's head along Hwy 12, and 12 miles from it's outlet at Skagg's Island. And transected by a vital Wildlife Corridor connecting 2 Mountain Parks: Sugarloaf/Hood and Jack London Parks; no discussion or analysis has been given to the significance of this World Heritage Cultural Site, or the impacts or any mitigation from the significantly new, taller, and dense construction within the Program Draft EIR-SP Project analysis (cursory discussion was given to light pollution, but none to the physicality of the presence of tall, dense, populous village construction in the midst of an Historic Treasure, McDonalds centered in Teotihuacan).

C164-34

The significance of this Spiritual location was not lost on those who created the Sonoma Developmental Center for a healing center for their developmentally disabled children. We should hope that at this more enlightened time, and consistent with CEQA, the Historical Preservation Act, and the 50th Anniversary of the World Heritage Convention (Sept 17, 2022), we should be prepared to preserve both the content and the context, as much as is physically possible, for this National Treasure, "The Valley of the Moon". Under the UNESCO World Heritage Convention, which the United States was signatory (though withdrawn from 2018), we should "strengthen Credibility of the World Heritage List, ensure Conservation of World Heritage properties, promote Capacity-building measures, increase public awareness, involvement and support for World Heritage, and enhance the role of Communities in implementation of the World Heritage Convention". What has been done here appears to be the opposite, a complete neglect of not only Native American cultural values, but World Heritage Convention values.

DEBORAH C. NITASAKA, M.A.
Science-Minded Thinker & Freelance Writer
P.O. Box 1054, Glen Ellen, California 95442-1054
707.996.8620; 707.318.7214 (mobile); dclaire77@gmail.com

26 September 2022

Brian Oh, Comprehensive Planning ManagerPermit Sonoma
County of Sonoma
2550 Ventura AvenueSanta Rosa, CA 95403
email: Brian.Oh@sonoma-county.org

RE: Public Comment on SDC Specific Plan and DEIR

Dear Mr. Oh:

We are writing today following our review of the draft environmental impact report pertaining to the Sonoma Developmental Center's (SDC) future.

As most following this planning process, including Sonoma County Planning Commissioner Greg Carr, have stated (repeatedly, loudly, emphatically) – we find that this report fails, either in part or in total, to account for several environmental impacts essential to any meaningful understanding of the ways in which the public's safety, true protections for the natural environment, and the many human needs are to be addressed. And so, with but a few scant weeks to pour through a 789 page report that bases its assessments, conclusions, and recommendations on the previous "Plan" - and so is itself deeply flawed and grossly inadequate, we will once more *howl into the void*. C165-1

Others with more advanced professional qualifications have pinpointed the flaws in those sections of the report pertaining to the natural environment, historic preservation, public safety, and traffic. We will restrict our comments to concerns for the future housing uses of SDC's Core Campus - and to a planning process that appears to have now gone off the rails – disappearing into the abyss of railroaded transparency!

The first of our issues concerns the so-called "SDC Specific Plan" and the "reasonable range of alternatives to the Proposed Plan" - as required by CEQA in an EIR. Is it just us? We find that the community's input is nowhere to be seen in either of these deeply deficient reports.

To illustrate, we and others have proposed, as one reasonable alternative, using SDC's built footprint, referred to elsewhere as its "historical 180-acre built area," as a campus for those seeking training in the trades, in the applied sciences, public service occupations, and other professions of financial and social benefit to the students, their families, and the entire state.

We see no evidence that this invaluable, desperately needed (see any number of actual empirical studies) educational use was given a moment of consideration. Remarkably shortsighted given that use of SDC's Core Campus as a campus would come with fewer vehicle miles travelled, allocations for affordable housing, to name but a few of the benefits, in part because students, staff, and educators could be offered housing within the campus. Please see the attached letter sent to the Sonoma County Board of Supervisors on November 21, 2021 as it offers a deeply researched look at just such a use. C165-2

Further, the Draft EIR ignores the county's dire need for affordable housing, calling instead for allocating 90% of the 1,000 proposed new houses as market rate homes. This in defiance of **The Final Regional Housing Needs Allocation (RHNA) Plan**, adopted in December 2021 which determined that Sonoma County's fair share of regional housing would be 3,881 units, with 1,632 allocated as housing affordable to very low- and low-income

households. That would be about half the homes to be built, not 10% as this draft EIR calls for! Just a disgraceful display of the preference throughout the draft for meeting the needs of the wealthy over the rest of us.

C165-2

> "SDC Core Campus: Consists primarily of residential buildings, with medical, educational, recreational, and administrative buildings interspersed. A cluster of utility and support buildings, and fire station sit at the western edge of the Core Campus. On the eastern portion of the site, historic agriculture uses…"
>
> Government Code Section 14670.10.5 (c) (4): The agreement shall require that housing be a priority in the planning process and that any housing proposal determined to be appropriate for the property shall include affordable housing. It is further the intent of the state that priority be given to projects that include housing that is deed restricted to provide housing for individuals with developmental disabilities.

To this end, we propose developing cottage clusters throughout the campus designed to meet specific needs such as supportive housing for individuals with disabilities, older adults, agricultural workers, and young families in need of starter homes. As an enriching environment affording access to the educational, recreational, social, health, and support resources, all on this technical college campus, all bringing full circle the many necessities of life - all without segregating this campus from the rest of Glen Ellen - what could be better?

It is outrageous to propose 100 of the 1,000 housing units might be deemed affordable, especially when communities such as Glen Ellen have been ravaged for Tourist Occupancy Taxes since Sonoma County's Vacation Rental Ordinance went into effect more than a decade ago. One hundred units doesn't begin to make up for the hundreds of homes converted into commercial tourist traps over these years. We need to actually, truly, add to our housing stock. By "add to" we mean in addition to recovering, by some means, those dwelling units sacrificed for profit, private and public. The proposed housing outline comes nowhere near to meeting the documented need for affordable housing in Sonoma County.

C165-3

Although state housing element law is cited in Chapter 3.1.2: Population and Housing, we believe that, beyond this scant mention, it ignores state law and the Sonoma County Housing Element. Certainly, it does not begin to touch on the county's requirement to provide for its burgeoning homeless population, a significant aging population unable to live on its paltry retirement income, or an agricultural community ignored in this process - as usual.

Our second point also concerns process. While the people of Sonoma County, of the State of California have been encouraged to participate in a planning process sold to us as public, above board, and time constrained, we have just learned of another process (see attached 9/23/22 Index-Tribune article). This one private, ongoing, underhanded, free of transparency, a play for SDC by a real estate developer and his business partner - both with lengthy histories of questionable business ethics. This time, having sufficiently inserted themselves into the state system, carrying satchels of cash, of many millions of tax dollars, all offered to Sonoma County in exchange for a deal requiring NO Environmental Impact Report and benefitting only the few, the wealthiest schemers.

> "Public records reveal that two Sonoma County businessmen — Darius Anderson and Doug Bosco — played central roles in the backdoor negotiations for the easement sales" in a sham process meant to deflect the public's attention away from the dealmaking between a little-known state agency headed by the same man working to bring coal through Sonoma County on the Sonoma-Marin Area Rail Transit district — SMART line (see two attached 2021 Bohemian articles)

Former congressman Doug Bosco is the CEO of the private freight company Northwestern Pacific Railroad Company (NWP Co.). Along with his business partner, real estate developer (e.g., Treasure Island: Radioactive debris) and owner of the powerful Platinum Advisors political consulting firm, Darius Anderson, they leveraged their influence to lobby state and federal lawmakers for the right to transport coal, among other commodities on the SMART rail line. Although most of their plans failed to pan out, through a series of complex loans and contracts (according to The Bohemian's 2021 report), a publicly chartered rail agency, North Coast Railroad Authority (NCRA), now owes NWP Co. millions of dollars. And today they continue running freight on the SMART rails.

C165-4

It should be noted that Anderson and Bosco are founding members of Sonoma Media Investments, which owns most of the print media in Sonoma County including the Press Democrat, Sonoma Index-Tribune, Sonoma County Gazette, Petaluma Argus-Courier, North Bay Business Journal, Sonoma Magazine, and La Prensa.

C165-4

So it's business as usual as the high rollers operate behind the scenes, leveraging millions of tax dollars in a play for possession of a community resource. Doug Bosco believes he and he alone can secure SDC, work around the usual requirements for an EIR, and buy off Sonoma County to create his next dream project.

When Supervisor Gorin spoke at last week's (September 21) meeting of the North Sonoma Valley Municipal Advisory Council, there was no mention of the Bosco/Ocean Conservancy deal. Nor did County Planner Oh indicate that he was negotiating a deal with Doug Bosco when he addressed the Sonoma County Planning Commission at its September 15 meeting.

The public is entitled to an explanation - NOW! This planning process must be halted until those who will pay (in oh so many ways) are fully informed of the facts.

And now, one final point that cannot be ignored: The Sonoma Developmental Center, Eldridge, the neighborhoods south of SDC - WE ARE ONE! We are Glen Ellen. We will not stand for further planning hellbent on separating our neighborhoods by this or any other planning process!

With earnest sincerity,



Deborah C. Nitasaka, M.A.
Co-founder, Sonoma County Housing Advocacy Group



Tadashi Nitasaka, M.D.

cc: North Sonoma Valley Municipal Advisory Council <hannah.whitman@sonoma-county.org>
Sonoma County Planning Commission <PlanningAgency@sonoma-county.org>
State Senator Bill Dodd <senator.dodd@senate.ca.gov>
State Senator Mike McGuire <senator.mcguire@senate.ca.gov>
Susan Gorin <Susan.Gorin@sonoma-county.org>
District3@sonoma-county.org
District4@sonoma-county.org
David Rabbitt <David.Rabbitt@sonoma-county.org>
Lynda Hopkins <Lynda.Hopkins@sonoma-county.org>
Chase Hunter <chase.hunter@sonomanews.com>
Sonoma Sun <news@sonomasun.com>

From:	Teri Shore
To:	Brian Oh; engage@sdcspecificplan.com; Susan Gorin
Cc:	Greg Carr; Caitlin Cornwall; Pat Gilardi; Larry Reed; Jacquelynne Ocana; Shaun McCaffery; Belen.Grady@sonoma-county.org; PlanningAgency; Pitts, Logan; Senator.McGuire@senate.ca.gov; Senator.Dodd@senate.ca.gov; Rebecca; Ezrah; Cecilia.Aguiar-Curry@asm.ca.gov; Gerald McLaughlin; district4; James Gore; district5; David Rabbitt; Hannah Whitman; Arielle Kubu-Jones; Rebecca Hermosillo; Rep. Mike Thompson
Subject:	SDC DEIR Specifc Plan Public Comment - Please add to official administrative record
Date:	Wednesday, September 21, 2022 1:46:04 PM
Attachments:	ShoreSDC.DEIRFinalCommentsAll9.26.22.pdf

EXTERNAL

Dear Sonoma County Board of Supervisors, Planning Commissioners, Permit Sonoma (with copies to state elected officials),

Please find below and attached my official detailed public comments on the SDC Draft Environmental Report and Specific Plan to be entered into the public record and administrative record. Looking forward to the county's responses.

C166-1

It consists of 12 pages of a letter; 20 pages of a table with comments; and 8 pages of an article. Please include all.

Thanks for your consideration.

Teri Shore
515 Hopkins St.
Sonoma, CA 95476

Teri Shore
Environmentalist
515 Hopkins St.
Sonoma, CA 95476

Sent VIA EMAIL

September 21, 2022

To: Permit Sonoma, Board of Supervisors and Sonoma County Planning Commission

Copies to: Senators Mike McGuire and Bill Dodd

RE: Public Comments on Sonoma Developmental Center Draft Environmental Impact Report (DEIR) and Specific Plan – Revise EIR to Meet CEQA, Scale it Back and Protect Open Space!!

Dear Permit Sonoma, Board of Supervisors and Sonoma County Planning Commission,

As a long-time resident of Sonoma Valley who cares deeply about the lands, wildlife and people who live here, I do not support the Sonoma Developmental Center (SDC) Specific Plan as proposed by Permit Sonoma and find that the DEIR is inadequate to meet the requirements of the California Environmental Quality Act. Please see my general comments followed by comments on the DEIR and a detailed table with more detailed comments.

GENERAL COMMENTS on SDC DEIR, Specific Plan and Planning Process

Reversal of County Land Use Policies: The proposed SDC Specific Plan and DEIR comprise a complete reversal on decades of city centered growth and open space protection in Sonoma County. Instead of providing a visionary plan that addresses climate change and environmental protection while providing appropriate affordable housing, the County of Sonoma is deciding to forever urbanize the heart of rural and agricultural Sonoma Valley. Whether or not the Specific Plan is implemented or not, the rezoning of these lands for residential, hotel, commercial, retail and other new land uses will forever transform these lands.

C166-2

Public Land for Public Good: This public land has always served the public good. For decades, everyone from local residents to county elected officials to open space agencies and the general public have envisioned these lands for protected open space and serving the needs of people with developmental disabilities and others who may need housing and services. So, it is extremely heartbreaking to realize that the county is instead intent on building a giant new subdivision here despite the many other options that have been forwarded by the community and stakeholders. The state statute is being willfully misinterpreted by the County of Sonoma to the detriment of the people of California who own these lands. Turning public lands over to private developers for profit is simply wrong when there are many models for repurposing public lands without doing so, such as Marin Headlands, Presidio Trust, and Mare Island.

C166-3

Open Space: My comments are primarily focused on the open space lands surrounding the campus. These lands are critical for conservation, biodiversity and habitat linkage at a regional and state level. These lands qualify for and are prioritized for recognition in Governor Newsom's 30 X 30 Executive Order among environmental leaders such as Sierra Club, Sonoma Land Trust and Sonoma Mountain Preservation.

C166-4

It is unfortunate that the DEIR and Specific Plan do not give these treasured lands the level of analysis and protection as the development on the historic campus. Definitions are unclear and there are no requirements or details on how, when or through what process the open space will be permanently protected in public ownership.

No doubt it is because the primary focus has been on urban planning. It might be a very good urban plan for a town or city but not for the center of the Sonoma Valley Wildlife Corridor and open space that provides easy access to nature and quiet recreation for all, across the income spectrum. Here the urban plan constitutes old fashioned sprawl.

Housing: While we all recognize the need for affordable housing, we also know that we can't build our way out of it. Just look to the rest of the Bay Area and places like Los Angeles where affordable housing is even more scarce. There is room in existing cities and towns to provide affordable housing for the people who need it. But of course, we need to change the way we provide housing; build-baby-build isn't it. The SDC lands are the wrong place for massive housing development comprised primarily of market rate housing. This will simply create another high-end wine country enclave and profits for private developers.

C166-5

Timeline: While I don't have any confidence that the county intends to change course, I do request that the county provides the public, Planning Commission and Board of Supervisors adequate and appropriate time to revies and finalized the DEIR and Specific Plan. The County must ask the State of California for more time to accomplish this important planning process. The County and State should not adopt a plan just to meet an arbitrary deadline. There is no rush given that the SDC property will be in transition for decades to come.

DEIR COMMENTS

C166-6

1. **REVISE DEIR TO MEET CEQA**: Revise and strengthen the Draft Environmental Impact Report to meet the requirements of California Environmental Quality Act by

analyzing and preventing or reducing all negative environmental impacts generated by the proposed Specific Plan by scaling back project, avoiding impacts and providing legally enforceable mitigation measures in a Mitigation and Monitoring Program. As drafted the DEIR is not adequate to meet CEQA. It has zero mitigations for any environmental impacts, including two that are "significant and unavoidable:" historic preservation and VMTs.

C166-6

2. **REVISE SELF-MITIGATED SPECIFIC PLAN:** Revise and strengthen the Specific Plan Conditions of Approval to be legally enforceable requirements and recast as mitigation measures in the DEIR, as above. As drafted, the "self-mitigating" Specific Plan does not mitigate significant negative environmental impacts. The Conditions of Approval (CofAs) only apply to half of the environmental areas required for study under CEQA. And there are none for critical issues such as wildfire. Most of the CofAs for biological resources apply only to construction, not operations or maintenance, and are based mostly on existing state law or Best Management Practices, which are not in statute and therefore not legally enforceable.

All Specific Plan Goals and Policies need to be specific, strong and enforceable. Otherwise, they are practically meaningless. Please remove vague words such as "promote" or "encourage" or "if feasible." Replace with "require", "shall" or "must." These strengthened Goals and Polices then need to be made Conditions of Approval and recast as Mitigations in the DEIR in a Mitigation and Monitoring Program.

If CofAs, policies or goals can't be made specific, then remove them as they do not mitigate environmental impacts. Having a Self-Mitigated Plan is not part of CEQA and does not necessarily meet CEQA; and certainly not in the case of the SDC Specific Plan and DEIR.

3. **SCALE BACK DEVELOPMENT AND CHANGE PREFERRED ALTERNATIVE:** Scale back the development to 450 or fewer homes in scale with the rural character of the property; utilize existing buildings, preserve historic features. Require that 100 percent of the homes be affordable to low, very low- and moderate-income working people and to individuals with developmental disabilities. Require that all homes and buildings meet Visitability Standards for access by Americans with Disabilities (ADA), prioritizing those who currently live in Sonoma Valley.

C166-7

- Eliminate the hotel, retail and commercial space that is not needed as those services already exist nearby in Sonoma Valley.
- Change the Preferred Alternative to the Historic Preservation Alternative, which is the most environmentally sound, and amend to reflect the requirements above.

4. **ANALYZE OPEN SPACE AND PUBLIC INSTITUTUION ALTERNATIVES:** All the alternatives studied by the County of Sonoma are variations on a major mixed-use development that maximizes urban style use. The scaled back Historic Alternative is the closest to what the public and community has asked for over the years. However, the Open Space and Public Institution Alternatives that were dismissed by the County of Sonoma offer significantly difference alternatives that deserve further analysis. The Marin Headlands and Presidio Trust are good examples of how public land was repurposed without overdevelopment that could be analyzed further in the Open Space Alternative.

C166-8

Providing more details on the Historic, Open Space and Public Institution Alternatives will

serve to meet CEQA criteria to provide the public and decisionmakers with a true range of alternatives.

C166-8

While the DEIR claims that these alternatives were dismissed due lack of consistency with state statute, I would argue that the various development alternatives that were presented are too narrow and also inconsistent with state statute. State statute calls for housing as appropriate on the SDC site and to prioritize affordable housing and housing for developmentally disabled individuals. What's present is very much out of scale and not appropriate for rural land. In addition, the DEIR and Specific Plan calls for the introduction of commercial agriculture throughout the preserved open space areas, which was never mentioned in state statute. Many other new land uses never mentioned in state statute are also proposed.
In there any legal, statutory or other reason why County of Sonoma should not analyze and provide more details on the Historic, Open Space and Public Institution Alternatives?

5. **PROVIDE SPECIFICS AND ADDRESS IMPACTS TO OPEN SPACE** – The Specific Plan and the DEIR mentions open space protection in general terms in several places, in various ways, but fails to provide a clear definition of "preserved open space," or to give the exact boundaries (other than in one general overlay map), or give details on how or when it will be protected, transferred or managed.

C166-9

Vague Goals and Policies contained the Specific Plan and DEIR do not suffice, such as *"future developers at the site must work with the County to ensure proper management and stewardship"* and *"Work with Sonoma County to dedicate the preserved open space as regional parkland."* Not resolving these issues is likely to create confusion and conflict later for all involved, as elected officials, agency staff and developers change over time.

The DEIR and Specific Plan cannot rely on state statute to protect the open space lands as that language is vague, only as "feasible" and in the "best interests of the state."[1]

These inadequacies need to be resolved in the DEIR and Specific Plan by adding clear descriptions of the open space lands with exact boundaries; likely mechanisms for transferring the lands and to what possible entities or types of entities; a timeline; and how the lands will be managed and under what authority. Environmental impacts and mitigations for impacts to the open space lands from development of the campus and ongoing operations must be provided.

Preserved Open Space and Agriculture: The Specific Plan and DEIR make sweeping statements about "historic agriculture" but do not explain the extent of past agriculture in terms of types or amount of acreage. The impacts of allowing commercial agriculture on open space that is currently not in agriculture must be analyzed and the environmental impacts avoided or mitigated in the DEIR.

C166-10

Unacceptable New Uses in Preserved Open Space: Table 4-3 (attached) of the Land Use Section of the Specific Plan outlines many new uses in "preserved open space" including wine tasting rooms, timber conversion, wholesale nurseries, sports facilities and several others that have not been analyzed under CEQA or addressed at all in the

goals, policies or CofAs of the Specific Plan. These "permitted" new uses in Preserved Open space must be analyzed, avoided or prevented and mitigated as required under CEQA and in my view NOT ALLOWED OR PERMITTED in Preserved Open Space.

C166-10

SHOULD NOT ALLOW AS PROPOSED THESE USES IN PRESERVED OPEN SPACE TABLE 4-2 SPECIFIC PLAN

Agricultural Crop Production and Cultivation
Agricultural Processing
Animal Keeping: Beekeeping
Animal Keeping: Confined Farm Animals
Animal Keeping: Farm Animals
Animal Keeping: Pet Fancier -
Farm Retail Sales
Farm Stands
Indoor Crop Cultivation
Mushroom Farming
Nursery, Wholesale
Timberland Conversions, Minor
Nursery, Wholesale
Tasting Rooms

SHOULD NOT ALLOW AS PROPOSED IN SPECIFIC PLAN WITH CONDITIONAL USE PERMIT
Recreation and Sports Facilities: Recreation Facility, Outdoor
Recreation and Sports Facilities: Rural
Sports and Recreation

6. **SONOMA VALLEY WILDLIRE CORRIDOR MAPPING AND RIPARIAN SETBACKS:** Increase setbacks along Sonoma Creek, Riparian areas and the Sonoma Wildlife Corridor to at least 100 feet, instead of inadequate 50 feet as proposed. Explain why 50 feet is adequate to protect riparian areas and the wildlife corridor. In this section, I will defer to comments by the experts, including the Sonoma Land Trust and Center for Biological Diversity.

C166-11

Mapping: Neither the DEIR nor the Specific Plan provides an accurate map of the Sonoma Valley Wildlife Corridor. The DEIR refers to Figure 1.6-3, which does not appear in the DEIR. The Specific Plan Figure 1.6-3 is a map of Existing Vegetation.

In the Specific Plan Figure 1.6-2 titled "Wildlife Constraints," something that appears to represent the Sonoma Wildlife Corridor consists of two wavy green lines labeled as "Critical Wildlife Linkage Marin Blue Ridge." However, that term is not defined, does not contain the words "Sonoma Valley Wildlife Corridor" and is never used anywhere else in the Specific Plan or DEIR. And, in fact, the Sonoma Valley Wildlife Corridor does not appear to be specifically mapped anywhere in the Specific Plan or DEIR that I could find.

To meet CEQA by providing the public and decisionmakers with accurate information, the Sonoma Wildlife Corridor needs to be clearly mapped and defined with consistent terms. You must revise the DEIR and Specific Plan to specifically map and describe the boundaries of the Sonoma Valley Wildlife Corridor. C166-11

7. **WILDFIRE:** There are no mitigation conditions of approval for wildfire; and the goals and policies are based on a future Emergency Response Plan that will be developed at some point. This is inadequate under CEQA. The DEIR and Self-Mitigating SDC Specific Plan do not eliminate risk or wildfire hazard to insignificant levels. Develop and add enforceable Mitigations in the DEIR and Conditions of Approval in the Specific Plan for Wildfire to reduce and prevent risk as there currently are none. C166-12

The Evacuation Time analysis seems unrealistic and not based on fact as it suggests that "added times" for travel during an evacuation range from 1 or 2 minutes to 37 minutes to get to Napa. It took people HOURS to evacuate from Kenwood and Sonoma Valley during recent fires.

Also, the DEIR calls for the "requirement" for a shelter-in-place facility at SDC after 200 homes are built. There is no proven rationale for sheltering in place particularly in a High Fire Risk Area. Revise wildfire evacuation impacts to reflect on-the-ground experiences during recent wildfires and new state and county wildfire risk and hazard maps. Eliminate the shelter-place as there is no evidence it would save lives.

The DEIR and Specific Plan must also consider a wildfire mitigation that includes retreat from wildfire areas. Please see attached article in Bay Nature from experts on land use and wildfire which explains why developing in high wildfire areas is no longer appropriate or safe.

Please include by reference the comments on wildfire and evacuation from the State Alliance for Firesafe Road Regulations and other commenters with expertise on these issues.

8. **CLIMATE CRISIS and VMTs:** The DEIR finds that the proposed Specific Plan will produce "significant and unavoidable" environmental impacts due to huge increases in Vehicle Miles Traveled that will be generated primarily by new residents driving to and from the SDC site. The DEIR offers no mitigations or conditions of approval to reduce or avoid the amount of driving. C166-13

The DEIR finds that the proposed SDC Specific Plan will undermine local, regional and state policies and commitments to address the climate crisis as it found significant and unavoidable impacts in the areas of vehicle miles traveled. That means that there is NO WAY to offset or mitigate the extra driving generated by all the new housing, retail, commercial development proposed at SDC. The County must not approve this project as proposed with these impacts if it is serious about addressing the climate crisis.

Taking this approach fails to meet the standards contained in CEQA because VMTs can be avoided and reduced by building fewer homes, reusing and demolishing fewer buildings, requiring public transit, and other measures that were never considered. The DEIR and Specific Plan must be revised to analyze and provide mitigations and measures to reduce VMTs.

9. CONFLICTS WITH EXISTING COUNTY AND VOTER APPROVED POLICIES: Statements in the DEIR and Specific Plan that the proposals do not conflict C166-14

with existing county policies are inaccurate. The proposed Specific Plan is a complete reversal of land use policy in the County of Sonoma dating back to the original General Plan in 1989. It constitutes urbanization of rural and open space lands not seen since the 1970s; and the type of development that paved over places such as Silicon Valley.

C166-14

As proposed, the DEIR and Specific Plan violates decades of city-centered growth policies adopted and supported by the voters of Sonoma County and contained in the General Plan. Until now, the County of Sonoma has mostly upheld policies to grow inside existing cities and towns, honor voter-approve Urban Growth Boundaries, protect greenbelts and open space, and respect voter-approved community separators. The voters of Sonoma County have taxed themselves to create the Ag + Open Space District, the SMART Train, and provide expanded funding to Sonoma County Regional Parks.

The DEIR must analyze and mitigate the impacts to these long-standing land use and open space protection policies and voter-approved measures from the proposed Specific Plan and complete reversal of land use policy in order to comply with CEQA.

10. **HOUSING AND POPULATION**

C166-15

New housing at SDC is not required or necessary for the County of Sonoma to meet its state mandated Regional Housing Needs Allocation of 3,881 housing units for the next 8-year cycle (2023-2031), as cited in the DEIR.[2] In fact, housing at SDC was never considered as part of the RHNA process because the property's future remains uncertain and is currently zoned for public facilities, not housing.

The DEIR cites the Association of Bay Area Governments (which also assigns RHNA numbers) that between 2020 and 2040, the number of housing units in Sonoma County will grow by 15 percent, while the population grows by 9 percent. These facts indicate that adequate housing units will be provided if housing units grow twice as fast as population. These projections of housing and population indicate that housing needs are likely to be met without building 1,000 units at SDC. In addition, the DEIR discloses that unincorporated Sonoma County is in fact losing population.

It is clear that the housing numbers proposed in the Specific Plan and analyzed in the DEIR do not reflect actual official population or housing needs. It is based solely on Permit Sonoma's assumptions about how to make the development profitable for developer. This is the wrong baseline and approach.

The DEIR fails to consider that Sonoma County Transportation Authority has previously determined that the county and cities could build at least 30,000 new and rebuilt (post fire) housing units without expanding outside of UGBs or existing USAs. SDC was neither referenced nor considered as a location for housing.[3]

The DEIR fails to make note that the City of Sonoma has adequate room to meet and exceed its RHNA allocations for the next 8-year cycle; or that according to the Springs Specific Plan Notice of Preparation of an EIR, there is potential for 700 new housing units there. The county Housing Rezone EIR has also identified parcels for higher density housing in the Springs and around the unincorporated county which would result in additional housing.

With these facts in mind, the DEIR must analyze and mitigate the growth inducing impacts of adding 1,000 extra housing units to Sonoma Valley and the County of Sonoma. One alternative the DEIR should consider is putting those 1,000 units into existing towns and cities, possible through a Transfer of Development Rights agreement with cities and the county of Sonoma itself.

C166-15

11. ENDANGERED, THREATENED SPECIES

C166-16

The DEIR and Specific Plan fail to adequately analyze or mitigate the negative environmental impacts to endangered and threatened species on the SDC lands. The mitigations, goals, policies and Conditions of Approval are inadequate because they are weak with unenforceable actions, rely primarily on existing laws that have to be followed anyway, and/or rely on future studies and assessments as assessments – all of which fail to meet CEQA.

In addition, the DEIR and Specific Plan fail to provide any analysis or even discuss the fact that mountain lions and bears and other predators utilize the SDC lands; or any of the research on this wildlife and others that is published or available. The DEIR and Specific Plan must recognize and provide details on this wildlife and provide analysis and mitigations to reduce negative environmental impacts; and prevent human-wildlife interactions – at the least.

I will defer to comments on this section to the experts including Center for Biological Diversity and Sonoma Land Trust.

12. COMMUNITY BENEFITS AGREEMENTS

The DEIR and Specific Plan need to consider and analyze the benefits of the use of a Community Benefits Agreements at SDC with the community, labor, and public and appropriate stakeholders as a way to provide certainty that the mitigations and measures to protect the environment and community are upheld over the decades as SDC is being transformed.

C166-17

For example, county residents, particularly in the Sonoma Valley could determine what is most important based on community needs and particulars of the project once a property owner or manager is identified. For example, we could require the property owner or manager to commit to high levels of affordable and workforce housing, good, living wage jobs, protecting wildlife corridors, supportive and accessible housing for disabled people, and much more. We could fill in the gaps that the DEIR and Specific Plan don't provide, particularly if the state choose a different plan and/or the county never adopts or implements the Specific Plan.

13. **STATE STATUTE:** The County of Sonoma needs to revisit its interpretation of the state statute in respect to the Specific Plan and EIR as follows:

C166-18

Housing: State Statute says the following:
It is the intent of the Legislature that priority be given to affordable housing in the disposition of the Sonoma Developmental Center state real property.
The agreement shall require that housing be a priority in the planning process and that any housing proposal determined to be ***appropriate for the property*** *shall include affordable housing. It is further the intent of the state that priority be given to projects that include housing that* ***is deed restricted to provide housing for individuals with developmental disabilities.***

Nowhere does the statute call for maximum urbanization of the SDC nor

to create a new town, hotel, commercial or retail. The scale of housing and development is not appropriate for the rural property surrounded by ag land. Therefore, the County of Sonoma's Specific Plan and DEIR are not consistent with and misinterpret the state statute. Both need to be revised to align with state statute and public comment by scaling back the development, eliminating market rate housing and other development, and providing deed-restricted affordable housing to individuals with developmental disabilities.

C166-18

Open Space: State Statute says the following:

The Department of General Services recognizes the exceptional open-space, natural resources, and wildlife habitat characteristics of the Sonoma Developmental Center.

It is the intent of the Legislature that the lands outside the core developed campus and its related infrastructure be preserved as ***public parkland and open space.***

The disposition of the property or property interests shall provide for ***the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible*** *and shall be upon terms and conditions the director deems to* ***be in the best interests of the state.***

The state statute makes clear that the permanent protection of open space lands is for public parkland and natural resources as a public resource. The County's Specific Plan and DEIR are inconsistent with state statute as they propose introducing agriculture, sports fields and other uses without consider the negative environmental impacts of doing so.
However, the state statute also conditions protection of the open space "to the extent feasible" and to "be in the best interests of the state." That is why the county Specific Plan and DEIR must provide details on how, when and with what entities that the open space will be protected. If not, then the state legislature will need to act to ensure the protection of the open space and that none of it is sold off for development or other inappropriate use.

C166-19

Economic Feasibility: State Statute says the following:

The planning process shall facilitate the disposition of the property by amending the general plan of the county and any appropriate zoning ordinances, completing any environmental review, and ***addressing the economic feasibility of future development****.*

The County of Sonoma's entire Specific Plan and DEIR is tied to this one mention of economic feasibility to the exclusion of just about everything else. The state did not mandate that the project be economically feasible or financially feasible but to address it. Economic feasibility changes constantly with market conditions. Specific Plans and General Plans are written for long periods of time when economic feasibility is certain to change. The County is misinterpreting state statute to maximize urban development at the SDC site. The proposal could also be economically feasible if, for example, the state paid to clean up the site, then transferred it to state parks or another public conservation entity. A bond measure or initiative could be written. However, the County looked at only one option

C166-20

or alternative: making profits for a private developer. This lacks vision and is inconsistent with state statute and CEQA

C166-20

The Planning Commission must direct Permit Sonoma to revise the Specific Plan and DEIR to be consistent with state statute and public comment and provide new alternatives that don't focus entirely on urbanization and developer profits.

There are many other concerns that I have regarding the DEIR and Specific Plan, but these are what I am able to provide with the time and energy that I have at this time.

PLEASE SEE DETAILED TABLE OF COMMENTS BELOW AS WELL AS ARTICLE MENTIONED ABOUT WILDFIRE RETREAT.

Sincerely yours,

Teri Shore
terishore@gmail.com

Shore Detailed Comments Focused on Open Space Related Definitions, Goals, Policies and CofAs from DEIR

DEIR		Comment or Question	Action Requested
Open Space Related Definitions, Goals, Policies and CofAs from DEIR		The permanent preservation of open space lands in public ownership in perpetuity is not fully addressed nor the impacts to those lands adequately analyzed or mitigated by the DEIR and Specific Plan. While there is extensive discussion of the core campus, the open space is treated with vague and conflicting terms; even though it comprises the most acreage in the Specific Plan at 755 acres. Open Space definitions inconsistent, confusing. Agriculture is included in	1. Fully address, analyze and mitigate impacts to prioritized preservation of open space lands in public ownership in perpetuity as priority in the DEIR and Specific Plan, where now very little if any attention is given to the 755 acres outside the core campus development. 2. Provide clear, consistent definition for open space, preserved open space, permanent protections, open

		some places, not others, and never clearly defined in DEIR. Neither state nor community ever envisioned commercial agriculture in protected public open space. State statute never mentions agriculture or commercial agriculture. How when and by what mechanisms the open space lands will be permanently protected in public hands is never adequately described.	space in core campus, parks, paseos. 3. Open space should be defined as all the lands outside the core campus that will be permanently protected for natural resources, wildlife habitat, the Sonoma Wildlife Corridor, riparian corridors, wetlands, passive recreation and no development; other than maintaining and operating existing dams and improving trails. 4. Open space definition needs to include terms “public lands” as in “permanently protected as public lands in public hands for the public good.” Make clear that open space will not be in developer or other private hands. 5. Remove agriculture and commercial agricultural uses from definition of open space; and/or conduct analysis of impacts to open space from new commercial agricultural land uses that is now completely missing from DEIR. 6. Provide details on how, when and by what mechanisms the open space lands will be protected in perpetuity in public ownership.

Page 3 – ES 1.1	755 acres of contiguous open space, and the 11-acre non-contiguous Camp Via grounds within Jack London State Historic Park.	Is 11-acre Camp Via part of open space? Seems it should have a separate definition as a former camp. Unless intention is to remove and restore camp.	Define Camp Via as separate from public open space; or analyze impacts from removing and restoring as open space and deeding to Jack London State Park.
	Open space includes many acres of valuable wildlife habitat, former agricultural land, recreational uses, and the Eldridge Cemetery, as well as an existing network of trails and access roads	Here open space includes agriculture and the cemetery. The extent of historic agriculture is never defined. Commercial agriculture never existed on site, only for food for facility clients and staff. Cemetery is separate entity. State statute never mentions agriculture or commercial agriculture.	Remove agriculture from definition of public open space; or conduct analysis of impacts to open space from new commercial agricultural land uses that is now completely missing from DEIR. Define actual uses and acreage of historic agricultural uses; and commercial ag if it existed. Define Cemetery separately from open space.
Page 5 – ES3.1	preserved open space and parkland	Here preserved open space and parkland and mentioned together, but not defined. What parkland? Where?	Provide clear definition of preserved open space and parkland.
Page 10 ES 3.1	open space in the Core Campus	What? Open space in the Core Campus? Does that count toward the 755 acres of open space? Very confusing.	Define open space in the Core Campus as something other than open space to avoid confusion; and because a park next to buildings is not really open space but more like a park.
Page 11 ES3.1	preserved open space	Needs to be defined.	Define; remove agriculture from definition per above.
Page 11 ES3.2	Active open space areas (parks, paseos).	Active open space area is a new term introduced here with no definition. Same for parks and paseos.	Define active open space areas, parks, paseos.
Page 12 ES3.3	reclaimed as open space	What? This suggests that buildings will be removed and reclaimed as open space. That would not be open space. Maybe a park or greenspace?	Define reclaimed areas where buildings have been removed other than as open space.
Page 55 2.1.2.3	contiguous open space		Define what you mean by contiguous open space.

Page 55 2.1.2.3	Open space includes former agricultural land, recreational uses, the Eldridge Cemetery, and many acres of valuable wildlife habitat.	Here open space includes agriculture and the cemetery. The extent of historic agriculture is never defined. Commercial agriculture never existed on site, only for food for facility clients and staff. State statute never mentions agriculture or commercial agriculture. Cemetery is separate entity.	Remove agriculture from definition of public open space; or conduct analysis of impacts to public open space from new commercial agricultural land uses that is now completely missing from DEIR. Define Cemetery separately from open space.
	Embedded in the open space is an existing network of trails and access roads as well as a water system consisting of two surface water reservoirs, aqueducts, spring head, storage tanks, treatment plant, pipelines and a water intake in Sonoma Creek.		Analyze and mitigate how maintenance and operations of existing infrastructure in open space as described will impact the open space, habitat, wetlands and other natural resources.
Page 61 2.2.1	The legislation recognizes the exceptional open-space, natural resources, and wildlife characteristics of SDC, and it is the intent of the legislature that the lands outside of the core developed campus and its related infrastructure be preserved as public parkland and opens space.	Here for the first time the DEIR uses the terms "preserved as public parkland and opens space." Is open space the same as parkland? How much will be open space and how much parkland?	Define preserved open space as above; and define public parkland. Describe how much land will be open space and how much parkland. My recommendation is that all open space be designated as parkland.
Page 63 2.3	surrounding open space, recreational, and agricultural areas,	Here open space, recreation and agriculture are lumped together as if one. State statute never mentions agriculture or commercial agriculture.	Remove agriculture and define separately. If the intention is to allow commercial agriculture, then analyze and mitigate the impacts and provide land use and zoning over areas that county wants open to ag.
	The surrounding open spaces flourish as natural habitats and	Here open space, recreation and agriculture are lumped together as if	Remove agriculture and define separately. If the intention is to allow

	as agricultural and recreational land linked to regional parks and open space systems.	one. State statute never mentions agriculture or commercial agriculture.	commercial agriculture, then analyze and mitigate the impacts and provide land use and zoning over areas that county wants open to ag. Analyze and mitigate the impacts to introducing ag into open space.
	vast protected open space of oak woodlands, native grasslands, wetlands, forests, creeks, and lakes that provide habitats and wildlife movement corridors; agricultural land; and recreational open space integrated with the surrounding park systems.	This seems to be a more accurate definition for preserved open space, except for reference to agriculture.	Remove agriculture and define separately. If the intention is to allow commercial agriculture, then analyze and mitigate the impacts and provide land use and zoning over areas that county wants open to ag. Analyze and mitigate the impacts to introducing ag into open space.
Page 68 2.4.3 Key Planning Strategies	Further, the campus will be surrounded by a vast network of permanently preserved open spaces.	Yes, this is the most accurate and correct description. But doesn't define permanently protected or by what means.	Define permanently preserved open spaces and describe by what means they will be permanently protected.
Page 70 2.4.3.1 Land Use Classifications	**Single-Family Detached.** Single-family units that are detached from any other buildings (with the exception of accessory dwelling units) and have open space on all four sides.	Inaccurate use of open space. The green spaces between dwelling units are typically called yards. If it is for communal use, then use and define an appropriate term such as green space, park, pocket park or something.	Define areas around buildings as yards, green space, park, pocket park or something other than open space, which refers to the lands outside the core campus.
Page 72	The Institutional designation accommodates adaptive reuse and new construction of a retreat/conference center located at the southern terminus of Sonoma Avenue, this area is envisioned as making use of the open spaces and scenic setting to support a conference center.	Not clear what open space is being referred to here. If it is green areas between buildings, then define and describe as above. Or if the conference and retreat center is making use of public open space.	Clarify use of public open space by private retreat or conference center; and/or redefine area around buildings in core campus as parks, greenways or appropriate term.
	Parks and Recreation	Does Parks and	Clarify that Parks and

	The Parks and Recreation designation provides for parks, recreation fields, and landscaped trails and pathways, and associated infrastructure structures. Park spaces may be active or passive, and could include dog parks, play areas, and other uses. These areas are intended to primarily consist of outdoor spaces, but they may contain support structures such as restrooms or small utility buildings. Park and recreation areas may have a secondary function as stormwater treatment and infiltration areas.	Recreation designation apply only in core campus? Please make clear. It should not apply to public open space.	Recreation designation does not apply in public open space.
	Buffer Open Space The Buffer Open Space designation encompasses managed open space areas that create transitions between open space habitat and development. Along the edges of the Core Campus, the Buffer Open Space is intended as a defensible fire buffer area, with fire resilient landscaping that protects buildings from fire, along the creeks, the Buffer Open Space creates floodable areas for stormwater management and ensures adequate riparian corridors for wildlife movement. Agricultural and active recreation uses are allowed within this designation as long as they are located further than 50 feet away from the top of Sonoma Creek's	Agriculture is allowed in Buffer Open Space, but the impacts are never analyzed or mitigated. Why is 50 feet adequate to protect riparian areas from agriculture? Why isn't 100 feet a more adequate setback. Why not mitigate by prohibiting agriculture in open space buffer. Does Open Space Buffer overlap with preserved public open space? Agriculture is never mentioned in state statute.	Analyze and mitigate impacts of introducing agriculture into Open Space Buffer Areas. Explain whether this new land use and land use designation overlaps with preserved public open space; and mitigate and analyze the impacts.

	banks. Within the Buffer Open Space areas, built elements should be limited to trails and planters, permeable fencing, and informational signage.		
	Preserved Open Space The Preserved Open Space designation is intended to preserve open spaces outside of the Core Campus for habitat, recreation, ecological services, water resources, and agricultural uses. This space also contains some infrastructure, including water infrastructure, that is important for the continued functioning of local water systems.	Neither state nor community ever envisioned commercial agriculture in protected public open space. State statute never mentions agriculture or commercial agriculture.	Remove agriculture and commercial agricultural uses from definition of open space; and/or conduct analysis of impacts to open space from new commercial agricultural land uses that is now completely missing from DEIR.
Page 75	**western open space**	What is this? First time that term is used.	Define western open space.
Page 76	*Agrihood* The Agrihood District is envisioned as a new neighborhood that is a nod to historic agricultural lands, with physical and visual connections to the historic agricultural areas, low-impact development at a lower intensity, and a smooth visual transition between higher intensities to the west and the agricultural open space at the east.	See comments above about agriculture. The Agrihood appears to overlap with preserved public open space and community separator lands. What the heck is agricultural open space?????	Conduct analysis and mitigate impacts to preserved public open space from new commercial agricultural land uses that is now completely missing from DEIR. Conduct analysis and mitigate impacts to preserved public open space from new "agrihood." Describe how the agrihood overlaps with community separators; and how a vote of the people is likely to be required as it intensifies development. Define this new term: agricultural open space.

Goals and Policies	Open Space Related	Comment or Question	Action Requested
Page 94 3.1.3.3 Relevant Policies and Implementing Actions			
Pg 94, 131 Open Space and Resources and Hazards	2-A Open Space: Preserve the open space surrounding the core campus in public ownership in perpetuity, preventing further development in undeveloped areas and ensuring ongoing stewardship in partnership with neighboring State and regional parks and other institutions and organizations.	While I support this, there is no analysis, description or detail or how or when this will be accomplished. This language is far too vague to provide adequate mitigation. It needs to be more detailed and added to Conditions of Approval. The DEIR needs to provide specifics such as naming prioritized entities such as California State Parks, Sonoma County Regional Parks, Sonoma County Open Space District, California Coastal Conservancy and other "conservation" institutions and "non-profit" and "public" organizations. How will it be accomplished, such as through conservation easements, fee-title, inter-agency transfer or other mechanisms. A timeline, such as within three years of the adoption of the DEIR. Right now, there is nothing in writing; and the state statute is vague, conditional on "feasibility."	Add specific details for how, when and through what mechanisms the preservation of the open space in public ownership in perpetuity will be accomplished, and provide detailed options, as well as a timeline. Preservation of open space in public ownership in perpetuity needs to be added as a DEIR Mitigation and a Condition of Approval in the Specific Plan.
	2-B Balance: Promote a balance of habitat conservation, agriculture, and recreational open space, reflecting the recent historic use of the surrounding open space.	Balance and Promotion is not an action or requirement. Does not serve as an enforceable mitigation or condition of approval. Agriculture needs to be removed or analyzed and mitigated as a new land use. Define historic use. Recreational	Either remove this entirely as "balance" and "promote" have no enforceability to serve as a mitigation or condition of approval; or change to "require habitat conservation and protection of natural resources of open space in

		use is another new term introduced here without definition.	public ownership in perpetuity." Remove agriculture. Remove or define "historic use." Remove or define "recreational open space."
	Policies 2-1 Work with Sonoma County to dedicate the preserved open space as regional parkland.	Work with is vague and meaningless. Who is supposed to work with Sonoma County? Isn't this a Sonoma County document? This needs detailed description of how, when and by what mechanisms that the preserved open space will dedicated for public ownership in perpetuity. Here you say it will be parkland. In other places you say it will be agriculture. I support making it all parkland. But what does regional parkland mean? Does that prevent the land from going to state parks?	Add specific details for how, when and through what mechanisms the preservation of the open space in public ownership in perpetuity will be accomplished, and provide detailed options, as well as a timeline. Preservation of open space in public ownership in perpetuity needs to be added as a DEIR Mitigation and a Condition of Approval in the Specific Plan. Define what you mean by "regional parkland."
	2-7 Prohibit lights within the wildlife corridor and along the creek corridor.	Support.	
	2-11 Implement "dark skies" standards for all public realm lighting and all new buildings on the site, including by requiring that all outdoor fixtures are fully shielded, that outdoor lights have a color temperature of no more than 3,000 Kelvins, and that lighting for outdoor recreational facilities be prohibited after 11pm.	Support.	
Page 95	2-20 Require that new development preserve existing trees to the fullest extent feasible. Locate new construction and public	Inadequate. "As feasible" is unenforceable. This does nothing to save a single tree, nor does it provide any information	The DEIR needs a full assessment of the trees and tree canopy; and needs to require protection of mature trees

	realm improvements around existing landscaping features.	on the tree canopy that exists at SDC or the conservation or climate benefits they provide.	and by size and species and historic value. The conservation ad climate values of the existing trees need to be analyzed.
	2-20 Require that new development preserve existing trees to the ***fullest extent feasible.*** Locate new construction and public realm improvements around existing landscaping features.	Inadequate. "Fullest extent feasible" is unenforceable. The use of the word "require" is meaningless here.	The DEIR needs a full assessment of the trees and tree canopy; and needs to require protection of mature trees and by size and species and historic value. The conservation ad climate values of the existing trees need to be analyzed.
Pg 101 *Standard Conditions of Approval*	MOB-2 Construction of the Highway 12 connector should avoid damage to scenic and open space resources such as trees, rock outcroppings, and historic buildings to the **greatest extent feasible.**	Inadequate. "Fullest extent feasible" is unenforceable. The use of the word "require" is meaningless here.	Provide actual requirements and conditions of approval to prevent damage to scenic and open space resources such as trees, rock outcroppings and historic buildings.
Page 102	Preserved Open Space land use designation is intended to preserve open spaces outside of the Core Campus for habitat, recreation, and agricultural uses.	Remove agriculture from definition of preserved open space. Agriculture is never mentioned in state statute.	Remove agriculture from definition of preserved open space; and/or conduct analysis and mitigations for introducing ag into open space, and land use designations as described above.
Page 105	preserving the site's open space framework	Define open space framework. Is that just a map?	Define and describe the open space framework.
Page 123 3.2.2.4 Planning Area Overview			
Agricultural Resources	The Planning Area is a located in a rural setting within the vastly agricultural area of unincorporated Sonoma County. Parcels immediately to the south of the Planning Area in the eastern portions are	Inadequate. Vague. Unclear.	Define amount of acreage and actual agriculture uses at SDC. Clarify whether they are commercial ag uses or just for growing food for residents and staff at SDC.

	currently being used as vineyards. In this rural context, there is some land within SDC that was historically used for agriculture within the Planning Area.		
	This area contained historic agriculture uses, including animal husbandry and grazing, orchards, vineyards, crop production and the former Sunrise Industries farm.	Inadequate. Vague.	Define amount of acreage and actual agriculture uses at SDC. Clarify whether they are commercial ag uses or just for growing food for residents and staff at SDC.
	The presence of rich soils and the mandate to preserve open space on the SDC site suggests that agricultural uses could again become an important land use on the SDC site.	Commercial agriculture as the Specific Plan and DEIR propose is a new land use compared to the food and farming conducted at SDC for residents and staff.	As above, either remove agriculture or conduct an analysis of the impacts of introducing commercial agriculture into open space. Define amount of acreage and actual agriculture uses at SDC. Clarify whether they are commercial ag uses or just for growing food for residents and staff at SDC.
Page 124	Approximately 610 acres within the Planning Area is designated as Grazing Land and 98 acres is designated as Farmland of Local Importance.	Yes, but there is no commercial grazing or agriculture being conducted on site; and it is unlikely there ever was.	See above.
	However, there are no current grazing activities occurring within the Planning Area.	Exactly.	Introduction of grazing is a new land use that requires analysis and mitigation in the DEIR.
	No land within the Planning Area is currently zoned as Agricultural in the Sonoma County General Plan; the entire Planning Area is currently zoned as Public Facilities. The only agricultural and resource-based land use permitted in	Exactly.	Introduction of new commercial agricultural uses as proposed requires analysis and mitigation in the EIR.

	this zone is beekeeping, and agricultural processing is conditionally permitted.		
Page 131 3.2.3.3 Relevant Policies and Implementing Actions **The following relevant policies and implementing actions of the Proposed Plan address agriculture and forestry resources:**	2-D Biological Resources: Promote conservation of existing habitat, including creeks, groundwater recharge areas, and open spaces, through intentional water and energy conservation, sustainable food production, top-tier sustainable building practices, and aggressive waste reduction strategies in order to protect natural resources and critical wildlife habitat, maintain wildlife linkages, and foster environmental stewardship.	Inadequate. Promote is not adequate to protect or mitigate environmental harm to biological resources.	Change promote to "require" and provide some actual mitigations.
	Policies 2-1 Work with Sonoma County to dedicate the preserved open space as regional parkland.	Inadequate. Vague. Unclear. "Work with" has no clear definition. Given this is one of the most important assets and elements of the Specific Plan and state statute, the DEIR needs to provide far more detail and actual requirements, mitigations and enforceable measures and conditions of approval to meet CEQA.	Add specific details for how, when and through what mechanisms the preservation of the open space in public ownership in perpetuity will be accomplished, and provide detailed options, as well as a timeline. Preservation of open space in public ownership in perpetuity needs to be added as a DEIR Mitigation and a Condition of Approval in the Specific Plan.
	2-2 Work with agricultural community partners and local farmers to reintroduce agricultural uses in the agrihood and within the managed landscape buffer to promote local production and regenerative farming practices, honoring the site's history and enhancing the site's connection to the land.	As above, "work with" is an inadequate term to meet CEQA mitigation requirements. New land uses including the agrihood and agriculture need to be analyzed and mitigated. If the intent is to prioritize regenerative farming and local production, that needs to be made clear. Commercial agriculture is not that.	Analyze and mitigate impacts to open space lands from new land use of "agrihood." See comments above about agrihood, community separators and agriculture in general.

	2-21 Preserve and enhance the wetlands east of the core campus as a fire break, groundwater recharge, and habitat area.	Required by law to protect wetlands. Therefore, this is not a mitigation.	Analyze and mitigate impacts to wetlands as use as fire break and groundwater recharge area, which are new land uses for wetlands that are protected by federal law.
	2-26 Prohibit the use of all pesticides, rodenticides, and poisons in materials and procedures used in landscaping, construction, and site maintenance within the Planning Area. This restriction should be included in all Declarations of Covenants, Conditions and Restrictions (CC&Rs) to ensure that future homeowners are aware of the requirements.	Support.	Support.
	The proposed Agrihood District (Goal 5-M) would support new agricultural uses, with physical and visual connections to the historic agricultural areas, low-impact development at a lower intensity, and a smooth visual transition between higher intensities to the west and the agricultural open space at the east. It is also noted that the County's Zoning Code would be concurrently amended to incorporate the Proposed Plan's new and modified land use districts and overlays, use and development standards, and density and intensity limits, if the Proposed Plan is adopted.	Exactly. And the impacts of this have not been analyzed or mitigated in the DIER.	Analyze and mitigate impacts of Agrihood on open space lands that is currently missing from DEIR.
	Given that the Proposed	This is nonsensical	Explain.

	Plan supports agricultural uses as permitted by existing zoning and that the Planning Area does not include any Williamson Act contract lands, this impact would be less than significant	conclusion. What does it even mean?	
Page 136	The Proposed Plan would introduce new and modified land use districts and overlays that will accommodate proposed land use classifications including residential, employment center, flex zone, institutional, utilities, parks and recreation, buffer open space, preserved open space, and a hotel overlay zone.	Exactly. And the impacts from all that on open space lands are not adequately analyzed or mitigated.	Fully analyze and mitigate all the environmental impacts to open space lands and Sonoma Valley from Proposed Specific Plan, which has not been adequately done in the DEIR, as comments show.
	In addition, the proposed Agrihood District (Goal 5-M) is planned on the eastern side of the Core Campus and would support new agricultural uses in recognition of the Farmland of Local Importance, which historically supported agricultural uses on the eastern portion of the site.	New land use.	See above on agriculture as a new land use at SDC and on open space lands.
	In addition, the proposed Agrihood District (Goal 5-M) is planned on the eastern side of the Core Campus and would support new agricultural uses in recognition of the Farmland of Local Importance, which historically supported agricultural uses on the eastern portion of the site.	New land use.	As above, new land use needs to be analyzed and mitigated in DEIR.
Page 196 3.3 Air	It is noted that quantified	Inadequate analysis. This	Analyze and mitigate

Quality	operational emissions do not include potential agricultural uses that would be allowed in the Agrihood district and Buffer Open Space and Permanent Open Space designations of the Proposed Plan. However, as discussed in the Methodology and Assumptions section above, these uses would be located away from future sensitive uses including residential areas (i.e., outside the Core Campus), and permitted agricultural activities are unlikely to occur on a scale that would result in daily operational emissions of the Proposed Plan (**Table 3.3-8**) exceeding BAAQMD's thresholds for particulate matter.	is giant leap. The DEIR needs to analyze and mitigate, not make giant assumptions based on no facts or evidence.	impacts of potential new ag uses on open space and SDC property, future and current residents of the area. Provide actual mitigations that are enforceable.
	Limited agricultural uses would be allowed in the Agrihood district as well as the Buffer Open Space and Preserved Open Space areas outside of the Core Campus.	What are the limited agriculture uses.	Analyze and mitigate new agriculture uses.
Page 237 3.4.3.3 Relevant Policies and Implementing Actions ***Open Space and Resources and Hazards***	Goals 2-D Biological Resources: Promote conservation of existing habitat, including creeks, groundwater recharge areas, and open spaces, through intentional water and energy conservation, sustainable food production, top-tier sustainable building practices, and aggressive waste reduction strategies in order to protect natural	Promote is not an adequate mitigation.	See comments above to require actual requirements and mitigations, replace "promote" with actionable and enforceable measures.

	resources and critical wildlife habitat, maintain wildlife linkages, and foster environmental stewardship.		
	2-E Wildlife Corridor: Maintain and enhance the size and permeability of the Sonoma Valley Wildlife Corridor (as shown in Figure 1.6-3) by ensuring a compact development footprint at the SDC site and by minimizing impacts to wildlife movement and safety from human activity and development at the campus.	Inadequate. How exactly will impacts be minimized to wildlife movement and safety from human activity and development at the campus.	Provide adequate analysis and mitigations for minimizing impacts to wildlife movement and safety from human activity and development at the campus.
	2-7 Prohibit lights within the wildlife corridor and along the creek corridor.	Support.	Support
	2-8 Maintain wildlife crossing structures by periodically checking for and clearing debris, vegetation overgrowth, and other blockages from culvert and bridge crossing structures; within the Core Campus, the Project Sponsor should develop and execute a maintenance	Inadequate. What does periodically mean? Who will do the checking? How is a project sponsor equipped to develop and execute a maintenance program? The word should needs to be "shall."	Provide an enforceable requirement for maintaining wildlife crossing structures.
	2-9 Within the wildlife corridor, meet but do not exceed the defensible space requirements of the County Fire Department to maintain wildlife habitat while maximizing fire safety.	Inadequate. What the heck does this mean exactly?	Explain and define what this means exactly; and who would be responsible.
	2-14 Prohibit all unleashed outdoor cats, and restrict off-leash dogs and other domestic animals to private fenced yards and designated areas.	Support.	Support.

	2-15 Collaborate with local wildlife protection groups to create and distribute educational information and regulations for residents and employees to guide safe interactions with wildlife onsite. Materials should be accessible to all ages and abilities and could include posted signs, disclosures, fliers, or informational sessions, among other things.	Inadequate. Collaborate does not constitute and enforceable mitigation.	Change collaborate to "require SDC property owner and open space managers to ….."
	2-17 Adhere to residential nighttime noise standards to the extent feasible.	Inadequate. Meaningless.	Provide actual enforceable noise mitigations.
	2-20 Require that new development preserve existing trees to the fullest extent feasible. Locate new construction and	Inadequate. Meaningless.	Provide actual enforceable tree preservation mitigations.
Page 239	2-25 Include protective buffers of at least 50 feet along Sonoma and Mill creeks, as measured from the top-of-bank and as shown on Figure 2.2-1: Open Space Framework, to protect wildlife habitat and species diversity, facilitate movement of stream flows and ground water recharge, improve water quality, and maintain the integrity and permeability of the Sonoma Valley Wildlife Corridor, and the ability of wildlife to use and disperse through the SDC site. Manage protective buffers so that they support continuous stands of healthy native plant communities.	Inadequate. Why does 50 feet provide adequate protection? Why not 100 feet? What is the Open Space Framework? Just a map? Manage how?	Provide adequate analysis and mitigations for protective buffers, define and describe open space framework, and explain how protective buffers will be managed.

	2-27 Ensure that all development adheres to Sonoma County Municipal Code Sec 26-65 on riparian corridor protection.	Following existing law is not a mitigation or measure. It is required by law. How will you ensure it is followed?	How will county ensure that the riparian corridor protection regulations will be followed and enforced; and by whom?
	2-28 Prior to the commencement of the approval of any specific project in the Proposed Plan area, Project Sponsors shall contract a qualified biologist to conduct studies identifying the presence of special-status species and sensitive habitats at proposed development sites and ensure implementation of appropriate mitigation measures to reduce impacts to sensitive habitat or habitat function to a less than significant level.	Inadequate. Future studies do not provide mitigation.	Inadequate.
Page 240 3.4.3.4 Impacts *Summary of Proposed Plan*	The existing undeveloped portions of the Planning Area would be designated as Preserved Open Space land use. Development is not proposed to occur within Preserved Open Space, where current daytime recreational uses would continue. Impact 3.4-1 Implementation of the Proposed Plan would not	So here the DIER states that the Preserved Open Space Land Use would remain undeveloped and not be developed, except for recreational daytime uses. Agricultural use and development are not mentioned here. I support that, but it is inconsistent with other parts of the DEIR and Specific Plan. Remove agriculture to be consistent. You can't say there is no impact when the impacts of agriculture haven't been analyzed.	Remove agriculture from preserved open space.
Page 242	Outside of the developed areas, the Proposed Plan establishes dedicated open space areas. Managed open space in these areas would preserve and, in some cases,	Support, but needs more detail and explanation on how the open space will be managed and how it will enhance habitats and wildlife. I agree that preservation would be	Reconcile definition and use of preserved open space throughout DEIR and Specific Plan; remove agriculture.

	enhance the quality of sensitive habitats such as wetlands, native grasslands and oak woodlands. Several special-status wildlife and some plant species would be positively impacted by the preservation of these habitats. The open space would preserve the Sonoma Valley Wildlife Corridor and maintain its permeability for the movement of wildlife at a regional scale.	beneficial. But once again, the issue of agriculture is not addressed, which could be extremely harmful to everything here.	
Page 254	The Proposed Plan is intended to contain development within the already developed area (Core Area) and protect open space for recreational and preservation uses. The	Exactly. No agriculture.	See previous comments on agriculture.
Page 255	Because the Proposed Plan preserves the overwhelming majority of the SDC parcel in open space, it ensures continuation of regional connectivity for wildlife, serving as a conduit for transit of wildlife between significant habitat blocks to the east and west.	Inadequate. Just preserving the 755 acres of open space in itself does not protect the natural resources or ensure connectivity for wildlife. Plus, there is a huge amount of inconsistency on how open space is defined and a lack of specificity on how it will be preserved.	Explain in detail how the Proposed Plan ensures continuation of regional connectivity for wildlife, serving as a conduit for transit of wildlife between significant habitat blocks to the east and west.
Page 257	Moreover, the 750 acres of Planning Area that will be preserved as open space will help offset some of the emissions generated by development under the Proposed Plan, though not necessarily on a magnitude sufficient to achieve carbon neutrality for the Planning Area. Nevertheless, this	What? Please provide detailed analysis and assumptions on this point. Looks like another great leap. Particularly since there is no plan for protecting trees, and there is no analysis of the impacts of introducing commercial agriculture.	Please provide detailed analysis and assumptions on this point. Looks like another great leap with very little actual evidence.

	significant source of carbon sequestration supports the 2022 Scoping Plan's emphasis on natural and working lands.		
Page 307 3.10.1.1 Historical Land Use	SDC operations made use of the significant open space for recreation and agriculture, with programs that made use of the land to support the clients. Institutional decline in the 1970s and 1980s led to the eventual transfer of several hundred acres of what was identified as surplus land to the county and state park system, including approximately 600 acres that were transferred to the adjacent Jack London State Historic Park in 2002. With its remaining 945 acres, the SDC continued to operate agriculture and recreation programs on the property and kept much of the land in active use until the State announced closure of developmental centers in 2015 and closed the SDC in late 2018.		
Page 319	As described in the Biological Resources Chapter, the campus will be surrounded by a vast network of permanently preserved open spaces to protect natural resources, foster environmental stewardship, and maintain and enhance the permeability of the Sonoma Valley Wildlife Corridor for safe wildlife	It is not clear how the Specific Plan and DEIR will adequately accomplish this.	

	movement throughout the site.		
Page 396	Policies 2-1 Work with Sonoma County to dedicate the preserved open space as regional parkland. 2-4 Streamline the existing trail system by mapping, improving, and clearly marking designated trails for recreational use in order to minimize negative effects on the open space from recreational use.	As above, "work with" is not an enforceable mitigation. How will streamlining the trail system improve and mitigate impacts from recreation use?	See comments above about this policy and use of term "work with." Explain how streamlining the trail system will improve and mitigate impacts from recreation use.
	2-5 Consider creating a designated area for water recreation at Suttonfield Lake, such as an access point near the trail from Arnold Drive with rail fencing and clearly marked signage and rules for swimming, dogs, and non-motorized boating.	Not a good idea. That will require a huge amount of supervision, new fences and roads, lighting and all kinds of things that are not conducive to preserving open space, natural resources and wildlife habitat. Plus, it is drinking water.	Remove this concept.
Page 397 *Community Design*	5-16 Develop a cohesive and integrated system of parks and open spaces, to fulfill the active and passive recreational needs of the community, building on the overall framework outlined in Figure 5.1-1.	Is the entire framework based on one map? How, who and when will a cohesive and integrated system of parks and open spaces, to fulfill the active and passive recreational needs of the community be accomplished?	Explain the framework. Describe in detail how, who and when will a cohesive and integrated system of parks and open spaces, to fulfill the active and passive recreational needs of the community be accomplished.
Page 403	Moreover, 755 acres of the Planning Area will be retained as open space that will be publicly accessible and integrated into the regional parks system (proposed Policy 2-1).	Yes. Support, but many elements of the Specific Plan and DEIR conflict with this and fail to address impacts from new land uses such as agriculture. Also, why limit to regional park system? What about state?	Explain why regional parks and not state parks? Explain how the 755 acres of open space will be "retained" and by whom, when and by what mechanisms.
Page 524	Full Open Space and Public/Institutional Use alternatives were also	While I appreciate that these alternatives were considered, they could	Provide more analysis and detail on the Full Open Space and

	considered; however, for reasons discussed in Section 4.3, these alternatives were determined to be inconsistent with project objectives and infeasible, and therefore not analyzed in detail.	have been more fully analyzed and evaluated to provide public and decision makers with another option for the SDC property. While it is true that this option is not specifically mentioned in state statute, when it comes to housing, it states “as appropriate.” The Specific Plan goes far beyond “appropriate” for housing. It also introduces agriculture which was never mentioned in state statute.	Public/Institutional Use alternatives to provide the public and decision makers with additional options for the future of SDC.

Wildfire smoke near Mineral, California. (Photo by Mark Gunn,

Flickr
)
Fire
A Case for Retreat in the Age of Fire asDozens of Wildfi res Th reaten Homes inthe West
by
Emily E. Schlickman
,
Brett Milligan
and
Stephen M. Wheeler
September 15, 2022
Th
is article is republished from
Th
e Conversation
under a CreativeCommons license. Read the
original article
.
After the 2018 wildfire in Paradise, Calif., many fire-damaged homes were razed.
Justin Sullivan/GettyImages
Emily E. Schlickman
,
University of California, Davis
;
Brett Milligan
,
University of California,Davis
, and
Stephen M. Wheeler
,

University of California, Davis
More than
90 large fi res
were burning across the parched Western U.S. landscape in mid-September 2022 following a record-setting heat wave, and thousands of people were underevacuation orders. One wildfi re had
burned about 100 homes
and buildings in the NorthernCalifornia town of Weed. As fi re risk rises, is it time to consider managed retreat? Th reeenvironmental design and sustainability experts explore the options.
A case for retreat in the age of fi re
Wildfi res in the American West are getting
larger, more frequent and more severe
. Althougheff orts are underway to create fi re-adapted communities, it's important to realize that wecannot simply design our way out of wildfi re – some communities will need to begin planning aretreat.
Paradise, California,
worked for decades to reduce
its fi re risk by removing dry grasses, brushand forest overgrowth in the surrounding wildlands. It built fi rebreaks to prevent fi res fromspreading, and
promoted defensible space
around homes.
But in 2018, a fi re sparked by wind-damaged power lines swept up the ravine and destroyedover 18,800 structures.
Eighty-fi ve people died
. It's just one example.
Across the America West and in other fi re-risk countries, thousands of communities likeParadise
are at risk. Many, if not most, are in the wildland-urban interface, a zone betweenundeveloped land and urban areas where both wildfi res and unchecked growth are common.From 1990 to 2010, new housing in the wildland-urban interface in the continental U.S.
grew by41%
. By 2020,
more than 16
million homes
were in fi re-prone areas in the West.
Whether in the form of large, master-planned communities or incremental, house-by-houseconstruction, developers have been placing new homes in danger zones.
Assesses fire risk at the local level can help communities understand and prepare. The map reflects theprobability wildfire will occur in an area in 2022.
First Street Foundation Wildfire Model
It has been nearly four years since the Paradise fi re, and the town's population is now
less than30% of what it once was
. Th is makes Paradise one of the fi rst documented cases of voluntaryretreat in the face of wildfi re risk. And while the notion of wildfi re retreat is controversial,politically fraught and not yet endorsed by the general public, as experts in urban planning andenvironmental design, we believe the necessity for retreat will become increasinglyunavoidable.
But retreat isn't only about wholesale moving. Here are four forms of retreat being used to keeppeople out of harm's way.
Limiting future development
On one end of the wildfi re retreat spectrum are development-limiting policies that

createstricter standards for new construction. Th ese might be employed in moderate-risk areas or
communities disinclined to change.
An example is San Diego's steep hillside guidelines that restrict construction in areas withsignifi cant grade change, as wildfi res burn faster uphill. In the guidelines, steep hillsides have agradient of at least 25% and a vertical elevation of at least 50 feet. In most cases, new buildingscannot encroach into this zone and must be located
at least 30 feet from the hillside
.
While development-limiting policies like this prevent new construction in some of the mosthazardous conditions, they often cannot eliminate fi re risk.
Development-limiting policies can include stricter construction standards. The illustration shows thedifference between a home on a steep, wooded hillside that is hard to defend from fire and one fartherfrom the slope. Emily Schlickman
Halting new construction
Further along the spectrum are construction-halting measures, which prevent newconstruction to manage growth in high-risk parts of the wildland-urban interface.
Th
ese fi rst two levels of action could both be implemented using basic urban planning tools,starting with county and city general plans and zoning, and subdivision ordinances. Forexample, Los Angeles County recently updated its
general plan to limit new sprawl in wildfi rehazard zones
. Urban growth boundaries could also be adopted locally, as many suburbancommunities north of San Francisco have done, or could be mandated by states,
as Oregon didin 1973
.
Halting construction and managing growth in high-risk parts of the wildland-urban interface is anotherretreat tool. Emily Schlickman
To assist the process, states and the federal government could designate
fi
re-risk areas
, similarto Federal Emergency Management Agency fl ood maps.
California already designates zones
with three levels of fi re risk: moderate, high and very high.
Th
ey could also develop fi re-prone landscape zoning acts, similar to legislation that has helped limit new development along coasts
,
on wetlands
and
along earthquake faults
.
Incentives for local governments to adopt these frameworks could be provided throughplanning and technical assistance grants or preference for infrastructure funding. At the sametime, states or federal agencies could refuse funding for local authorities that enabledevelopment in severe-risk areas.
In some cases, state offi cials
might turn to the courts
to stop county-approved projects toprevent loss of life and property and reduce the costs that taxpayers might pay to maintain andprotect at-risk properties

Th
ree
high-profi le
projects
in California's wildland-urban interface have been stopped in thecourts because their environmental impact reports fail to adequately address the increasedwildfi re risk that the projects create. (Full disclosure: For a short time in 2018, one of us, EmilySchlickman, worked as a design consultant on one of these – an experience that inspired thisarticle.)

Incentives to encourage people to relocate

In severe risk areas, the technique of "incentivized relocating" could be tested to help peoplemove out of wildfi re's way through programs such as voluntary buyouts. Similar programs havebeen used after fl oods.

Local governments would work with FEMA to off er eligible homeowners the pre-disaster valueof their home
in exchange for not rebuilding
. To date, this type of federally backed buyoutprogram has yet to be implemented for wildfi re areas, but some vulnerable communities havedeveloped their own.

Th
e city of Paradise created a buyout program funded with nonprofi t grant money anddonations. However, only
300 acres of patchworked parcels have been acquired
, suggestingthat stronger incentives and more funding may be required.

Removing government-backed fi re insurance plans or instituting variable fi re insurance ratesbased on risk could also encourage people to avoid high-risk areas.

Another potential tool is a "transferable development rights" framework. Under such aframework, developers wishing to build more intensively in lower-risk town centers couldpurchase development rights from landowners in rural areas where fi re-prone land is to bepreserved or returned to unbuilt status. Th e rural landowners are thus compensated for the lostuse of their property. Th ese frameworks have been used for growth management purposes inMontgomery County, Maryland
, and in
Massachusetts
and
Colorado
.

Incentivized relocating can be used in severe risk areas by subsidizing the movement of some people outof wildfire's way. The illustrations show what before and after might look like.

Emily Schlickman

Miiiihll

Moving entire communities, wholesale

Vulnerable communities may want to relocate but don't want to leave neighbors and friends."Wholesale moving" involves managing the entire resettlement of a vulnerable community.

While this technique has yet to be implemented for wildfi re-prone areas, there is a long historyof its use
after catastrophic fl oods
. One place it is currently being used is Isle de Jean Charles,Louisiana, which has
lost 98% of its landmass since 1955 because of erosion and sea levelrise
. In 2016, the community received a federal grant to plan a retreat to higher ground,including the design of a

new community center
40 miles north and upland of the island.
Th
is technique, though, has drawbacks – from the complicated logistics and support needed tomove an entire community to the time frame needed to develop a resettlement plan topotentially overloading existing communities with those displaced.
In extreme risk areas, wholesale moving could be an approach – managing the resettlement of an entirevulnerable community to a safer area. Emily Schlickman
Even with ideal landscape management, wildfi re risks to communities will continue to increase,and retreat from the wildland-urban interface will become increasingly necessary. Th e primaryquestion is whether that retreat will be planned, safe and equitable, or delayed, forced andcatastrophic.
Emily E. Schlickman
, Assistant Professor of Landscape Architecture and EnvironmentalDesign,
University of California, Davis
;
Brett Milligan
, Associate Professor of LandscapeArchitecture and Environmental Design,
University of California, Davis
, and
Stephen M.Wheeler
, Professor of Urban Design, Planning, and Sustainability,
University of California,Davis
Th
is article is republished from
Th
e Conversation
under a Creative Commons license. Read the
original article
.
About the Authors
Emily E. Schlickman
,
Brett Milligan
and
Stephen M. Wheeler
ALSO ON BAY NATURE
3 months ago 1 comment
Large carcasses can't just be
wiped up. What are the
other options?
What Happens When
Large Animals Die …
• 3 months ago 1 comment
For urban butterfly habitats,
more is more.
How to Make a City
Friendly to …
• 8 months ago 1 comme
Bill Leikam has spent

dozen years learning t
secrets of foxes in the
How to Be a Fox:
Secrets from the
•

---

[1] *The disposition of the property or property interests shall provide for the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible and shall be upon terms and conditions the director deems to be in the best interests of the state.*

[2] According to the Final 2023–2031 RHNA, ABAG has
Sonoma Developmental Center Specific Plan determined that unincorporated Sonoma County's fair share of regional housing need for the 2023 to 2031 period would be 3,881 units. Approximately 1,632 of these units would be allocated as housing affordable to very low- and low-income households.93 The ABAG
Executive Board adopted the Final RHNA Plan in December 2021. It should be noted that
while the present RHNA allocation is for the next eight years, full development of the SDC
Specific Plan would occur over a longer time horizon, over multiple RHNA cycles.

[3] Sonoma County Transportation Authority/Regional Climate Protection Authority Board Meeting Packet, October 14, 2019, 4.3.2. Housing – update on pipeline projects (REPORT)*

Sonoma County Transportation Authority/Regional Climate Protection Authority Board Meeting Packet, September 10, 2018, 4.5. SCTA Planning Item 4.5.1. Housing – housing projects in the pipeline and update on housing items (REPORT)*

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Teri Shore
Environmentalist
515 Hopkins St.
Sonoma, CA 95476



Sent VIA EMAIL

September 21, 2022

To: Permit Sonoma, Board of Supervisors and Sonoma County Planning Commission

Copies to: Senators Mike McGuire and Bill Dodd

RE: Public Comments on Sonoma Developmental Center Draft Environmental Impact Report (DEIR) and Specific Plan – Revise EIR to Meet CEQA, Scale it Back and Protect Open Space!!

Dear Permit Sonoma, Board of Supervisors and Sonoma County Planning Commission,

As a long-time resident of Sonoma Valley who cares deeply about the lands, wildlife and people who live here, I do not support the Sonoma Developmental Center (SDC) Specific Plan as proposed by Permit Sonoma and find that the DEIR is inadequate to meet the requirements of the California Environmental Quality Act. Please see my general comments followed by comments on the DEIR and a detailed table with more detailed comments.

GENERAL COMMENTS on SDC DEIR, Specific Plan and Planning Process

Reversal of County Land Use Policies: The proposed SDC Specific Plan and DEIR comprise a complete reversal on decades of city centered growth and open space protection in Sonoma County. Instead of providing a visionary plan that addresses climate change and environmental protection while providing appropriate affordable housing, the County of Sonoma is deciding to forever urbanize the heart of rural and agricultural Sonoma Valley. Whether or not the Specific Plan is implemented or not, the rezoning of these lands for residential, hotel, commercial, retail and other new land uses will forever transform these lands.

Public Land for Public Good: This public land has always served the public good. For decades, everyone from local residents to county elected officials to open space agencies and the general public have envisioned these lands for protected open space and serving the needs of people with developmental disabilities and others who may need housing and services. So, it is extremely heartbreaking to realize that the county is instead intent on building a giant new subdivision here despite the many other options that have been forwarded by the community and stakeholders. The state statute is being willfully misinterpreted by the County of Sonoma to the detriment of the people of California who own these lands. Turning public lands over to private developers for profit is simply wrong when there are many models for repurposing public lands without doing so, such as Marin Headlands, Presidio Trust, and Mare Island.

Open Space: My comments are primarily focused on the open space lands surrounding the campus. These lands are critical for conservation, biodiversity and habitat linkage at a regional and state level. These lands qualify for and are prioritized for recognition in Governor Newsom's 30 X 30 Executive Order among environmental leaders such as Sierra Club, Sonoma Land Trust and Sonoma Mountain Preservation.

It is unfortunate that the DEIR and Specific Plan do not give these treasured lands the level of analysis and protection as the development on the historic campus. Definitions are unclear and there are no requirements or details on how, when or through what process the open space will be permanently protected in public ownership.

No doubt it is because the primary focus has been on urban planning. It might be a very good urban plan for a town or city but not for the center of the Sonoma Valley Wildlife Corridor and open space that provides easy access to nature and quiet recreation for all, across the income spectrum. Here the urban plan constitutes old fashioned sprawl.

Housing: While we all recognize the need for affordable housing, we also know that we can't build our way out of it. Just look to the rest of the Bay Area and places like Los Angeles where affordable housing is even more scarce. There is room in existing cities and towns to provide affordable housing for the people who need it. But of course, we need to change the way we provide housing; build-baby-build isn't it. The SDC lands are the wrong place for massive housing development comprised primarily of market rate housing. This will simply create another high-end wine country enclave and profits for private developers.

Timeline: While I don't have any confidence that the county intends to change course, I do request that the county provides the public, Planning Commission and Board of Supervisors adequate and appropriate time to revies and finalized the DEIR and Specific Plan. The County must ask the State of California for more time to accomplish this important planning process. The County and State should not adopt a plan just to meet an arbitrary deadline. There is no rush given that the SDC property will be in transition for decades to come.

DEIR COMMENTS

1. **REVISE DEIR TO MEET CEQA**: Revise and strengthen the Draft Environmental Impact Report to meet the requirements of California Environmental Quality Act by analyzing and preventing or reducing all negative environmental impacts generated by the proposed Specific Plan by scaling back project, avoiding impacts and providing legally enforceable mitigation measures in a Mitigation and Monitoring Program. As drafted the DEIR is not adequate to meet CEQA. It has zero mitigations for any environmental impacts, including two that are "significant and unavoidable:" historic preservation and VMTs.

2. **REVISE SELF-MITIGATED SPECIFIC PLAN:** Revise and strengthen the Specific Plan Conditions of Approval to be legally enforceable requirements and recast as mitigation measures in the DEIR, as above. As drafted, the "self-mitigating" Specific Plan does not mitigate significant negative environmental impacts. The Conditions of Approval (CofAs) only apply to half of the environmental areas required for study under CEQA. And there are none for critical issues such as wildfire. Most of the CofAs for biological resources apply only to construction, not operations or maintenance, and are based

mostly on existing state law or Best Management Practices, which are not in statute and therefore not legally enforceable.

All Specific Plan Goals and Policies need to be specific, strong and enforceable. Otherwise, they are practically meaningless. Please remove vague words such as "promote" or "encourage" or "if feasible." Replace with "require", "shall" or "must." These strengthened Goals and Polices then need to be made Conditions of Approval and recast as Mitigations in the DEIR in a Mitigation and Monitoring Program.

If CofAs, policies or goals can't be made specific, then remove them as they do not mitigate environmental impacts. Having a Self-Mitigated Plan is not part of CEQA and does not necessarily meet CEQA; and certainly not in the case of the SDC Specific Plan and DEIR.

3. **SCALE BACK DEVELOPMENT AND CHANGE PREFERRED ALTERNATIVE:** Scale back the development to 450 or fewer homes in scale with the rural character of the property; utilize existing buildings, preserve historic features. Require that 100 percent of the homes be affordable to low, very low- and moderate-income working people and to individuals with developmental disabilities. Require that all homes and buildings meet Visitability Standards for access by Americans with Disabilities (ADA), prioritizing those who currently live in Sonoma Valley.
   - Eliminate the hotel, retail and commercial space that is not needed as those services already exist nearby in Sonoma Valley.
   - Change the Preferred Alternative to the Historic Preservation Alternative, which is the most environmentally sound, and amend to reflect the requirements above.
4. **ANALYZE OPEN SPACE AND PUBLIC INSTITUTUION ALTERNATIVES:** All the alternatives studied by the County of Sonoma are variations on a major mixed-use development that maximizes urban style use. The scaled back Historic Alternative is the closest to what the public and community has asked for over the years. However, the Open Space and Public Institution Alternatives that were dismissed by the County of Sonoma offer significantly difference alternatives that deserve further analysis. The Marin Headlands and Presidio Trust are good examples of how public land was repurposed without overdevelopment that could be analyzed further in the Open Space Alternative.

Providing more details on the Historic, Open Space and Public Institution Alternatives will serve to meet CEQA criteria to provide the public and decisionmakers with a true range of alternatives.

While the DEIR claims that these alternatives were dismissed due lack of consistency with state statute, I would argue that the various development alternatives that were presented are too narrow and also inconsistent with state statute. State statute calls for housing as appropriate on the SDC site and to prioritize affordable housing and housing for developmentally disabled individuals. What's present is very much out of scale and not appropriate for rural land. In addition, the DEIR and Specific Plan calls for the introduction of commercial agriculture throughout the preserved open space areas, which was never mentioned in state statute. Many other new land uses never mentioned in state statute are also proposed.

In there any legal, statutory or other reason why County of Sonoma should not analyze and provide more details on the Historic, Open Space and Public Institution Alternatives?

5. **PROVIDE SPECIFICS AND ADDRESS IMPACTS TO OPEN SPACE** – The Specific Plan and the DEIR mentions open space protection in general terms in several places, in various ways, but fails to provide a clear definition of "preserved open space," or to give the exact boundaries (other than in one general overlay map), or give details on how or when it will be protected, transferred or managed.

   Vague Goals and Policies contained the Specific Plan and DEIR do not suffice, such as *"future developers at the site must work with the County to ensure proper management and stewardship"* and *"Work with Sonoma County to dedicate the preserved open space as regional parkland."* Not resolving these issues is likely to create confusion and conflict later for all involved, as elected officials, agency staff and developers change over time.

   The DEIR and Specific Plan cannot rely on state statute to protect the open space lands as that language is vague, only as "feasible" and in the "best interests of the state."[1]

   These inadequacies need to be resolved in the DEIR and Specific Plan by adding clear descriptions of the open space lands with exact boundaries; likely mechanisms for transferring the lands and to what possible entities or types of entities; a timeline; and how the lands will be managed and under what authority. Environmental impacts and mitigations for impacts to the open space lands from development of the campus and ongoing operations must be provided.

   Preserved Open Space and Agriculture: The Specific Plan and DEIR make sweeping statements about "historic agriculture" but do not explain the extent of past agriculture in terms of types or amount of acreage. The impacts of allowing commercial agriculture on open space that is currently not in agriculture must be analyzed and the environmental impacts avoided or mitigated in the DEIR.

   Unacceptable New Uses in Preserved Open Space: Table 4-3 (attached) of the Land Use Section of the Specific Plan outlines many new uses in "preserved open space" including wine tasting rooms, timber conversion, wholesale nurseries, sports facilities and several others that have not been analyzed under CEQA or addressed at all in the goals, policies or CofAs of the Specific Plan. These "permitted" new uses in Preserved Open space must be analyzed, avoided or prevented and mitigated as required under CEQA and in my view NOT ALLOWED OR PERMITTED in Preserved Open Space.

---

[1] *The disposition of the property or property interests shall provide for* ***the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible*** *and shall be upon terms and conditions the director deems to* ***be in the best interests of the state.***

SHOULD NOT ALLOW AS PROPOSED THESE USES IN PRESERVED OPEN SPACE TABLE 4-2 SPECIFIC PLAN

Agricultural Crop Production and Cultivation
Agricultural Processing
Animal Keeping: Beekeeping
Animal Keeping: Confined Farm Animals
Animal Keeping: Farm Animals
Animal Keeping: Pet Fancier -
Farm Retail Sales
Farm Stands
Indoor Crop Cultivation
Mushroom Farming
Nursery, Wholesale
Timberland Conversions, Minor
Nursery, Wholesale
Tasting Rooms

SHOULD NOT ALLOW AS PROPOSED IN SPECIFIC PLAN WITH CONDITIONAL USE PERMIT
Recreation and Sports Facilities: Recreation Facility, Outdoor
Recreation and Sports Facilities: Rural Sports and Recreation

6. **SONOMA VALLEY WILDLIRE CORRIDOR MAPPING AND RIPARIAN SETBACKS:** Increase setbacks along Sonoma Creek, Riparian areas and the Sonoma Wildlife Corridor to at least 100 feet, instead of inadequate 50 feet as proposed. Explain why 50 feet is adequate to protect riparian areas and the wildlife corridor. In this section, I will defer to comments by the experts, including the Sonoma Land Trust and Center for Biological Diversity.

Mapping: Neither the DEIR nor the Specific Plan provides an accurate map of the Sonoma Valley Wildlife Corridor. The DEIR refers to Figure 1.6-3, which does not appear in the DEIR. The Specific Plan Figure 1.6-3 is a map of Existing Vegetation.

In the Specific Plan Figure 1.6-2 titled "Wildlife Constraints," something that appears to represent the Sonoma Wildlife Corridor consists of two wavy green lines labeled as "Critical Wildlife Linkage Marin Blue Ridge." However, that term is not defined, does not contain the words "Sonoma Valley Wildlife Corridor" and is never used anywhere else in the Specific Plan or DEIR. And, in fact, the Sonoma Valley

Wildlife Corridor does not appear to be specifically mapped anywhere in the Specific Plan or DEIR that I could find.

To meet CEQA by providing the public and decisionmakers with accurate information, the Sonoma Wildlife Corridor needs to be clearly mapped and defined with consistent terms. You must revise the DEIR and Specific Plan to specifically map and describe the boundaries of the Sonoma Valley Wildlife Corridor.

7. **WILDFIRE:** There are no mitigation conditions of approval for wildfire; and the goals and policies are based on a future Emergency Response Plan that will be developed at some point. This is inadequate under CEQA. The DEIR and Self-Mitigating SDC Specific Plan do not eliminate risk or wildfire hazard to insignificant levels. Develop and add enforceable Mitigations in the DEIR and Conditions of Approval in the Specific Plan for Wildfire to reduce and prevent risk as there currently are none.

The Evacuation Time analysis seems unrealistic and not based on fact as it suggests that "added times" for travel during an evacuation range from 1 or 2 minutes to 37 minutes to get to Napa. It took people HOURS to evacuate from Kenwood and Sonoma Valley during recent fires.

Also, the DEIR calls for the "requirement" for a shelter-in-place facility at SDC after 200 homes are built. There is no proven rationale for sheltering in place particularly in a High Fire Risk Area. Revise wildfire evacuation impacts to reflect on-the-ground experiences during recent wildfires and new state and county wildfire risk and hazard maps. Eliminate the shelter-place as there is no evidence it would save lives.

The DEIR and Specific Plan must also consider a wildfire mitigation that includes retreat from wildfire areas. Please see attached article in Bay Nature from experts on land use and wildfire which explains why developing in high wildfire areas is no longer appropriate or safe.

Please include by reference the comments on wildfire and evacuation from the State Alliance for Firesafe Road Regulations and other commenters with expertise on these issues.

8. **CLIMATE CRISIS and VMTs:** The DEIR finds that the proposed Specific Plan will produce "significant and unavoidable" environmental impacts due to huge increases in Vehicle Miles Traveled that will be generated primarily by new residents driving to and from the SDC site. The DEIR offers no mitigations or conditions of approval to reduce or avoid the amount of driving.

The DEIR finds that the proposed SDC Specific Plan will undermine local, regional and state policies and commitments to address the climate crisis as it found significant and unavoidable impacts in the areas of vehicle miles traveled. That means that there is NO WAY to offset or mitigate the extra driving generated by all the new housing, retail, commercial development proposed at SDC. The County must not approve this project as proposed with these impacts if it is serious about addressing the climate crisis.

Taking this approach fails to meet the standards contained in CEQA because VMTs can be avoided and reduced by building fewer homes, reusing and demolishing fewer buildings, requiring public transit, and other measures that were never considered. The DEIR and Specific Plan must be revised to analyze and provide mitigations and measures to reduce VMTs.

9. **CONFLICTS WITH EXISTING COUNTY AND VOTER APPROVED POLICIES:** Statements in the DEIR and Specific Plan that the proposals do not conflict with existing county policies are inaccurate. The proposed Specific Plan is a complete reversal of land use policy in the County of Sonoma dating back to the original General Plan in 1989. It constitutes urbanization of rural and open space lands not seen since the 1970s; and the type of development that paved over places such as Silicon Valley.

As proposed, the DEIR and Specific Plan violates decades of city-centered growth policies adopted and supported by the voters of Sonoma County and contained in the General Plan. Until now, the County of Sonoma has mostly upheld policies to grow inside existing cities and towns, honor voter-approve Urban Growth Boundaries, protect greenbelts and open space, and respect voter-approved community separators. The voters of Sonoma County have taxed themselves to create the Ag + Open Space District, the SMART Train, and provide expanded funding to Sonoma County Regional Parks.

The DEIR must analyze and mitigate the impacts to these long-standing land use and open space protection policies and voter-approved measures from the proposed Specific Plan and complete reversal of land use policy in order to comply with CEQA.

10. **HOUSING AND POPULATION**

New housing at SDC is not required or necessary for the County of Sonoma to meet its state mandated Regional Housing Needs Allocation of 3,881 housing units for the next 8-year cycle (2023-2031), as cited in the DEIR.[2] In fact, housing at SDC was never considered as part of the RHNA process because the property's future remains uncertain and is currently zoned for public facilities, not housing.

The DEIR cites the Association of Bay Area Governments (which also assigns RHNA numbers) that between 2020 and 2040, the number of housing units in Sonoma County will grow by 15 percent, while

[2] According to the Final 2023–2031 RHNA, ABAG has
Sonoma Developmental Center Specific Plan determined that unincorporated Sonoma County's fair share of regional housing need for the 2023 to 2031 period would be 3,881 units. Approximately 1,632 of these units would be allocated as housing affordable to very low- and low-income households.93 The ABAG Executive Board adopted the Final RHNA Plan in December 2021. It should be noted that while the present RHNA allocation is for the next eight years, full development of the SDC Specific Plan would occur over a longer time horizon, over multiple RHNA cycles.

the population grows by 9 percent. These facts indicate that adequate housing units will be provided if housing units grow twice as fast as population. These projections of housing and population indicate that housing needs are likely to be met without building 1,000 units at SDC. In addition, the DEIR discloses that unincorporated Sonoma County is in fact losing population.

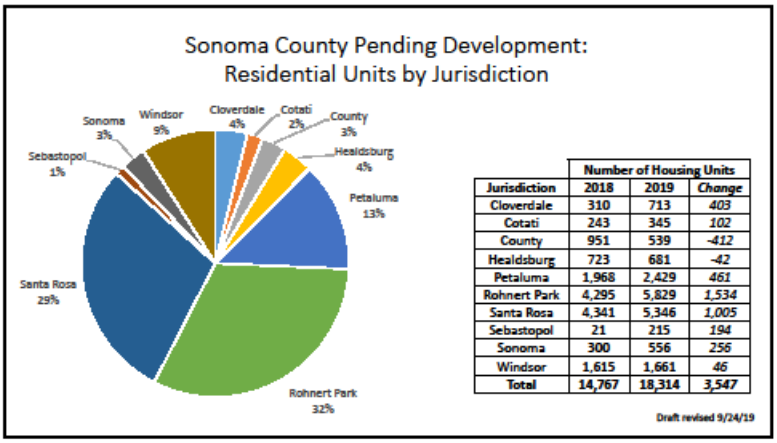
It is clear that the housing numbers proposed in the Specific Plan and analyzed in the DEIR do not reflect actual official population or housing needs. It is based solely on Permit Sonoma's assumptions about how to make the development profitable for developer. This is the wrong baseline and approach.

The DEIR fails to consider that Sonoma County Transportation Authority has previously determined that the county and cities could build at least 30,000 new and rebuilt (post fire) housing units without expanding outside of UGBs or existing USAs. SDC was neither referenced nor considered as a location for housing.[3]

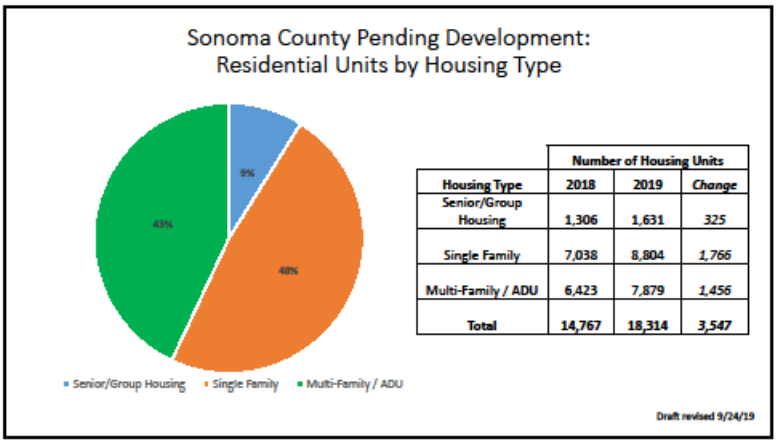
[3] Sonoma County Transportation Authority/Regional Climate Protection Authority Board Meeting Packet, October 14, 2019, 4.3.2. Housing – update on pipeline projects (REPORT)*

Sonoma County Transportation Authority/Regional Climate Protection Authority Board Meeting Packet, September 10, 2018, 4.5. SCTA Planning Item 4.5.1. Housing – housing projects in the pipeline and update on housing items (REPORT)*

10/3/2019



Jurisdiction	Number of Housing Units 2018	2019	Change
Cloverdale	310	713	*403*
Cotati	243	345	*102*
County	951	539	*-412*
Healdsburg	723	681	*-42*
Petaluma	1,968	2,429	*461*
Rohnert Park	4,295	5,829	*1,534*
Santa Rosa	4,341	5,346	*1,005*
Sebastopol	21	215	*194*
Sonoma	300	556	*256*
Windsor	1,615	1,661	*46*
Total	**14,767**	**18,314**	***3,547***



Housing Type	Number of Housing Units 2018	2019	Change
Senior/Group Housing	1,306	1,631	*325*
Single Family	7,038	8,804	*1,766*
Multi-Family / ADU	6,423	7,879	*1,456*
Total	**14,767**	**18,314**	***3,547***

108

1

The DEIR fails to make note that the City of Sonoma has adequate room to meet and exceed its RHNA allocations for the next 8-year cycle; or that according to the Springs Specific Plan Notice of Preparation of an EIR, there is potential for 700 new housing units there. The county Housing Rezone EIR has also identified parcels for higher density housing in the Springs and around the unincorporated county which would result in additional housing.

With these facts in mind, the DEIR must analyze and mitigate the growth inducing impacts of adding 1,000 extra housing units to Sonoma Valley and the County of Sonoma. One alternative the DEIR should consider

is putting those 1,000 units into existing towns and cities, possible through a Transfer of Development Rights agreement with cities and the county of Sonoma itself.

11. ENDANGERED, THREATENED SPECIES

The DEIR and Specific Plan fail to adequately analyze or mitigate the negative environmental impacts to endangered and threatened species on the SDC lands. The mitigations, goals, policies and Conditions of Approval are inadequate because they are weak with unenforceable actions, rely primarily on existing laws that have to be followed anyway, and/or rely on future studies and assessments as assessments – all of which fail to meet CEQA.

In addition, the DEIR and Specific Plan fail to provide any analysis or even discuss the fact that mountain lions and bears and other predators utilize the SDC lands; or any of the research on this wildlife and others that is published or available. The DEIR and Specific Plan must recognize and provide details on this wildlife and provide analysis and mitigations to reduce negative environmental impacts; and prevent human-wildlife interactions – at the least.

I will defer to comments on this section to the experts including Center for Biological Diversity and Sonoma Land Trust.

12. COMMUNITY BENEFITS AGREEMENTS

The DEIR and Specific Plan need to consider and analyze the benefits of the use of a Community Benefits Agreements at SDC with the community, labor, and public and appropriate stakeholders as a way to provide certainty that the mitigations and measures to protect the environment and community are upheld over the decades as SDC is being transformed.

For example, county residents, particularly in the Sonoma Valley could determine what is most important based on community needs and particulars of the project once a property owner or manager is identified. For example, we could require the property owner or manager to commit to high levels of affordable and workforce housing, good, living wage jobs, protecting wildlife corridors, supportive and accessible housing for disabled people, and much more. We could fill in the gaps that the DEIR and Specific Plan don't provide, particularly if the state choose a different plan and/or the county never adopts or implements the Specific Plan.

13. **STATE STATUTE:** The County of Sonoma needs to revisit its interpretation of the state statute in respect to the Specific Plan and EIR as follows:

> **Housing:** State Statute says the following:
> *It is the intent of the Legislature that priority be given to affordable housing in the disposition of the Sonoma Developmental Center state real property.*
> *The agreement shall require that housing be a priority in the planning process and that any housing proposal determined to be* ***appropriate for the property*** *shall include affordable housing. It is further the intent of the state that priority be given to projects that include housing that* ***is deed restricted to provide housing for individuals with developmental disabilities.***

Nowhere does the statute call for maximum urbanization of the SDC nor to create a new town, hotel, commercial or retail. The scale of housing and development is not appropriate for the rural property surrounded by ag land. Therefore, the County of Sonoma's Specific Plan and DEIR are not consistent with and misinterpret the state statute. Both need to be revised to align with state statute and public comment by scaling back the development, eliminating market rate housing and other development, and providing deed-restricted affordable housing to individuals with developmental disabilities.

Open Space: State Statute says the following:

The Department of General Services recognizes the exceptional open-space, natural resources, and wildlife habitat characteristics of the Sonoma Developmental Center.

It is the intent of the Legislature that the lands outside the core developed campus and its related infrastructure be preserved as ***public parkland and open space.***

The disposition of the property or property interests shall provide for ***the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible*** *and shall be upon terms and conditions the director deems to* ***be in the best interests of the state.***

The state statute makes clear that the permanent protection of open space lands is for public parkland and natural resources as a public resource. The County's Specific Plan and DEIR are inconsistent with state statute as they propose introducing agriculture, sports fields and other uses without consider the negative environmental impacts of doing so.
However, the state statute also conditions protection of the open space "to the extent feasible" and to "be in the best interests of the state." That is why the county Specific Plan and DEIR must provide details on how, when and with what entities that the open space will be protected. If not, then the state legislature will need to act to ensure the protection of the open space and that none of it is sold off for development or other inappropriate use.

Economic Feasibility: State Statute says the following:

The planning process shall facilitate the disposition of the property by amending the general plan of the county and any appropriate zoning ordinances, completing any environmental review, and ***addressing the economic feasibility of future development.***

The County of Sonoma's entire Specific Plan and DEIR is tied to this one mention of economic feasibility to the exclusion of just about everything else. The state did not mandate that the project be economically feasible or financially feasible but to address it. Economic feasibility changes constantly with market conditions. Specific Plans and General Plans are written for long periods of time when economic feasibility is certain to change. The County is misinterpreting state statute to maximize urban development at the SDC site. The proposal could also be economically feasible if, for example, the state paid to clean up the site, then transferred it to state parks or another public

conservation entity. A bond measure or initiative could be written. However, the County looked at only one option or alternative: making profits for a private developer. This lacks vision and is inconsistent with state statute and CEQA

The Planning Commission must direct Permit Sonoma to revise the Specific Plan and DEIR to be consistent with state statute and public comment and provide new alternatives that don't focus entirely on urbanization and developer profits.

There are many other concerns that I have regarding the DEIR and Specific Plan, but these are what I am able to provide with the time and energy that I have at this time.

PLEASE SEE DETAILED TABLE OF COMMENTS BELOW AS WELL AS ARTICLE MENTIONED ABOUT WILDFIRE RETREAT.

Sincerely yours,



Teri Shore
terishore@gmail.com

DEIR		Comment or Question	Action Requested
Open Space Related Definitions, Goals, Policies and CofAs from DEIR		The permanent preservation of open space lands in public ownership in perpetuity is not fully addressed nor the impacts to those lands adequately analyzed or mitigated by the DEIR and Specific Plan. While there is extensive discussion of the core campus, the open space is treated with vague and conflicting terms; even though it comprises the most acreage in the Specific Plan at 755 acres. Open Space definitions inconsistent, confusing. Agriculture is included in some places, not others, and never clearly defined in DEIR. Neither state nor community ever envisioned commercial agriculture in protected public open space. State statute never mentions agriculture or commercial agriculture. How when and by what mechanisms the open space lands will be permanently protected in public hands is never adequately described.	1. Fully address, analyze and mitigate impacts to prioritized preservation of open space lands in public ownership in perpetuity as priority in the DEIR and Specific Plan, where now very little if any attention is given to the 755 acres outside the core campus development. 2. Provide clear, consistent definition for open space, preserved open space, permanent protections, open space in core campus, parks, paseos. 3. Open space should be defined as all the lands outside the core campus that will be permanently protected for natural resources, wildlife habitat, the Sonoma Wildlife Corridor, riparian corridors, wetlands, passive recreation and no development; other than maintaining and operating existing dams and improving trails. 4. Open space definition needs to include terms “public lands” as in “permanently protected as public lands in public hands for the public good.” Make clear that open space will not be in developer or other private hands. 5. Remove agriculture and commercial

			agricultural uses from definition of open space; and/or conduct analysis of impacts to open space from new commercial agricultural land uses that is now completely missing from DEIR. 6. Provide details on how, when and by what mechanisms the open space lands will be protected in perpetuity in public ownership.
Page 3 – ES 1.1	755 acres of contiguous open space, and the 11-acre non-contiguous Camp Via grounds within Jack London State Historic Park.	Is 11-acre Camp Via part of open space? Seems it should have a separate definition as a former camp. Unless intention is to remove and restore camp.	Define Camp Via as separate from public open space; or analyze impacts from removing and restoring as open space and deeding to Jack London State Park.
	Open space includes many acres of valuable wildlife habitat, former agricultural land, recreational uses, and the Eldridge Cemetery, as well as an existing network of trails and access roads	Here open space includes agriculture and the cemetery. The extent of historic agriculture is never defined. Commercial agriculture never existed on site, only for food for facility clients and staff. Cemetery is separate entity. State statute never mentions agriculture or commercial agriculture.	Remove agriculture from definition of public open space; or conduct analysis of impacts to open space from new commercial agricultural land uses that is now completely missing from DEIR. Define actual uses and acreage of historic agricultural uses; and commercial ag if it existed. Define Cemetery separately from open space.
Page 5 – ES3.1	preserved open space and parkland	Here preserved open space and parkland and mentioned together, but not defined. What parkland? Where?	Provide clear definition of preserved open space and parkland.
Page 10 ES 3.1	open space in the Core Campus	What? Open space in the Core Campus? Does that count toward the 755 acres of open space? Very confusing.	Define open space in the Core Campus as something other than open space to avoid confusion; and because a park next to buildings is not really open space but more like a park.
Page 11 ES3.1	preserved open space	Needs to be defined.	Define; remove agriculture from definition per above.

Page 11 ES3.2	Active open space areas (parks, paseos).	Active open space area is a new term introduced here with no definition. Same for parks and paseos.	Define active open space areas, parks, paseos.
Page 12 ES3.3	reclaimed as open space	What? This suggests that buildings will be removed and reclaimed as open space. That would not be open space. Maybe a park or greenspace?	Define reclaimed areas where buildings have been removed other than as open space.
Page 55 2.1.2.3	contiguous open space		Define what you mean by contiguous open space.
Page 55 2.1.2.3	Open space includes former agricultural land, recreational uses, the Eldridge Cemetery, and many acres of valuable wildlife habitat.	Here open space includes agriculture and the cemetery. The extent of historic agriculture is never defined. Commercial agriculture never existed on site, only for food for facility clients and staff. State statute never mentions agriculture or commercial agriculture. Cemetery is separate entity.	Remove agriculture from definition of public open space; or conduct analysis of impacts to public open space from new commercial agricultural land uses that is now completely missing from DEIR. Define Cemetery separately from open space.
	Embedded in the open space is an existing network of trails and access roads as well as a water system consisting of two surface water reservoirs, aqueducts, spring head, storage tanks, treatment plant, pipelines and a water intake in Sonoma Creek.		Analyze and mitigate how maintenance and operations of existing infrastructure in open space as described will impact the open space, habitat, wetlands and other natural resources.
Page 61 2.2.1	The legislation recognizes the exceptional open-space, natural resources, and wildlife characteristics of SDC, and it is the intent of the legislature that the lands outside of the core developed campus and its related infrastructure be preserved as public parkland and opens space.	Here for the first time the DEIR uses the terms “preserved as public parkland and opens space.” Is open space the same as parkland? How much will be open space and how much parkland?	Define preserved open space as above; and define public parkland. Describe how much land will be open space and how much parkland. My recommendation is that all open space be designated as parkland.
Page 63 2.3	surrounding open space, recreational, and agricultural areas,	Here open space, recreation and agriculture are lumped together as if one. State statute never	Remove agriculture and define separately. If the intention is to allow commercial agriculture,

		mentions agriculture or commercial agriculture.	then analyze and mitigate the impacts and provide land use and zoning over areas that county wants open to ag.
	The surrounding open spaces flourish as natural habitats and as agricultural and recreational land linked to regional parks and open space systems.	Here open space, recreation and agriculture are lumped together as if one. State statute never mentions agriculture or commercial agriculture.	Remove agriculture and define separately. If the intention is to allow commercial agriculture, then analyze and mitigate the impacts and provide land use and zoning over areas that county wants open to ag. Analyze and mitigate the impacts to introducing ag into open space.
	vast protected open space of oak woodlands, native grasslands, wetlands, forests, creeks, and lakes that provide habitats and wildlife movement corridors; agricultural land; and recreational open space integrated with the surrounding park systems.	This seems to be a more accurate definition for preserved open space, except for reference to agriculture.	Remove agriculture and define separately. If the intention is to allow commercial agriculture, then analyze and mitigate the impacts and provide land use and zoning over areas that county wants open to ag. Analyze and mitigate the impacts to introducing ag into open space.
Page 68 2.4.3 Key Planning Strategies	Further, the campus will be surrounded by a vast network of permanently preserved open spaces.	Yes, this is the most accurate and correct description. But doesn't define permanently protected or by what means.	Define permanently preserved open spaces and describe by what means they will be permanently protected.
Page 70 2.4.3.1 Land Use Classifications	**Single-Family Detached.** Single-family units that are detached from any other buildings (with the exception of accessory dwelling units) and have open space on all four sides.	Inaccurate use of open space. The green spaces between dwelling units are typically called yards. If it is for communal use, then use and define an appropriate term such as green space, park, pocket park or something.	Define areas around buildings as yards, green space, park, pocket park or something other than open space, which refers to the lands outside the core campus.
Page 72	The Institutional designation accommodates adaptive reuse and new construction of a retreat/conference center located at the southern terminus of Sonoma Avenue, this area is envisioned as making use of the open spaces and	Not clear what open space is being referred to here. If it is green areas between buildings, then define and describe as above. Or if the conference and retreat center is making use of public open space.	Clarify use of public open space by private retreat or conference center; and/or redefine area around buildings in core campus as parks, greenways or appropriate term.

	scenic setting to support a conference center.		
	Parks and Recreation The Parks and Recreation designation provides for parks, recreation fields, and landscaped trails and pathways, and associated infrastructure structures. Park spaces may be active or passive, and could include dog parks, play areas, and other uses. These areas are intended to primarily consist of outdoor spaces, but they may contain support structures such as restrooms or small utility buildings. Park and recreation areas may have a secondary function as stormwater treatment and infiltration areas.	Does Parks and Recreation designation apply only in core campus? Please make clear. It should not apply to public open space.	Clarify that Parks and Recreation designation does not apply in public open space.
	Buffer Open Space The Buffer Open Space designation encompasses managed open space areas that create transitions between open space habitat and development. Along the edges of the Core Campus, the Buffer Open Space is intended as a defensible fire buffer area, with fire resilient landscaping that protects buildings from fire, along the creeks, the Buffer Open Space creates floodable areas for stormwater management and ensures adequate riparian corridors for wildlife movement. Agricultural and active recreation uses are allowed within this designation as long as they are located further than 50 feet away from	Agriculture is allowed in Buffer Open Space, but the impacts are never analyzed or mitigated. Why is 50 feet adequate to protect riparian areas from agriculture? Why isn't 100 feet a more adequate setback. Why not mitigate by prohibiting agriculture in open space buffer. Does Open Space Buffer overlap with preserved public open space? Agriculture is never mentioned in state statute.	Analyze and mitigate impacts of introducing agriculture into Open Space Buffer Areas. Explain whether this new land use and land use designation overlaps with preserved public open space; and mitigate and analyze the impacts.

	the top of Sonoma Creek's banks. Within the Buffer Open Space areas, built elements should be limited to trails and planters, permeable fencing, and informational signage.		
	Preserved Open Space The Preserved Open Space designation is intended to preserve open spaces outside of the Core Campus for habitat, recreation, ecological services, water resources, and agricultural uses. This space also contains some infrastructure, including water infrastructure, that is important for the continued functioning of local water systems.	Neither state nor community ever envisioned commercial agriculture in protected public open space. State statute never mentions agriculture or commercial agriculture.	Remove agriculture and commercial agricultural uses from definition of open space; and/or conduct analysis of impacts to open space from new commercial agricultural land uses that is now completely missing from DEIR.
Page 75	**western open space**	What is this? First time that term is used.	Define western open space.
Page 76	*Agrihood* The Agrihood District is envisioned as a new neighborhood that is a nod to historic agricultural lands, with physical and visual connections to the historic agricultural areas, low-impact development at a lower intensity, and a smooth visual transition between higher intensities to the west and the agricultural open space at the east.	See comments above about agriculture. The Agrihood appears to overlap with preserved public open space and community separator lands. What the heck is agricultural open space?????	Conduct analysis and mitigate impacts to preserved public open space from new commercial agricultural land uses that is now completely missing from DEIR. Conduct analysis and mitigate impacts to preserved public open space from new "agrihood." Describe how the agrihood overlaps with community separators; and how a vote of the people is likely to be required as it intensifies development. Define this new term: agricultural open space.
Goals and Policies	**Open Space Related**	**Comment or Question**	**Action Requested**
Page 94 3.1.3.3 Relevant Policies			

and Implementing Actions			
Pg 94, 131 Open Space and Resources and Hazards	2-A Open Space: Preserve the open space surrounding the core campus in public ownership in perpetuity, preventing further development in undeveloped areas and ensuring ongoing stewardship in partnership with neighboring State and regional parks and other institutions and organizations.	While I support this, there is no analysis, description or detail or how or when this will be accomplished. This language is far too vague to provide adequate mitigation. It needs to be more detailed and added to Conditions of Approval. The DEIR needs to provide specifics such as naming prioritized entities such as California State Parks, Sonoma County Regional Parks, Sonoma County Open Space District, California Coastal Conservancy and other "conservation" institutions and "non-profit" and "public" organizations. How will it be accomplished, such as through conservation easements, fee-title, inter-agency transfer or other mechanisms. A timeline, such as within three years of the adoption of the DEIR. Right now, there is nothing in writing; and the state statute is vague, conditional on "feasibility."	Add specific details for how, when and through what mechanisms the preservation of the open space in public ownership in perpetuity will be accomplished, and provide detailed options, as well as a timeline. Preservation of open space in public ownership in perpetuity needs to be added as a DEIR Mitigation and a Condition of Approval in the Specific Plan.
	2-B Balance: Promote a balance of habitat conservation, agriculture, and recreational open space, reflecting the recent historic use of the surrounding open space.	Balance and Promotion is not an action or requirement. Does not serve as an enforceable mitigation or condition of approval. Agriculture needs to be removed or analyzed and mitigated as a new land use. Define historic use. Recreational use is another new term introduced here without definition.	Either remove this entirely as "balance" and "promote" have no enforceability to serve as a mitigation or condition of approval; or change to "require habitat conservation and protection of natural resources of open space in public ownership in perpetuity." Remove agriculture. Remove or define "historic use." Remove or define "recreational open space."
	Policies	Work with is vague and meaningless. Who is	Add specific details for how, when and through

	2-1 Work with Sonoma County to dedicate the preserved open space as regional parkland.	supposed to work with Sonoma County? Isn't this a Sonoma County document? This needs detailed description of how, when and by what mechanisms that the preserved open space will dedicated for public ownership in perpetuity. Here you say it will be parkland. In other places you say it will be agriculture. I support making it all parkland. But what does regional parkland mean? Does that prevent the land from going to state parks?	what mechanisms the preservation of the open space in public ownership in perpetuity will be accomplished, and provide detailed options, as well as a timeline. Preservation of open space in public ownership in perpetuity needs to be added as a DEIR Mitigation and a Condition of Approval in the Specific Plan. Define what you mean by "regional parkland."
	2-7 Prohibit lights within the wildlife corridor and along the creek corridor.	Support.	
	2-11 Implement "dark skies" standards for all public realm lighting and all new buildings on the site, including by requiring that all outdoor fixtures are fully shielded, that outdoor lights have a color temperature of no more than 3,000 Kelvins, and that lighting for outdoor recreational facilities be prohibited after 11pm.	Support.	
Page 95	2-20 Require that new development preserve existing trees to the fullest extent feasible. Locate new construction and public realm improvements around existing landscaping features.	Inadequate. "As feasible" is unenforceable. This does nothing to save a single tree, nor does it provide any information on the tree canopy that exists at SDC or the conservation or climate benefits they provide.	The DEIR needs a full assessment of the trees and tree canopy; and needs to require protection of mature trees and by size and species and historic value. The conservation ad climate values of the existing trees need to be analyzed.
	2-20 Require that new development preserve existing trees to the ***fullest extent feasible.*** Locate new construction and public realm	Inadequate. "Fullest extent feasible" is unenforceable. The use of the word "require" is meaningless here.	The DEIR needs a full assessment of the trees and tree canopy; and needs to require protection of mature trees and by size and species and historic value.

	improvements around existing landscaping features.		The conservation ad climate values of the existing trees need to be analyzed.
Pg 101 *Standard Conditions of Approval*	MOB-2 Construction of the Highway 12 connector should avoid damage to scenic and open space resources such as trees, rock outcroppings, and historic buildings to the **greatest extent feasible.**	Inadequate. "Fullest extent feasible" is unenforceable. The use of the word "require" is meaningless here.	Provide actual requirements and conditions of approval to prevent damage to scenic and open space resources such as trees, rock outcroppings and historic buildings.
Page 102	Preserved Open Space land use designation is intended to preserve open spaces outside of the Core Campus for habitat, recreation, and agricultural uses.	Remove agriculture from definition of preserved open space. Agriculture is never mentioned in state statute.	Remove agriculture from definition of preserved open space; and/or conduct analysis and mitigations for introducing ag into open space, and land use designations as described above.
Page 105	preserving the site's open space framework	Define open space framework. Is that just a map?	Define and describe the open space framework.
Page 123 3.2.2.4 Planning Area Overview			
Agricultural Resources	The Planning Area is a located in a rural setting within the vastly agricultural area of unincorporated Sonoma County. Parcels immediately to the south of the Planning Area in the eastern portions are currently being used as vineyards. In this rural context, there is some land within SDC that was historically used for agriculture within the Planning Area.	Inadequate. Vague. Unclear.	Define amount of acreage and actual agriculture uses at SDC. Clarify whether they are commercial ag uses or just for growing food for residents and staff at SDC.
	This area contained historic agriculture uses, including animal husbandry and grazing, orchards, vineyards, crop production and the former Sunrise Industries farm.	Inadequate. Vague.	Define amount of acreage and actual agriculture uses at SDC. Clarify whether they are commercial ag uses or just for growing food for residents and staff at SDC.

	The presence of rich soils and the mandate to preserve open space on the SDC site suggests that agricultural uses could again become an important land use on the SDC site.	Commercial agriculture as the Specific Plan and DEIR propose is a new land use compared to the food and farming conducted at SDC for residents and staff.	As above, either remove agriculture or conduct an analysis of the impacts of introducing commercial agriculture into open space. Define amount of acreage and actual agriculture uses at SDC. Clarify whether they are commercial ag uses or just for growing food for residents and staff at SDC.
Page 124	Approximately 610 acres within the Planning Area is designated as Grazing Land and 98 acres is designated as Farmland of Local Importance.	Yes, but there is no commercial grazing or agriculture being conducted on site; and it is unlikely there ever was.	See above.
	However, there are no current grazing activities occurring within the Planning Area.	Exactly.	Introduction of grazing is a new land use that requires analysis and mitigation in the DEIR.
	No land within the Planning Area is currently zoned as Agricultural in the Sonoma County General Plan; the entire Planning Area is currently zoned as Public Facilities. The only agricultural and resource-based land use permitted in this zone is beekeeping, and agricultural processing is conditionally permitted.	Exactly.	Introduction of new commercial agricultural uses as proposed requires analysis and mitigation in the EIR.
Page 131 3.2.3.3 Relevant Policies and Implementing Actions The following relevant policies and implementing actions of the Proposed Plan address agriculture and forestry resources:	2-D Biological Resources: Promote conservation of existing habitat, including creeks, groundwater recharge areas, and open spaces, through intentional water and energy conservation, sustainable food production, top-tier sustainable building practices, and aggressive waste reduction strategies in order to protect natural resources and critical wildlife habitat, maintain wildlife linkages, and foster environmental stewardship.	Inadequate. Promote is not adequate to protect or mitigate environmental harm to biological resources.	Change promote to "require" and provide some actual mitigations.

	Policies 2-1 Work with Sonoma County to dedicate the preserved open space as regional parkland.	Inadequate. Vague. Unclear. “Work with” has no clear definition. Given this is one of the most important assets and elements of the Specific Plan and state statute, the DEIR needs to provide far more detail and actual requirements, mitigations and enforceable measures and conditions of approval to meet CEQA.	Add specific details for how, when and through what mechanisms the preservation of the open space in public ownership in perpetuity will be accomplished, and provide detailed options, as well as a timeline. Preservation of open space in public ownership in perpetuity needs to be added as a DEIR Mitigation and a Condition of Approval in the Specific Plan.
	2-2 Work with agricultural community partners and local farmers to reintroduce agricultural uses in the agrihood and within the managed landscape buffer to promote local production and regenerative farming practices, honoring the site’s history and enhancing the site’s connection to the land.	As above, “work with” is an inadequate term to meet CEQA mitigation requirements. New land uses including the agrihood and agriculture need to be analyzed and mitigated. If the intent is to prioritize regenerative farming and local production, that needs to be made clear. Commercial agriculture is not that.	Analyze and mitigate impacts to open space lands from new land use of “agrihood.” See comments above about agrihood, community separators and agriculture in general.
	2-21 Preserve and enhance the wetlands east of the core campus as a fire break, groundwater recharge, and habitat area.	Required by law to protect wetlands. Therefore, this is not a mitigation.	Analyze and mitigate impacts to wetlands as use as fire break and groundwater recharge area, which are new land uses for wetlands that are protected by federal law.
	2-26 Prohibit the use of all pesticides, rodenticides, and poisons in materials and procedures used in landscaping, construction, and site maintenance within the Planning Area. This restriction should be included in all Declarations of Covenants, Conditions and Restrictions (CC&Rs) to ensure that future homeowners are aware of the requirements.	Support.	Support.
	The proposed Agrihood District (Goal 5-M) would	Exactly. And the impacts of this have not been	Analyze and mitigate impacts of Agrihood on

	support new agricultural uses, with physical and visual connections to the historic agricultural areas, low-impact development at a lower intensity, and a smooth visual transition between higher intensities to the west and the agricultural open space at the east. It is also noted that the County's Zoning Code would be concurrently amended to incorporate the Proposed Plan's new and modified land use districts and overlays, use and development standards, and density and intensity limits, if the Proposed Plan is adopted.	analyzed or mitigated in the DIER.	open space lands that is currently missing from DEIR.
	Given that the Proposed Plan supports agricultural uses as permitted by existing zoning and that the Planning Area does not include any Williamson Act contract lands, this impact would be less than significant	This is nonsensical conclusion. What does it even mean?	Explain.
Page 136	The Proposed Plan would introduce new and modified land use districts and overlays that will accommodate proposed land use classifications including residential, employment center, flex zone, institutional, utilities, parks and recreation, buffer open space, preserved open space, and a hotel overlay zone.	Exactly. And the impacts from all that on open space lands are not adequately analyzed or mitigated.	Fully analyze and mitigate all the environmental impacts to open space lands and Sonoma Valley from Proposed Specific Plan, which has not been adequately done in the DEIR, as comments show.
	In addition, the proposed Agrihood District (Goal 5-M) is planned on the eastern side of the Core Campus and would support new agricultural	New land use.	See above on agriculture as a new land use at SDC and on open space lands.

	uses in recognition of the Farmland of Local Importance, which historically supported agricultural uses on the eastern portion of the site.		
	In addition, the proposed Agrihood District (Goal 5-M) is planned on the eastern side of the Core Campus and would support new agricultural uses in recognition of the Farmland of Local Importance, which historically supported agricultural uses on the eastern portion of the site.	New land use.	As above, new land use needs to be analyzed and mitigated in DEIR.
Page 196 3.3 Air Quality	It is noted that quantified operational emissions do not include potential agricultural uses that would be allowed in the Agrihood district and Buffer Open Space and Permanent Open Space designations of the Proposed Plan. However, as discussed in the Methodology and Assumptions section above, these uses would be located away from future sensitive uses including residential areas (i.e., outside the Core Campus), and permitted agricultural activities are unlikely to occur on a scale that would result in daily operational emissions of the Proposed Plan (**Table 3.3-8**) exceeding BAAQMD's thresholds for particulate matter.	Inadequate analysis. This is giant leap. The DEIR needs to analyze and mitigate, not make giant assumptions based on no facts or evidence.	Analyze and mitigate impacts of potential new ag uses on open space and SDC property, future and current residents of the area. Provide actual mitigations that are enforceable.
	Limited agricultural uses would be allowed in the Agrihood district as well as the Buffer Open	What are the limited agriculture uses.	Analyze and mitigate new agriculture uses.

	Space and Preserved Open Space areas outside of the Core Campus.		
Page 237 3.4.3.3 Relevant Policies and Implementing Actions ***Open Space and Resources and Hazards***	Goals 2-D Biological Resources: Promote conservation of existing habitat, including creeks, groundwater recharge areas, and open spaces, through intentional water and energy conservation, sustainable food production, top-tier sustainable building practices, and aggressive waste reduction strategies in order to protect natural resources and critical wildlife habitat, maintain wildlife linkages, and foster environmental stewardship.	Promote is not an adequate mitigation.	See comments above to require actual requirements and mitigations, replace "promote" with actionable and enforceable measures.
	2-E Wildlife Corridor: Maintain and enhance the size and permeability of the Sonoma Valley Wildlife Corridor (as shown in Figure 1.6-3) by ensuring a compact development footprint at the SDC site and by minimizing impacts to wildlife movement and safety from human activity and development at the campus.	Inadequate. How exactly will impacts be minimized to wildlife movement and safety from human activity and development at the campus.	Provide adequate analysis and mitigations for minimizing impacts to wildlife movement and safety from human activity and development at the campus.
	2-7 Prohibit lights within the wildlife corridor and along the creek corridor.	Support.	Support
	2-8 Maintain wildlife crossing structures by periodically checking for and clearing debris, vegetation overgrowth, and other blockages from culvert and bridge crossing structures; within the Core Campus, the Project Sponsor should develop and execute a maintenance	Inadequate. What does periodically mean? Who will do the checking? How is a project sponsor equipped to develop and execute a maintenance program? The word should needs to be "shall."	Provide an enforceable requirement for maintaining wildlife crossing structures.

	2-9 Within the wildlife corridor, meet but do not exceed the defensible space requirements of the County Fire Department to maintain wildlife habitat while maximizing fire safety.	Inadequate. What the heck does this mean exactly?	Explain and define what this means exactly; and who would be responsible.
	2-14 Prohibit all unleashed outdoor cats, and restrict off-leash dogs and other domestic animals to private fenced yards and designated areas.	Support.	Support.
	2-15 Collaborate with local wildlife protection groups to create and distribute educational information and regulations for residents and employees to guide safe interactions with wildlife onsite. Materials should be accessible to all ages and abilities and could include posted signs, disclosures, fliers, or informational sessions, among other things.	Inadequate. Collaborate does not constitute and enforceable mitigation.	Change collaborate to "require SDC property owner and open space managers to ….."
	2-17 Adhere to residential nighttime noise standards to the extent feasible.	Inadequate. Meaningless.	Provide actual enforceable noise mitigations.
	2-20 Require that new development preserve existing trees to the fullest extent feasible. Locate new construction and	Inadequate. Meaningless.	Provide actual enforceable tree preservation mitigations.
Page 239	2-25 Include protective buffers of at least 50 feet along Sonoma and Mill creeks, as measured from the top-of-bank and as shown on Figure 2.2-1: Open Space Framework, to protect wildlife habitat and species diversity, facilitate movement of stream flows and ground	Inadequate. Why does 50 feet provide adequate protection? Why not 100 feet? What is the Open Space Framework? Just a map? Manage how?	Provide adequate analysis and mitigations for protective buffers, define and describe open space framework, and explain how protective buffers will be managed.

	water recharge, improve water quality, and maintain the integrity and permeability of the Sonoma Valley Wildlife Corridor, and the ability of wildlife to use and disperse through the SDC site. Manage protective buffers so that they support continuous stands of healthy native plant communities.		
	2-27 Ensure that all development adheres to Sonoma County Municipal Code Sec 26-65 on riparian corridor protection.	Following existing law is not a mitigation or measure. It is required by law. How will you ensure it is followed?	How will county ensure that the riparian corridor protection regulations will be followed and enforced; and by whom?
	2-28 Prior to the commencement of the approval of any specific project in the Proposed Plan area, Project Sponsors shall contract a qualified biologist to conduct studies identifying the presence of special-status species and sensitive habitats at proposed development sites and ensure implementation of appropriate mitigation measures to reduce impacts to sensitive habitat or habitat function to a less than significant level.	Inadequate. Future studies do not provide mitigation.	Inadequate.
Page 240 3.4.3.4 Impacts ***Summary of Proposed Plan***	The existing undeveloped portions of the Planning Area would be designated as Preserved Open Space land use. Development is not proposed to occur within Preserved Open Space, where current daytime recreational uses would continue. Impact 3.4-1 Implementation of the Proposed Plan would not	So here the DIER states that the Preserved Open Space Land Use would remain undeveloped and not be developed, except for recreational daytime uses. Agricultural use and development are not mentioned here. I support that, but it is inconsistent with other parts of the DEIR and Specific Plan. Remove agriculture to be consistent. You can't say there is no impact when	Remove agriculture from preserved open space.

		the impacts of agriculture haven't been analyzed.	
Page 242	Outside of the developed areas, the Proposed Plan establishes dedicated open space areas. Managed open space in these areas would preserve and, in some cases, enhance the quality of sensitive habitats such as wetlands, native grasslands and oak woodlands. Several special-status wildlife and some plant species would be positively impacted by the preservation of these habitats. The open space would preserve the Sonoma Valley Wildlife Corridor and maintain its permeability for the movement of wildlife at a regional scale.	Support, but needs more detail and explanation on how the open space will be managed and how it will enhance habitats and wildlife. I agree that preservation would be beneficial. But once again, the issue of agriculture is not addressed, which could be extremely harmful to everything here.	Reconcile definition and use of preserved open space throughout DEIR and Specific Plan; remove agriculture.
Page 254	The Proposed Plan is intended to contain development within the already developed area (Core Area) and protect open space for recreational and preservation uses. The	Exactly. No agriculture.	See previous comments on agriculture.
Page 255	Because the Proposed Plan preserves the overwhelming majority of the SDC parcel in open space, it ensures continuation of regional connectivity for wildlife, serving as a conduit for transit of wildlife between significant habitat blocks to the east and west.	Inadequate. Just preserving the 755 acres of open space in itself does not protect the natural resources or ensure connectivity for wildlife. Plus, there is a huge amount of inconsistency on how open space is defined and a lack of specificity on how it will be preserved.	Explain in detail how the Proposed Plan ensures continuation of regional connectivity for wildlife, serving as a conduit for transit of wildlife between significant habitat blocks to the east and west.
Page 257	Moreover, the 750 acres of Planning Area that will be preserved as open space will help offset some of the emissions generated by development under the Proposed Plan, though	What? Please provide detailed analysis and assumptions on this point. Looks like another great leap. Particularly since there is no plan for protecting trees, and there is no analysis of the	Please provide detailed analysis and assumptions on this point. Looks like another great leap with very little actual evidence.

	not necessarily on a magnitude sufficient to achieve carbon neutrality for the Planning Area. Nevertheless, this significant source of carbon sequestration supports the 2022 Scoping Plan's emphasis on natural and working lands.	impacts of introducing commercial agriculture.	
Page 307 3.10.1.1 Historical Land Use	SDC operations made use of the significant open space for recreation and agriculture, with programs that made use of the land to support the clients. Institutional decline in the 1970s and 1980s led to the eventual transfer of several hundred acres of what was identified as surplus land to the county and state park system, including approximately 600 acres that were transferred to the adjacent Jack London State Historic Park in 2002. With its remaining 945 acres, the SDC continued to operate agriculture and recreation programs on the property and kept much of the land in active use until the State announced closure of developmental centers in 2015 and closed the SDC in late 2018.		
Page 319	As described in the Biological Resources Chapter, the campus will be surrounded by a vast network of permanently preserved open spaces to protect natural resources, foster environmental stewardship, and maintain and enhance the permeability of the Sonoma Valley Wildlife	It is not clear how the Specific Plan and DEIR will adequately accomplish this.	

	Corridor for safe wildlife movement throughout the site.		
Page 396	Policies 2-1 Work with Sonoma County to dedicate the preserved open space as regional parkland. 2-4 Streamline the existing trail system by mapping, improving, and clearly marking designated trails for recreational use in order to minimize negative effects on the open space from recreational use.	As above, "work with" is not an enforceable mitigation. How will streamlining the trail system improve and mitigate impacts from recreation use?	See comments above about this policy and use of term "work with." Explain how streamlining the trail system will improve and mitigate impacts from recreation use.
	2-5 Consider creating a designated area for water recreation at Suttonfield Lake, such as an access point near the trail from Arnold Drive with rail fencing and clearly marked signage and rules for swimming, dogs, and non-motorized boating.	Not a good idea. That will require a huge amount of supervision, new fences and roads, lighting and all kinds of things that are not conducive to preserving open space, natural resources and wildlife habitat. Plus, it is drinking water.	Remove this concept.
Page 397 *Community Design*	5-16 Develop a cohesive and integrated system of parks and open spaces, to fulfill the active and passive recreational needs of the community, building on the overall framework outlined in Figure 5.1-1.	Is the entire framework based on one map? How, who and when will a cohesive and integrated system of parks and open spaces, to fulfill the active and passive recreational needs of the community be accomplished?	Explain the framework. Describe in detail how, who and when will a cohesive and integrated system of parks and open spaces, to fulfill the active and passive recreational needs of the community be accomplished.
Page 403	Moreover, 755 acres of the Planning Area will be retained as open space that will be publicly accessible and integrated into the regional parks system (proposed Policy 2-1).	Yes. Support, but many elements of the Specific Plan and DEIR conflict with this and fail to address impacts from new land uses such as agriculture. Also, why limit to regional park system? What about state?	Explain why regional parks and not state parks? Explain how the 755 acres of open space will be "retained" and by whom, when and by what mechanisms.
Page 524	Full Open Space and Public/Institutional Use alternatives were also considered; however, for reasons discussed in Section 4.3, these alternatives were	While I appreciate that these alternatives were considered, they could have been more fully analyzed and evaluated to provide public and decision makers with	Provide more analysis and detail on the Full Open Space and Public/Institutional Use alternatives to provide the public and decision makers

	determined to be inconsistent with project objectives and infeasible, and therefore not analyzed in detail.	another option for the SDC property. While it is true that this option is not specifically mentioned in state statute, when it comes to housing, it states "as appropriate." The Specific Plan goes far beyond "appropriate" for housing. It also introduces agriculture which was never mentioned in state statute.	with additional options for the future of SDC.

BAY NATURE



Wildfire smoke near Mineral, California. (Photo by Mark Gunn, Flickr)

Fire

A Case for Retreat in the Age of Fire as Dozens of Wildfires Threaten Homes in the West

by Emily E. Schlickman, Brett Milligan and Stephen M. Wheeler

September 15, 2022

This article is republished from The Conversation under a Creative Commons license. Read the original article.

BAY NATURE



After the 2018 wildfire in Paradise, Calif., many fire-damaged homes were razed. Justin Sullivan/Getty Images

Emily E. Schlickman, *University of California, Davis*; **Brett Milligan**, *University of California, Davis*, and **Stephen M. Wheeler**, *University of California, Davis*

More than 90 large fires were burning across the parched Western U.S. landscape in mid-September 2022 following a record-setting heat wave, and thousands of people were under evacuation orders. One wildfire had burned about 100 homes and buildings in the Northern California town of Weed. As fire risk rises, is it time to consider managed retreat? Three environmental design and sustainability experts explore the options.

A case for retreat in the age of fire

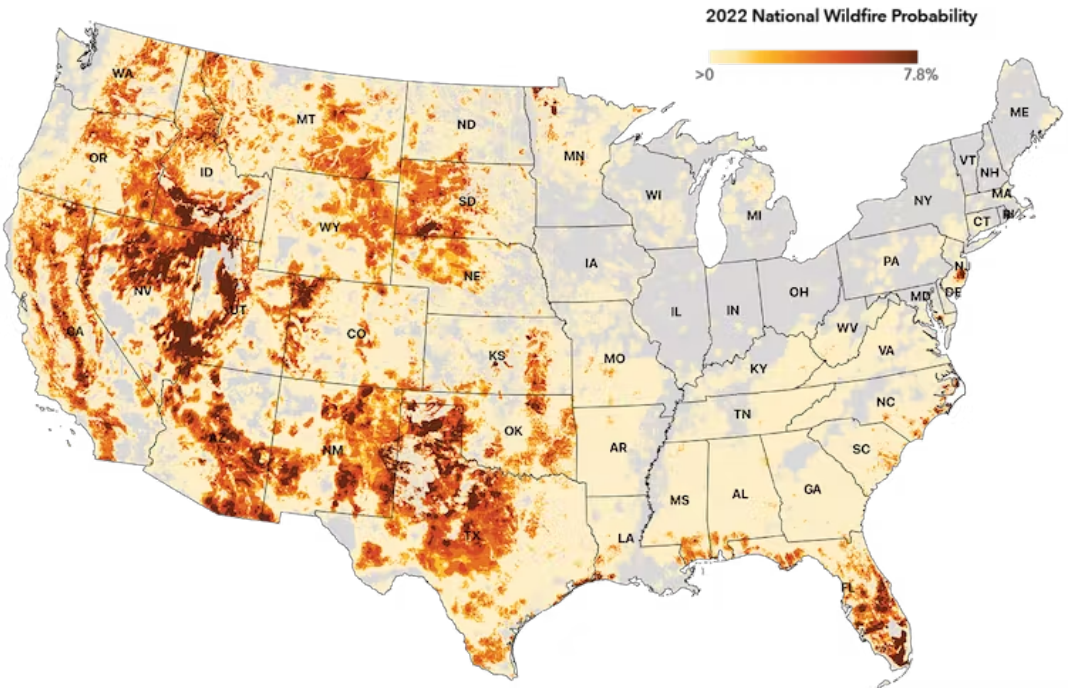
Wildfires in the American West are getting **larger, more frequent and more severe**. Although efforts are underway to create fire-adapted communities, it's important to realize that we cannot simply design our way out of wildfire – some communities will need to begin planning a retreat.

Paradise, California, **worked for decades to reduce** its fire risk by removing dry grasses, brush and forest overgrowth in the surrounding wildlands. It built firebreaks to prevent fires from spreading, and **promoted defensible space** around homes.

But in 2018, a fire sparked by wind-damaged power lines swept up the ravine and destroyed over 18,800 structures. **Eighty-five people died**. It's just one example.

undeveloped land and urban areas where both wildfires and unchecked growth are common. From 1990 to 2010, new housing in the wildland-urban interface in the continental U.S. **grew by 41%**. By 2020, **more than 16 million homes** were in fire-prone areas in the West.

Whether in the form of large, master-planned communities or incremental, house-by-house construction, developers have been placing new homes in danger zones.



Assesses fire risk at the local level can help communities understand and prepare. The map reflects the probability wildfire will occur in an area in 2022. First Street Foundation Wildfire Model

It has been nearly four years since the Paradise fire, and the town's population is now **less than 30% of what it once was**. This makes Paradise one of the first documented cases of voluntary retreat in the face of wildfire risk. And while the notion of wildfire retreat is controversial, politically fraught and not yet endorsed by the general public, as experts in urban planning and environmental design, we believe the necessity for retreat will become increasingly unavoidable.

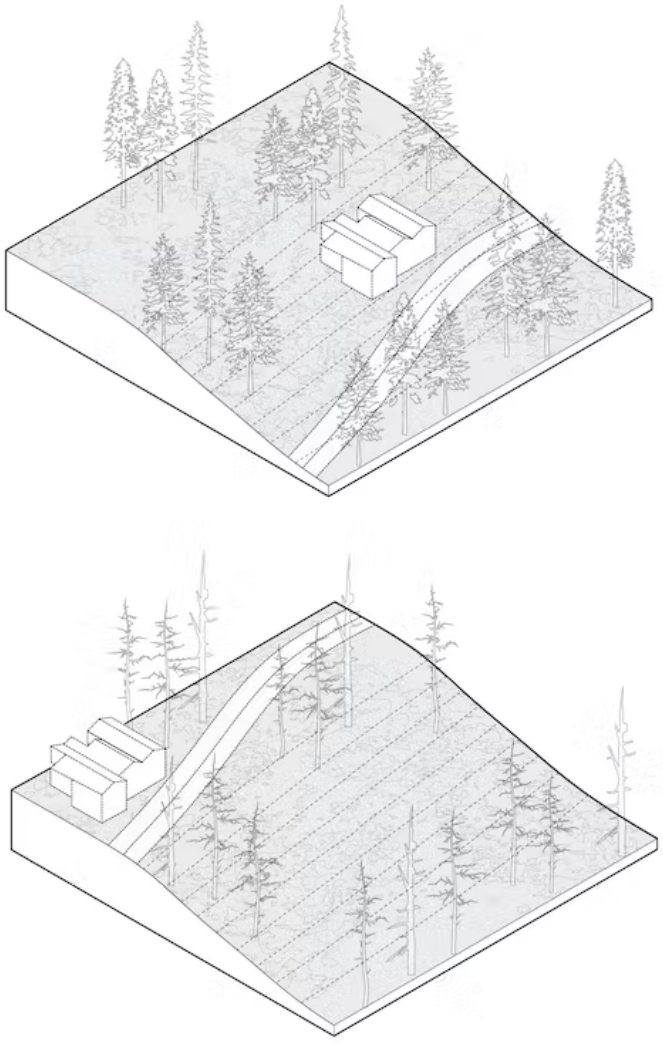
But retreat isn't only about wholesale moving. Here are four forms of retreat being used to keep people out of harm's way.

Limiting future development

On one end of the wildfire retreat spectrum are development-limiting policies that create stricter standards for new construction. These might be employed in moderate-risk areas or

An example is San Diego's steep hillside guidelines that restrict construction in areas with significant grade change, as wildfires burn faster uphill. In the guidelines, steep hillsides have a gradient of at least 25% and a vertical elevation of at least 50 feet. In most cases, new buildings cannot encroach into this zone and must be located **at least 30 feet from the hillside**.

While development-limiting policies like this prevent new construction in some of the most hazardous conditions, they often cannot eliminate fire risk.

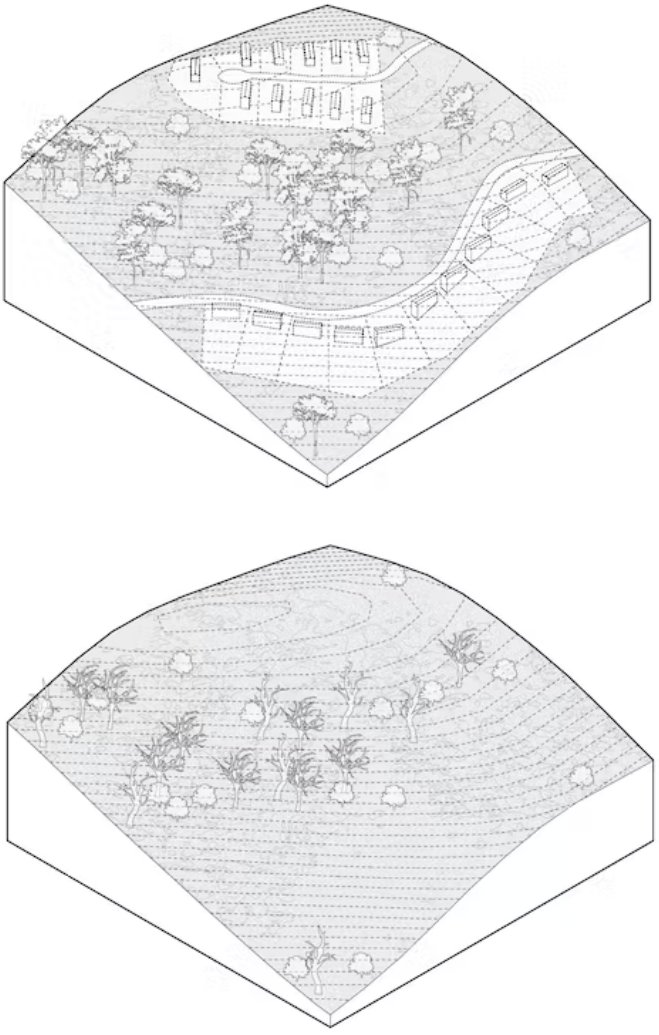


Development-limiting policies can include stricter construction standards. The illustration shows the difference between a home on a steep, wooded hillside that is hard to defend from fire and one farther from the slope. Emily Schlickman

Halting new construction

Further along the spectrum are construction-halting measures, which prevent new construction to manage growth in high-risk parts of the wildland-urban interface.

example, Los Angeles County recently updated its **general plan to limit new sprawl in wildfire hazard zones**. Urban growth boundaries could also be adopted locally, as many suburban communities north of San Francisco have done, or could be mandated by states, **as Oregon did in 1973**.



Halting construction and managing growth in high-risk parts of the wildland-urban interface is another retreat tool. Emily Schlickman

To assist the process, states and the federal government could designate **fire-risk areas**, similar to Federal Emergency Management Agency flood maps. **California already designates zones** with three levels of fire risk: moderate, high and very high.

They could also develop fire-prone landscape zoning acts, similar to legislation that has helped **limit new development along coasts**, **on wetlands** and **along earthquake faults**.

time, states or federal agencies could refuse funding for local authorities that enable development in severe-risk areas.

In some cases, state officials **might turn to the courts** to stop county-approved projects to prevent loss of life and property and reduce the costs that taxpayers might pay to maintain and protect at-risk properties

Three high-profile projects in California's wildland-urban interface have been stopped in the courts because their environmental impact reports fail to adequately address the increased wildfire risk that the projects create. (Full disclosure: For a short time in 2018, one of us, Emily Schlickman, worked as a design consultant on one of these – an experience that inspired this article.)

Incentives to encourage people to relocate

In severe risk areas, the technique of "incentivized relocating" could be tested to help people move out of wildfire's way through programs such as voluntary buyouts. Similar programs have been used after floods.

Local governments would work with FEMA to offer eligible homeowners the pre-disaster value of their home **in exchange for not rebuilding**. To date, this type of federally backed buyout program has yet to be implemented for wildfire areas, but some vulnerable communities have developed their own.

The city of Paradise created a buyout program funded with nonprofit grant money and donations. However, only **300 acres of patchworked parcels have been acquired**, suggesting that stronger incentives and more funding may be required.

Removing government-backed fire insurance plans or instituting variable fire insurance rates based on risk could also encourage people to avoid high-risk areas.

Another potential tool is a "transferable development rights" framework. Under such a framework, developers wishing to build more intensively in lower-risk town centers could purchase development rights from landowners in rural areas where fire-prone land is to be preserved or returned to unbuilt status. The rural landowners are thus compensated for the lost use of their property. These frameworks have been used for growth management purposes **in Montgomery County, Maryland**, and in **Massachusetts** and **Colorado**.

Incentivized relocating can be used in severe risk areas by subsidizing the movement of some people out of wildfire's way. The illustrations show what before and after might look like. Emily Schlickman

Vulnerable communities may want to relocate but don't want to leave neighbors and friends. "Wholesale moving" involves managing the entire resettlement of a vulnerable community.

While this technique has yet to be implemented for wildfire-prone areas, there is a long history of its use **after catastrophic floods**. One place it is currently being used is Isle de Jean Charles, Louisiana, which has **lost 98% of its landmass since 1955 because of erosion and sea level rise**. In 2016, the community received a federal grant to plan a retreat to higher ground, including the design of a **new community center** 40 miles north and upland of the island.

This technique, though, has drawbacks – from the complicated logistics and support needed to move an entire community to the time frame needed to develop a resettlement plan to potentially overloading existing communities with those displaced.

In extreme risk areas, wholesale moving could be an approach – managing the resettlement of an entire vulnerable community to a safer area. Emily Schlickman

Even with ideal landscape management, wildfire risks to communities will continue to increase, and retreat from the wildland-urban interface will become increasingly necessary. The primary question is whether that retreat will be planned, safe and equitable, or delayed, forced and catastrophic.

Emily E. Schlickman, Assistant Professor of Landscape Architecture and Environmental Design, *University of California, Davis*; **Brett Milligan**, Associate Professor of Landscape Architecture and Environmental Design, *University of California, Davis*, and **Stephen M. Wheeler**, Professor of Urban Design, Planning, and Sustainability, *University of California, Davis*

This article is republished from **The Conversation** under a Creative Commons license. Read the **original article**.

About the Authors

Emily E. Schlickman, Brett Milligan and Stephen M. Wheeler

What Happens When Large Animals Die ...

3 months ago • 1 comment

Large carcasses can't just be wiped up. What are the other options?

How to Make a City Friendly to ...

3 months ago • 1 comment

For urban butterfly habitats, more is more.

How to Be a Fox: Secrets from the

8 months ago • 1 comme

Bill Leikam has spent dozen years learning t secrets of foxes in the

TCE
ENGINEERING

Investment Securities $ Stocks* $ Agency* & Municipal Bonds**
Real Estate Consulting $ Property Management

154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Formerly NASD Series 7 & 63 Registered Rep, & Series 66 Financial Advisor.
Securities Not Available

Thomas C Ells, RCE 40656
MS Tax, MS Fin, MS Acc
ED, Galen's Gardens/SHS

Mr Brian Oh, Comprehensive Planning Manager, SDC
Permit Sonoma, County of Sonoma
2550 Ventura Ave.
Santa Rosa, CA 95403

Regarding: Sonoma Developmental Center (SDC) Specific Plan (SP) & Program DraftEIR (EIR) Comments 2

Sept 18, 2022

Dear : Brian Oh, & Too Whom This May Concern;

Why has County Staff/Consultants done the following, and what are your mitigation recommendations?: C167-1

The EIR & SP preparation violates BPC6731, without a Civil Engineer in responsible charge of Planning?

The EIR has committed the County to a course of action, new development, prior to EIR's Certification?
Historic Reuse appears proper, yet each price consequence results in expanded project impacts.
What is the economic obsolescence impact to the Springs/Glen Ellen of the proposed project?

The EIR and SP propose demolition of 1.2M sq-ft of buildings, along with the 1M+0.35M gal fresh water tanks, see Figure 4.3-1: "Historic Assets", without reference to local Wildfire protection. Why?

The EIR & SP propose demolition of Historic Firehouse (c1932) without wildfire impact consideration?
EIR & SP neglect wildfire consideration, as not "High Fire Risk", though analysis excluded SDC?

Why does EIR & SP use uncalibrated (unrealistic) models, eg without reference to actual fire evacuation?

The EIR develops a series of conclusions as analysis, beginning after point in time of project completion? C167-2
The EIR assumes no cumulative effects to the proposed project; eg. GHG's and solid waste, but does not include project specific demolition, nor constructed lifecycle, GHG's & wastes? Why?

The EIR assumes no cumulative effects from combining the proposed project wastewater into a down-stream waste treatment facility when a historic facility is located on site to recharge the wetlands/creek.

SDC is an Historic opportunity to propose and develop an integrated environmental & climate protective response to wildfire, in a traumatized and sensitized area, without which this proposal has a significant cumulative negative impact to the local & regional environment due to unrealized wildfire protections.

Why is EIR & SP preparation biased in favor of Standard-Operating-Procedure for new development?
There is, at great expense, no Professional caliber analysis within these documents, explain?

Your Humble Servant

Thomas Chase Ells

Thomas Chase Ells, ED, Galen's Gardens/Samaritan Housing Society
Anthropologist, RCE 40655, MS Tax Law, MS Fin, MS Acc.
UCI Administrative Law Certificate in Hazardous Materials & Emergency Management

TCE
ENGINEERING

Investment Securities $ Stocks* $ Agency* & Municipal Bonds**
Real Estate Consulting $ Property Management

154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Formerly NASD Series 7 & 63 Registered Rep, & Series 66 Financial Advisor.
Securities Not Available

Thomas C Ells, RCE 40656
MS Tax, MS Fin, MS Acc
ED, Galen's Gardens/SHS

Mr Brian Oh, Comprehensive Planning Manager, SDC
Permit Sonoma, County of Sonoma
2550 Ventura Ave.
Santa Rosa, CA 95403

Regarding: Sonoma Developmental Center (SDC) Specific Plan (SP) & Program Draft EIR (EIR)

Sept 18, 2022

Dear : Too Whom This May Concern; for Preliminary Discussions,

Though Permit Sonoma worked hard, produced >4000pgs, & created many potential alternatives within their Specific Plan/EIR process, they have overshot the mark creating a plan for the past, "fighting the last war" as we often do, and not taking advantage of the opportunity to present a plan for the future.

C168-1

Why does it appear the SDC EIR and associated Specific Plan (characterized by the County's preferred Proposed Project Alternative) have defined and committed the County of Sonoma, as Lead Agency under CEQA, to a series of specific decisions, plans, and/or alternatives without fully considering other acceptable plans (under legislation 14670.10.5), alternatives, mitigation measures, and the Null Project.

Please explain why the County (Permit Sonoma) has allowed the EIR to be produced which does not address the mitigatable cumulative effects of waste generated by the proposed alternative over the Null Project hypothesis, to the extent where recommended building demolition of ~1.2M sq-ft produces a minimum of 161,000 cy of debris equal to 67 years of operation of the Proposed Project Alternative in addition to the equal amount of debris produced by the eventual demolition of the Proposed 1.2M sq-ft Project (∑=322,000 cy, or 134 years at the rate of the Proposed Project at completion); together with the project waste there will be an average cumulative waste of 19.8 tons/day or 1.5% of daily averages (2016-2020, per SP pg 603) ? Since we are already transferring all our solid waste away from Sonoma County because we do not have local landfill capacity, and our waste charges ($135/ton) are double the charge for Hazardous Waste ($50.97/ton asbestos waste) taken to Kettleman Hills landfill, this must be considered a significant mitigatable impact by Reuse and Historic Preservation of the existing buildings. At the local waste costs, this represents >$960,000/yr = ~$65M over the 67 years, from these 3 sources.

Why is no mention made in the EIR or SP of GHG's which were imbedded and carried within the existing constructed buildings which will be released into the atmosphere by their demolition, nor is any mention made of the GHG emissions which are imbedded in the production of the new materials and resources which are expected to replace the demolished SDC buildings, these are significant long term mitigatable cumulative effects? Why has the EIR not addressed either of these cumulative GHG effects, from demolition, neither the before demolition GHG emissions sequestered in the existing buildings which will be released, nor the GHG emissions released in the production of the replacement 1.2M sq-ft of buildings together with their own lifecycle emissions released upon their demolition? These GHG's must be considered a significant mitigatable impact by their (building) Reuse.

C168-2

TCE ***ENGINEERING*** *154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com*

Why is no mention made in the EIR or SP of the cumulative effects of the opportunity lost to lead this community and the Global Community in re-visioning the future, from the past that we have, into the future that we need while using the existing buildings and infrastructure you demolish?

C168-2

Why is Historic Preservation of the existing buildings considered by the EIR & SP to be financially infeasible and unmitigatable? This is not a fact, nor is it a reasonable conjecture from any basic set of reasonable assumptions, other than a prejudice against Historic Buildings in preference to the Cult-of-the-New. Historical Preservation and Reuse of these buildings is relatively simple. In particular, historic lumber is dimensionally greater and structurally superior, providing more insulative cavity, and other materials were more dense historically. History teaches us that the oldest buildings are the most energy efficient for their locations; such as Kiva & Adobe Structures of the America Southwest are stone or adobe to insulate against the heat, raised pole structures in the Indus Valley Civilization and Mounded Structures of the Mississippian Culture prevent flood inundation, Northern Long Houses of the Iroquois in the East and the Suquamish of the West are large multifamily dwellings and made of wood frames and bark covering to insulate against the cold, even Igloos of the Eskimo. Why have you neglected the consideration that almost every older building uses less energy than that which replaces it, despite the efficiency of the New Building?

Why is scant consideration, even superficial avoidance, of the topic of Hazardous Materials mitigation and removal given within the EIR and SP as a direct consequence of the building demolition, as opposed to “In-Situ” mitigation in place through reuse and Historic Preservation of the existing buildings; Diesel Tanks, Film Development, Chemical Storage, Paint Shops, Corporate Yards and Transportation buildings, all have significant potential for Hazardous Materials impacts, as well as, the asbestos insulation and lead based paint in the housing, hospital, and office buildings? Lack of consideration of this impact has direct impacts of needlessly and costly filling existing hazardous waste landfills, both individually and cumulatively, though mitigatable.

C168-3

Each of the above considerations, taken individually are significant impacts not covered by the EIR and SP, but there is also a cumulative effect of the above neglectful preparation of the EIR and SP, “a death by 1000 cuts” to the Historic Preservation (stated to be unmitigatable). Why has the cumulative effect of this neglectful preparation not been addressed within the EIR and SP, which then augers for and streamlines the process for replacement by the preferred Proposed Project Alternative as opposed to Historic Preservation (HP)? Can you explain how you are mitigating these neglected impacts which should be further compared to the environmentally preferred HP, in producing a cycle of demolition and reconstruction which has a cumulative effect due to volume of waste, and on the environment due to exploitative expectations, the expectation that ‘everything I have should be new’, ‘we need the new’, ‘I need the new’? Again, why does the EIR and SP neglect the positive environmental impact the development could have by leading, rather than following old worn-out traditions of thinking, that have cumulatively placed us in our Climate Crisis?

Your Humble Servant

Thomas Chase Ells

Thomas Chase Ells, ED, Galen’s Gardens/Samaritan Housing Society
Anthropologist, RCE 40655, MS Tax Law, MS Fin, MS Acc.
UCI Administrative Law Certificate in Hazardous Materials & Emergency Management

TCE
ENGINEERING

Thomas C Ells, RCE 40656
MS Tax, MS Fin, MS Acc
ED, Galen's Gardens/SHS

Investment Securities $ Stocks* $ Agency* & Municipal Bonds**
Real Estate Consulting $ Property Management

154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Formerly NASD Series 7 & 63 Registered Rep, & Series 66 Financial Advisor.
Securities Not Available

Mr Brian Oh, Comprehensive Planning Manager, SDC
Permit Sonoma, County of Sonoma
2550 Ventura Ave.
Santa Rosa, CA 95403

Regarding: Sonoma Developmental Center (SDC) Specific Plan (SP) & Program DraftEIR (EIR)Comment 3a

Sept 23, 2022

C169-1

County's evidentiary record is anecdotal @best. Sonoma Valley represents a national treasure, as described as, "The Valley of the Moon". Sonoma is the Native Indigenous American name for the valley. When White settlers asked what Sonoma meant, Natives pointed to the trace of the Moon setting and rising behind the eastern ridgetops during certain times of the year, the White's interpretation was that "Sonoma" meant 'the valley that the Moon touches' ("The Valley of the Moon"). My Anthropology studies and linguistic avocation has taught me to hear the phonetic sounds (the basic phonemes), particularly for significant language words, words that have cultural, spiritual, or international usage, such as words which are adopted into a language from another. The basis of this study is Multi-critical analysis as opposed to diacritical analysis. Typically there will be very little understanding of the actual meaning of an adopted word. Then, if it retains a high referential standing, it indicates it's an adopted word, not merely a forgotten word. Typical adopted words with high Referential standing and forgotten meanings are: Alleluia, precious, and Amen.

C169-2

In this case we have Sonoma: what are the phonemes for "Sonoma", they are "Tsu" (not Tso) & "Noma"; so in this case our supposition is correct, because these are two very important international words. "Tsu" or "Tzu" represents the name given by the Chinese to one of their greatest Philosophers, "LaoTzu" the founder of Taoism (from UCI Anthropology studies "Chinese, Taoism & Confucianism", 1983), "LaoTzu" was originally named "LoTzu", meaning "Man-Master" (Philosopher) and when he was older it was changed to "LaoTzu", meaning "Old-Man-Master" (or Great Philosopher): Therefore "Tzu" means "Master". "Noma" is the Aramaic word for 'name' establishing the identity and essence of a thing and thereby giving man control over the substance, and in the Greek "Nomo" means "law or control", again, in Western parlance the essence is unknowable but the manifestation is controllable by the 'name': so control and name are the same thing, therefore "Noma" means "name" (from participation in Antiochian and Greek culture, which develops from a multi-critical analysis as opposed to diacritical).

"Sonoma" therefore means "The Master's Name", and in a Spiritual sense, it means the highest name above all names. "The Master's Holy Name", in an Eastern Spiritual sense describing God's, the Creator's, or Great Spirit's control over the location by the Moon's contact with the Earth, not Man's control over God by invocation of the Name. This we hear many times from Joseph Campbell, man's search for control vs man's search for God.

TCE ***ENGINEERING*** *154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com*

Also, in another form of Transcendence, both “Tsu” and “Noma” mean “control”, so they are like conjoined twins, in a simple manifestation of the “Rosetta Stone”. Looked at separately, we call this a “Translation”, but conjoining them is a form of transcendence in the physical plane of existence. The name “Sonoma” appears to be used as a descriptive tool, by connecting physical transcendence (translation of place) with the location of a Spiritual Transcendence (in reference to the verticality of the Moon’s touching the Earth), it again mirrors the “Rosetta Stone” representing two kinds of Transcendence, with the Earthly “T” crossing the Spiritual vertical demarcation.

C169-2

More than the mere analysis of the word and its application to the space, is the significance of "Sonoma" in the cross-cultural linguistic representation of deification using ancient language references from across the sea, and linked only by many thousands of years. There is no other place name which connects so perfectly the unity of man, the Name itself transcends both the ages and the seas, thus we have the essence of a World Heritage Cultural Site. Like many other UNESCO World Heritage Sites, which are in disrepair and in danger of destruction, Sonoma's "Valley of the Moon" is suffering an existential threat from the Proposed Project Alternative. Located at near the exact geographic center of Sonoma Valley, 10 miles from it's head along Hwy 12, and 12 miles from it's outlet at Skagg's Island. And transected by a vital Wildlife Corridor connecting 2 Mountain Parks: Sugarloaf/Hood and Jack London Parks; no discussion or analysis has been given to the significance of this World Heritage Cultural Site, or the impacts or any mitigation from the significantly new, taller, and dense construction within the Program Draft EIR-SP Project analysis (cursory discussion was given to light pollution, but none to the physicality of the presence of tall, dense, populous village construction in the midst of an Historic Treasure, McDonalds centered in Teotihuacan).

C169-3

The significance of this Spiritual location was not lost on those who created the Sonoma Developmental Center for a healing center for their developmentally disabled children. We should hope that at this more enlightened time, and consistent with CEQA, the Historical Preservation Act, and the 50th Anniversary of the World Heritage Convention (Sept 17, 2022), we should be prepared to preserve both the content and the context, as much as is physically possible, for this National Treasure, "The Valley of the Moon". Under the UNESCO World Heritage Convention, which the United States was signatory (though withdrawn from 2018), we should "strengthen Credibility of the World Heritage List, ensure Conservation of World Heritage properties, promote Capacity-building measures, increase public awareness, involvement and support for World Heritage, and enhance the role of Communities in implementation of the World Heritage Convention". What has been done here appears to be the opposite, a complete neglect of not only Native American cultural values, but World Heritage Convention values.

C169-4

TCE ENGINEERING 154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Analysis of EIR Historical Asset discussion:

The Program Draft EIR is silent on the above discussion, while reporting Environmental Impact Report - County Summary "5.3 Significant and Unavoidable Impacts: According to CEQA Guidelines 15126.2(b), an EIR must discuss any significant environmental impacts that cannot be avoided under full implementation of the proposed program...However the Proposed Plan aims to be self-mitigating. Thus, all proposed policies aim to address environmental impacts (to the, sic) to the greatest extent feasible and no mitigation measures are required. The analysis in Chapter 3 determined that the Proposed Plan would result in significant impacts to the cultural/historic resources and transportation (home-based work trip vehicle miles traveled per capita) that, even with implementation of mitigation measures, would remain significant and unavoidable". This language neglects real analysis of the Null Hypothesis Project, and only considers the Proposed Plan impacts which it states (along with all other alternatives) have similar impacts [without discernment as to avoidable, mitigatable, or unmitigatable], which is entirely untrue in the Null Hypothesis case.

C169-4

Continuing; "5.3.1 Cultural, Historic, and Tribal Resources: new construction under the Proposed Plan has the potential to disconnect the remaining contributing resources in the Core Campus from those in the Community Separator and Regional Parks lands to the east and west, disrupting the SSHHD's overall integrity to the point that it would no longer be eligible for listing in the National Register of Historic Places, CRHR, or as a California Historic Landmark. This impact, in addition to demolition of the aforementioned resources would result in a substantial adverse change to the significance of the historic district such that the significance of the historic district would be materially impaired pursuant to Section 15064.5. Implementation of goals 2-I and 2-J and policies 4-20 through 4-32 as well as Standard Conditions of Approval (LU1 through LU6) would partially compensate for the impact associated with the demolition of historically contributing resources and physical alteration of the historic district to the maximum extent practicable; however, because these measures would not be enough to avoid or reduce the impact completely, the Proposed Plan's impact would remain significant and unavoidable". No mention is made of the Tribal Resources, because no artifacts remain or they could be recovered in a project excavation, but this does not address the transcendent value of the space and place name as a World Heritage Cultural Site, which can be subsumed in the potential Project construct, where we have heard discussed 2-3Msf of Commercial Construction.

C169-5

Again, the Program Draft EIR's considerations of the impacts, mitigations, and alternatives appear limited to the Proposed Plan Project Alternative, and do not address the Alternatives, nor the Null Hypothesis Project, continuing a foregone conclusion (see 2-3Msf of Commercial Construction discussed above, is that unmitigatable?).

C169-6

Please see the following analysis of project conceptual iteration for planning and design.

TCE ENGINEERING 154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Please see pg4 p3 San Mateo Gardens, re "substantial evidence in the record, is a predominantly factual question...for the agency...drawing on its particular expertise"; here we are bringing your attention to the word “expertise”.

C169-6

Friends of the College of San Mateo Gardens v. San Mateo County Community College District

https://law.justia.com/cases/california/court-of-appeal/2017/a135892.html

We want to accept the presumption of legal operation, but we must also accept and correct the illegal condition when evidence is presented to the contrary. In a County system, Engineering is not conducted without Accounting. But if the Accounting fails such as for Northwestern Pacific Railroad, the sad evidence must be accepted, and correction immediately made or we suffer the loss of funding or function. No one was there to accept the Trucker's weighmaster's tickets when the washout deliveries were made in the upper NWP line, none could be found, none ever delivered, no NWP.

The reason we approach the initial determination of a project this way, using California Supreme Court’s remand for San Mateo Gardens, is, here we equate the Court EIR analysis process to the Engineering process, in that there are a sequence of iterative steps involved. This process is best exemplified from the CA Supreme Court's remand expressed in San Mateo Gardens, where a series of back-and-forth evaluations and propositions are made in analyzing a project (one such method is CPM,Critical Path Method), which is the same process we use in conceptual design or planning.

C169-7

A comparison is made by question; does the "initial concept" with its features fit the need and the existing space, then we may have to adjust the concept's features to the needs, or to the space? Conceptual planning designs forward & backward many times.

This comparison is not to decry the effort expended or the information obtained through Planning education or product, but a marathon runner prepares for a marathon, not Law or Engineering. Preparation for a marathon may be great preparation for someone wanting to become a Lawyer, Doctor, or Engineer, but by itself does not make one a Lawyer, Doctor, or Engineer. Nor is an Urban Planner a qualified Civil Engineer, and therefore is unable to make professional judgments in respect to the Planning of "fixed works" identified in BPC 6731.

[See Licensing BPC 6730-6730.2(a); 6731; 6734; 6735(a). See also Administrative Mandamus case, Morris v Harper (2001) 94 Cal.App.4th 52 . “After all, ‘“‘[i]t is the refusal or neglect to perform an act which is enjoined by the law as a present duty that serves as the very foundation for the [mandamus] proceeding.’ ” (Morris v. Harper, supra, at p. 60.)"]

San Mateo Gardens; "Instead of resting on whether a project is new “in an abstract sense,” the “decision to proceed under CEQA’s subsequent review provisions must . . . necessarily rest on a determination—whether implicit or explicit—that the original environmental document retains some informational value.” (Id. at p. 951.) Such an inquiry “is a predominantly factual question . . . for the agency to answer in the first instance, drawing on its particular expertise.” (Id. at p. 953.)"

C169-8

From where does this “expertise” derive, Planners require no Science education?

The EIR standard is, if/when there are significant environmental impacts, then a review of impacts and mitigations must obtain (other than stating overriding or unmitigatable conditions), and a "judicial review must reflect the exacting standard that an agency must apply". San Mateo (ibid) pg 8.

C169-8

What this is referring to is, that the evidence must be prepared to a very high standard, from the beginning, in order for it to be considered "substantial evidence in the record". Where is the “exacting Standard” & “expertise”?

According to the National Society of Professional Engineers code of ethics, Professional Engineers may disagree without a single outcome obtained, but must remain decorous.

C169-9

["The Supreme Court in San Mateo Gardens provided guidance for how to apply the subsequent review provisions. It explained that whether “major revisions” will be

required as a result of project changes “necessarily depends on the nature of the original environmental document,” i.e., whether it was an EIR or a negative declaration. (San Mateo Gardens, supra, 1 Cal.5th at p. 958.) It further explained that the appropriate standard of review also depends on the nature of the original environmental document. Although an agency’s determination of whether major revisions are required is reviewed for substantial evidence, “judicial review must reflect the exacting standard that an agency must apply when changes are made to a project that has been approved via a negative declaration,” as opposed to the deferential standard that applies when the project was originally approved by an EIR. (Id. at p. 953; see Committee for Re-Evaluation of TLine Loop v. San Francisco Municipal Transportation Agency (2016) 6 Cal.App.5th 1237, 1247, 1251-1252 [applying San Mateo Gardens in case where project originally approved by EIR]; Latinos Unidos de Napa v. City of Napa (2013) 221 Cal.App.4th 192,"]

In planning, we have said, the process is intensely exhaustive and iterative, and what is described as the Court EIR review process is also exhaustive and iterative.

C169-10

The Court ceding competency to the local agency is similar to the process of presenting a case to a Court of Competent Jurisdiction. A Court of Competent Jurisdiction is composed firstly of a trained lawyer, either by a Law School or by preparation and passing the Baby Bar. Then of course, the prospectant Judge must pass the National Bar Exam locally administered, next the Judge must practice law for a minimum of 10 years. At some point the Judge is appointed or runs for election, and finally, the Judge is selected to hear a case by the Chief Judge. The Court itself must also be of Competent Jurisdiction, meaning it is the proper venue, as established by our system of Jurisprudence. These are significant tests.

If someone went to College and studied English or Political Science, they could learn a lot of laws, but they would not be presumed to know how to practice Law,

And they did not go to Law School or pass the Baby Bar, and they have not prepared to be a Lawyer, let alone a Judge.

TCE ***ENGINEERING*** *154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com*

Engineering is one of the most complex problems in supply & demand, as evidenced by the number of divorces in custom home remodeling and construction, and why Public Works requires Licensed Civil Engineers.

C169-11

Our critique is not meant to characterize the work of any Engineers having completed reports for the SDC EIR-SP, since we do not know what instructions they were given.

But we contend that recommended demolition for over 1.2Msf without analysis of 400,000sf, and recommended demolition of ~75,000sf of Hospital Treatment Building rated at "not requiring any updates", represents an incomplete analysis at best, and certainly a neglect of the impacts on the resources being analyzed.

As we spoke of backward-and-forward analysis in design, this is required in Planning as well, unless a truncated process is employed. It is far easier to make the facts fit the design, than to make the design fit the facts. If your timeline is short, it is far easier for you to establish the Project, and make the analysis fit the Project by not addressing impacts except in a standard way, such as, "(h)owever the Proposed Plan aims to be self-mitigating". “from Program Draft EIR 5.3 Significant and Unavoidable Impacts”

Subsequent to the very specific State Law being passed to sell SDC, incorporating significant intent for community participation, many meetings were held with studied interest and good comments. Comments were sent to Permit Sonoma and the Planners involved in SDC's NOP of Program Draft EIR & SP, but these comments were not incorporated in the evaluation nor in the Proposed Alternative Project SP, nor were they forwarded to the Planning Commission, nor were they provided to other participants or commenters to the EIR & SP.

C169-12

This is not standard practice, and violates CEQA Code 15004(a)&(b)(1)-(3); “(a) Before granting any approval of a project subject to CEQA, every lead agency or responsible agency shall consider a final EIR or negative declaration or another document authorized by these guidelines…(b) Choosing the precise time for CEQA compliance involves a balancing of competing factors, EIR’s and negative declarations should be prepared as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment.”

(b)(1) "With public projects, at the earliest feasible time, project sponsors shall incorporate environmental considerations into project conceptualization".

The timeframe window for "cumulative impacts" evaluation was limited to after Proposed Alternative Project completion, leaving out the demolition and construction of the entire project, let alone the life cycle embedded costs, GHG’s and energy to be demolished as a consequence from the new construction.

C169-13

This time frame results in unsubstantiated conclusions for the Proposed Project Alternative in ES.3 Alternatives to the Proposed Plan, “As discussed in Impacts 3.6-2, the Proposed Plan would thus support and reflect the increasingly stringent State and local goals and regulations that seek to increase energy efficiency, reduce energy consumption, and prioritize renewable energy – reinforcing that the Proposed

Plan would not result in cumulatively considerable impact with respect to wasteful, inefficient, or unnecessary consumption of energy resources." They left out 161,000 tons of waste.

15004 (b)(3), "With private projects, the Lead Agency shall encourage the project proponent to incorporate environmental considerations into project conceptualization, design, and planning at the earliest feasible time."

C169-13

This truncated analysis appears to be the type that establishes priorities, goals, and objectives before the certification of the EIR is complete, therefore "limiting alternatives or mitigation measures".

This truncated analysis would violate CEQA Code 15004 (b)(2), "public agencies shall not undertake actions concerning the proposed public project that would have a significant adverse effect or limit the choice of alternatives or mitigation measures, before completion of CEQA compliance";"and for example, agencies shall not:(b)(2)(B)", "Otherwise take any action which gives impetus to a planned or foreseeable project in a manner that forecloses alternatives or mitigation measures that would ordinarily be part of CEQA review of that public project".

C169-14

Given that Permit Sonoma will only provide the public's comments to the Planning Commission upon final EIR Certification, and a series of comments have been made to the SDC Comprehensive Planning Manager which has not incorporated the public's comments into the Proposed Project Alternative, "at the earliest feasible time", they appear to have violated Sec's 15004(a)&(b)(1)-(3), inclusive.

What we contend here is, that the proper "back-and-forth" process has not occurred, as within the planning process proper, within the design process proper, within the EIR process, as would be the same within the Court's evaluation of the EIR process itself, from San Mateo Gardens remand from the California State Supreme Court, which constitutes proper Authority to all jurisdictions within California.

C169-15

We also contend that "particular expertise" and "the exacting standard that an agency must apply" is not available to the review that the "judicial review must reflect", without a Licensed Civil Engineering in Responsible Charge of "Fixed Works" Planning, BPC 6731.

CEQA Guideline 15149 "USE OF REGISTERED PROFESSIONALS IN PREPARING EIRS" suggests nontechnical preparation of EIR documents, but this does not exempt Program EIR's completed in conjunction with Specific Plans from the "particular expertise" and "exacting standards" of the Court, nor from State Law BPC 6731 declaring "City and Regional Planning to be Civil Engineering" requiring "responsible charge engineering"

Your Humble Servant

Thomas Chase Ells, ED, Galen's Gardens/Samaritan Housing Society
Anthropologist, RCE 40655, MS Tax Law, MS Fin, MS Acc.
UCI Administrative Law Certificate in Hazardous Materials & Emergency Management

See Appendix of additional CEQA Guideline Violations, following:

TCE ENGINEERING 154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Appendix of additional CEQA Guideline Violations, following:

15064.5. DETERMINING THE SIGNIFICANCE OF IMPACTS TO ARCHAEOLOGICAL AND HISTORICAL RESOURCES (a) For purposes of this section, the term "historical resources" shall include the following: (3) Any object, building, structure, site, area, place,… Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852) including the following: (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; (D) Has yielded, or may be likely to yield, information important in prehistory or history.

C169-16

15065 MANDATORY FINDINGS OF SIGNIFICANCE
(a) A lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur:
(1) The project has the potential to: … eliminate important examples of the major periods of California history or prehistory.
(2) The project has the potential to achieve short-term environmental goals to the disadvantage of lon

C169-17

term environmental goals.
(3) The project has possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

(c) Following the decision to prepare an EIR, if a lead agency determines that any of the conditions specified by subdivision (a) will occur, such a determination shall apply to: (1) the identification of effects to be analyzed in depth in the environmental impact report or the functional equivalent thereof, (2) the requirement to make detailed findings on the feasibility of alternatives or mitigation measures to substantially lessen or avoid the significant effects on the environment, (3) when found to be feasible, the making of changes in the project to substantially lessen or avoid the significant effects on the environment, and (4) where necessary, the requirement to adopt a statement of overriding considerations.

C169-18

Note: Authority cited: Section 21083, Public Resources Code. Reference: Sections 21001(c), 21082.2, and 21083, Public Resources Code; San Joaquin Raptor/Wildlife Center v. County of Stanislaus (1996) 42 Cal.App.4th 608; Los Angeles Unified School District v. City of Los Angeles (1997) 58 Cal.App.4th 1019, 1024; and Communities for a Better Environment v. California Resources Agency (2002) 103 Cal.App.4th 98.

15088 EVALUATION OF AND RESPONSE TO COMMENTS (a) The lead agency shall evaluate comments on environmental issues received from persons who reviewed the draft EIR and shall prepare a written response. The Lead Agency shall respond to comments received during the noticed comment period and any extensions and may respond to late comments. (b) The lead agency shall provide a written proposed response to a public agency on comments made by that public agency at least 10 days prior to certifying an environmental impact report. (c) The written response shall describe the disposition of significant environmental issues raised (e.g., revisions to the proposed project to mitigate anticipated impacts or objections). In particular, the major environmental issues raised when the Lead Agency's position is at variance with recommendations and objections raised in the comments must be addressed in detail giving reasons why specific comments and suggestions were not accepted. There must be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice.

C169-19

Note: Authority cited: Section 21083, Public Resources Code. Reference: Sections 21092.5, 21104, and 21153, Public Resources Code; People v. County of Kern (1974) 39 Cal. App. 3d 830; Cleary v. County of Stanislaus (1981) 118 Cal. App. 3d 348.

C169-19

15088.5 RECIRCULATION OF AN EIR PRIOR TO CERTIFICATION (a) A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification… "Significant new information" requiring recirculation include, for example, a disclosure showing that:
(3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it. (4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (Mountain Lion Coalition v. Fish and Game Com. (1989) 214 Cal.App.3d 1043)

15091. FINDINGS (a) No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are: (1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR. (2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency. (3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR. (b) The findings required by subdivision (a) shall be supported by substantial evidence in the record. (c) The finding in subdivision (a)(2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives. The finding in subdivision (a)(3) shall describe the specific reasons for rejecting identified mitigation measures and project alternatives. (d) When making the findings required in subdivision (a)(1), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.

C169-20

15092. APPROVAL (a) After considering the final EIR and in conjunction with making findings under Section 15091, the Lead Agency may decide whether or how to approve or carry out the project. (b) A public agency shall not decide to approve or carry out a project for which an EIR was prepared unless either: (1) The project as approved will not have a significant effect on the environment, or (2) The agency has: (A) Eliminated or substantially lessened all significant effects on the environment where feasible as shown in findings under Section 15091, and (B) Determined that any remaining significant effects on the environment found to be unavoidable under Section 15091 are acceptable due to overriding concerns as described in Section 15093.

C169-21

15093. STATEMENT OF OVERRIDING CONSIDERATIONS (a) CEQA requires the decision-making agency to balance, …the adverse environmental effects may be considered "acceptable." (b) When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.

15097. MITIGATION MONITORING OR REPORTING. (a) This section applies when a public agency has made the findings required under paragraph (1) of subdivision (a) of Section 15091 relative to an EIR or adopted a mitigated negative declaration in conjunction with approving a project. In order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented, the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program. (b) Where the project at issue is the adoption of a general plan, specific plan, community plan or other plan-level document (zoning, ordinance, regulation, policy), the monitoring plan shall apply to policies and any other portion of the plan that is a mitigation measure or adopted alternative. The monitoring plan may consist of policies included in plan-level documents. The annual report on general plan status required pursuant to the Government Code is one example of a reporting program for adoption of a city or county general plan.

C169-22

15126. CONSIDERATION AND DISCUSSION OF ENVIRONMENTAL IMPACTS All phases of a project must be considered when evaluating its impact on the environment: planning, acquisition, development, and operation. The subjects listed below shall be discussed as directed in Sections 15126.2, 15126.4 and 15126.6, preferably in separate sections or paragraphs of the EIR. If they are not discussed separately, the EIR shall include a table showing where each of the subjects is discussed. (a) Significant Environmental Effects of the Proposed Project. (b) Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented. Association of Environmental Professionals 2018 CEQA Guidelines 174 (c) Significant Irreversible Environmental Changes Which Would be Involved in the Proposed Project Should it be Implemented. (d) Growth-Inducing Impact of the Proposed Project. (e) The Mitigation Measures Proposed to Minimize the Significant Effects. (f) Alternatives to the Proposed Project.

C169-23

15126.2 CONSIDERATION AND DISCUSSION OF SIGNIFICANT ENVIRONMENTAL IMPACTS. (a) The Significant Environmental Effects of the Proposed Project. An EIR shall identify and focus on the significant environmental effects of the proposed project….The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas. (b) Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented. Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described. (c) Significant Irreversible Environmental Changes Which Would be Caused by the Proposed Project Should it be Implemented. Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since …generally commit future generations to similar uses. (d) Growth-Inducing Impact of the Proposed Project. Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. … projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

C169-24

TCE ENGINEERING 154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

15126.4 CONSIDERATION AND DISCUSSION OF MITIGATION MEASURES PROPOSED TO MINIMIZE SIGNIFICANT EFFECTS. (a) Mitigation Measures in General. C169-25
(1) An EIR shall describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy.
(A) The discussion of mitigation measures shall distinguish between the measures which are proposed by project proponents to be included in the project and other measures proposed by the lead, responsible or trustee agency or other persons which are not included but the lead agency determines could reasonably be expected to reduce adverse impacts if required as conditions of approving the project. This discussion shall identify mitigation measures for each significant environmental effect identified in the EIR. (B) Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way. (C) Energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant. Examples of energy conservation measures are provided in Appendix F. (D) If a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed. (Stevens v. City of Glendale (1981) 125 Cal.App.3d 986.) (2) Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments. In the case of the adoption of a plan, policy, regulation, or other public project, mitigation measures can be incorporated into the plan, policy, regulation, or project design.

15126.6. CONSIDERATION AND DISCUSSION OF ALTERNATIVES TO THE PROPOSED PROJECT. C169-26
(a) Alternatives to the Proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. … There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason. (Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553 and Laurel Heights Improvement Association v. Regents of the University of California (1988) 47 Cal.3d 376).
(b) Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.
(c) Selection of a range of reasonable alternatives. The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are:(i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.
(d) Evaluation of alternatives. The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be C169-27

discussed, but in less detail than the significant effects of the project as proposed. (County of Inyo v. City of Los Angeles (1981) 124 Cal.App.3d 1).

(e) "No project" alternative. (1) The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (see Section 15125). (2) The "no project" analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

C169-27

(3) A discussion of the "no project" alternative will usually proceed along one of two lines:

(A) When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the "no project" alternative will be the continuation of the existing plan, policy or operation into the future. Typically this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan.

C169-28

(B) If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the "no project" alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed. In certain instances, the no project alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.

(C) After defining the no project alternative using one of these approaches, the lead agency should proceed to analyze the impacts of the no project alternative by projecting what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.

(f) Rule of reason. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.

(1) Feasibility. Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives. (Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553; see Save Our Residential Environment v. City of West Hollywood (1992) 9 Cal.App.4th 1745, 1753, fn. 1).

C169-29

TCE ***ENGINEERING*** *154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com*

15130. DISCUSSION OF CUMULATIVE IMPACTS (a) An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065 (a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. (1) As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR. (2) When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency shall identify facts and analysis supporting the lead agency's conclusion that the cumulative impact is less than significant.

C169-29

15355. Def. CUMULATIVE IMPACTS "Cumulative impacts" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. (a) The individual effects may be changes resulting from a single project or a number of separate projects. (b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

C169-30

15144. FORECASTING Drafting an EIR or preparing a Negative Declaration necessarily involves some degree of forecasting. While foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can. Note: Authority cited: Section 21083, Public Resources Code; Reference: Sections 21003, 21061, and 21100, Public Resources Code.

15151 'Standards of Adequacy of EIR: good faith effort at full disclosure'. Re Historical Preservation Alt.

<u>Guidelines Information Only</u>
[15152 Tiering: Program EIR]
[15168 Program EIR]
[15182 Art 12 Special Situations; Residential Project to S.P. No Further EIR]
[15183.3 Streamlinging]
[15231-15233 Writ Article 15 Litigation]

<u>Definitions:</u>
15355 Cumulative
15364 Feasible
15370 Significant refers to "Adverse"
15384 Substantial Evidence
15387 Urbanized Area = 1000 residents/1 Sq-Mi

TCE
ENGINEERING

Investment Securities $ Stocks* $ Agency* & Municipal Bonds**
Real Estate Consulting $ Property Management

154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Formerly NASD Series 7 & 63 Registered Rep, & Series 66 Financial Advisor.
Securities Not Available

Thomas C Ells, RCE 40656
MS Tax, MS Fin, MS Acc
ED, Galen's Gardens/SHS

California State Department of General Services
Mr. Gerald McLaughlin, Asset Management Branch, SDC Project Manager
707 3rd Street, 5th Floor
Sacramento, CA 95605

Regarding: Sonoma Developmental Center (SDC) Sale to Galen's Gardens/Samaritan Housing Society

Aug 26, 2022

Dear : Too Whom This May Concern; for Preliminary Discussions,

Galen's Gardens/Samaritan Housing Society's offer is $1B for "Improvements to the Environment" at Sonoma Developmental Center (SDC) to such an extent as to offset the value & price of any other offer.

C170-1

The current process has gone off track, while Permit Sonoma's efforts at creating an EIR & Specific Plan process for development of SDC have produced Yeomen's effort of planning & exceptional avenues for creative visioning at SDC, they have shot clear past the demarcations of the community's desires/needs.

Galen's Gardens/Samaritan Housing Society offer is a "Null Hypothesis Project" proposal for "Improvement of the Environment" at SDC and Historic Restoration of the Historic main building ("Professional Education Building/PEC"), which exempts the proposal from CEQA. We in America suffer from a lack of vision, we have been convinced that the proper thing to do is to "Think Globally, but Act Locally" only. This is not correct, this is unscientific, it is anti-scientific and anti-American, we need to "Think Locally, and Act Globally", because that is scientific. What we want locally around us, we should want for all, and similarly with what we don't want near us. We've lost the Public will. See Appendix"A"Term Offer Sheet.

C170-2

Our offer is simple: create a Climate Crisis Center; establish a Polytechnic Environmental Institute; reuse as many of the buildings and facilities as possible; prevent waste & GHG emissions in the demolition of the County Proposed Project Alternative (CPPA) of ~161,000 tons waste along with the replacement of these same buildings with another ~161,000 tons of future waste (∑=134yrs waste); establish 6-Agencies with 100units/ each of affordable housing, with each reserving 10 of these units for "short term rentals". We will use Camp Via as an RV site, and re-establish the water & waste treatment systems for wetlands.

The value of this proposal to the State is $1.133 Billion, and we would return all the property to the State at any time they wish (subject to the Housing & School Leases, and $100M Rehab Loan). Our only conditions for the creation of the Climate Crisis Center, the Polytechnic Environmental Institute and the affordable housing is $100M Endowment from California Coastal Conservancy, $25M/yr Operating Budget (per CalPoly Humboldt) for the Polytechnic Institute, and the use of the property until it's return to the State. Please see attached Appendices for details.

Your Humble Servant

Thomas Chase Ells, ED, Galen's Gardens/Samaritan Housing Society
Anthropologist, RCE 40655, MS Tax Law, MS Fin, MS Acc.
UCI Administrative Law Certificate in Hazardous Materials & Emergency Management

From:	Thomas Ells
To:	Brian Oh; Mike McGuire; Susan Gorin; Jacquelynne Ocana; Steve Birdlebough; David J. Harris, PhD; Jack
Subject:	SDC Program Draft EIR & Specific Plan Comments & Proposed Alt Development
Date:	Friday, September 23, 2022 4:23:47 PM
Attachments:	SCD EIR and Specific Plan Process Comments 2a.pdf SCD EIR and Specific Plan Demolition1a.pdf SCD EIR and Specific Plan Process Comments 3a.pdf SCD Transaction Cover Letter2.pdf

EXTERNAL

Dear Brian Oh, Comprehensive Planning Manager, and To Whom This May Concern,
Please find, consider, and respond to the following SDC EIR & Specific Plan comments;
2 Comment letters (Demolition 1a, and Process Comments 2a) were dated 9/18/22.
1 Comment letter (Process Comments 3a) is dated 9/23/22.
1 Proposed Null Project Alternative Development (Transaction Cover Letter), with Environmental Benefits.

C171-1

Thomas C. Ells, RCE 40656

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Subject: RE: SDC Program Draft EIR Comments
Date: Wednesday, September 21, 2022 9:00:13 AM

From: Thomas Ells <thomasells40@gmail.com>
Sent: Sunday, September 18, 2022 3:22 PM
To: Brian Oh <Brian.Oh@sonoma-county.org>
Subject: SDC Program Draft EIR Comments

EXTERNAL

Dear Brian Oh, SDC Comprehensive Planning Manager, Sonoma County,

C172-1

Please see attached, additional SDC Program Draft EIR Comments (1a & 2a).

No where in the Sept 15th Planning Commission meeting comments did I see my original set of Draft EIR comments, which were emailed to you, and which you responded "no problem" you would include them in with all the other comments at that time.
I saw none of those prior comments. Please respond.

Your Humble Servant
Thomas C. Ells, RCE 40656
Anthropologist
Environmentalist

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

TCE
ENGINEERING

Investment Securities $ Stocks* $ Agency* & Municipal Bonds**
Real Estate Consulting $ Property Management

154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com

Formerly NASD Series 7 & 63 Registered Rep, & Series 66 Financial Advisor.
Securities Not Available

Thomas C Ells, RCE 40656
MS Tax, MS Fin, MS Acc
ED, Galen's Gardens/SHS

Mr Brian Oh, Comprehensive Planning Manager, SDC
Permit Sonoma, County of Sonoma
2550 Ventura Ave.
Santa Rosa, CA 95403

Regarding: Sonoma Developmental Center (SDC) Specific Plan (SP) & Program Draft EIR (EIR)

Sept 18, 2022

Dear : Too Whom This May Concern; for Preliminary Discussions,

Though Permit Sonoma worked hard, produced >4000pgs, & created many potential alternatives within their Specific Plan/EIR process, they have overshot the mark creating a plan for the past, "fighting the last war" as we often do, and not taking advantage of the opportunity to present a plan for the future.

Why does it appear the SDC EIR and associated Specific Plan (characterized by the County's preferred Proposed Project Alternative) have defined and committed the County of Sonoma, as Lead Agency under CEQA, to a series of specific decisions, plans, and/or alternatives without fully considering other acceptable plans (under legislation 14670.10.5), alternatives, mitigation measures, and the Null Project.

Please explain why the County (Permit Sonoma) has allowed the EIR to be produced which does not address the mitigatable cumulative effects of waste generated by the proposed alternative over the Null Project hypothesis, to the extent where recommended building demolition of ~1.2M sq-ft produces a minimum of 161,000 cy of debris equal to 67 years of operation of the Proposed Project Alternative in addition to the equal amount of debris produced by the eventual demolition of the Proposed 1.2M sq-ft Project (∑=322,000 cy, or 134 years at the rate of the Proposed Project at completion); together with the project waste there will be an average cumulative waste of 19.8 tons/day or 1.5% of daily averages (2016-2020, per SP pg 603) ? Since we are already transferring all our solid waste away from Sonoma County because we do not have local landfill capacity, and our waste charges ($135/ton) are double the charge for Hazardous Waste ($50.97/ton asbestos waste) taken to Kettleman Hills landfill, this must be considered a significant mitigatable impact by Reuse and Historic Preservation of the existing buildings. At the local waste costs, this represents >$960,000/yr = ~$65M over the 67 years, from these 3 sources.

Why is no mention made in the EIR or SP of GHG's which were imbedded and carried within the existing constructed buildings which will be released into the atmosphere by their demolition, nor is any mention made of the GHG emissions which are imbedded in the production of the new materials and resources which are expected to replace the demolished SDC buildings, these are significant long term mitigatable cumulative effects? Why has the EIR not addressed either of these cumulative GHG effects, from demolition, neither the before demolition GHG emissions sequestered in the existing buildings which will be released, nor the GHG emissions released in the production of the replacement 1.2M sq-ft of buildings together with their own lifecycle emissions released upon their demolition? These GHG's must be considered a significant mitigatable impact by their (building) Reuse.

TCE ENGINEERING *154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com*

Why is no mention made in the EIR or SP of the cumulative effects of the opportunity lost to lead this community and the Global Community in re-visioning the future, from the past that we have, into the future that we need while using the existing buildings and infrastructure you demolish?

Why is Historic Preservation of the existing buildings considered by the EIR & SP to be financially infeasible and unmitigatable? This is not a fact, nor is it a reasonable conjecture from any basic set of reasonable assumptions, other than a prejudice against Historic Buildings in preference to the Cult-of-the-New. Historical Preservation and Reuse of these buildings is relatively simple. In particular, historic lumber is dimensionally greater and structurally superior, providing more insulative cavity, and other materials were more dense historically. History teaches us that the oldest buildings are the most energy efficient for their locations; such as Kiva & Adobe Structures of the America Southwest are stone or adobe to insulate against the heat, raised pole structures in the Indus Valley Civilization and Mounded Structures of the Mississippian Culture prevent flood inundation, Northern Long Houses of the Iroquois in the East and the Suquamish of the West are large multifamily dwellings and made of wood frames and bark covering to insulate against the cold, even Igloos of the Eskimo. Why have you neglected the consideration that almost every older building uses less energy than that which replaces it, despite the efficiency of the New Building?

Why is scant consideration, even superficial avoidance, of the topic of Hazardous Materials mitigation and removal given within the EIR and SP as a direct consequence of the building demolition, as opposed to “In-Situ” mitigation in place through reuse and Historic Preservation of the existing buildings; Diesel Tanks, Film Development, Chemical Storage, Paint Shops, Corporate Yards and Transportation buildings, all have significant potential for Hazardous Materials impacts, as well as, the asbestos insulation and lead based paint in the housing, hospital, and office buildings? Lack of consideration of this impact has direct impacts of needlessly and costly filling existing hazardous waste landfills, both individually and cumulatively, though mitigatable.

Each of the above considerations, taken individually are significant impacts not covered by the EIR and SP, but there is also a cumulative effect of the above neglectful preparation of the EIR and SP, “a death by 1000 cuts” to the Historic Preservation (stated to be unmitigatable). Why has the cumulative effect of this neglectful preparation not been addressed within the EIR and SP, which then augers for and streamlines the process for replacement by the preferred Proposed Project Alternative as opposed to Historic Preservation (HP)? Can you explain how you are mitigating these neglected impacts which should be further compared to the environmentally preferred HP, in producing a cycle of demolition and reconstruction which has a cumulative effect due to volume of waste, and on the environment due to exploitative expectations, the expectation that ‘everything I have should be new’, ‘we need the new’, ‘I need the new’? Again, why does the EIR and SP neglect the positive environmental impact the development could have by leading, rather than following old worn-out traditions of thinking, that have cumulatively placed us in our Climate Crisis?

Your Humble Servant

Thomas Chase Ells

Thomas Chase Ells, ED, Galen’s Gardens/Samaritan Housing Society
Anthropologist, RCE 40655, MS Tax Law, MS Fin, MS Acc.
UCI Administrative Law Certificate in Hazardous Materials & Emergency Management

From: Tiare Welch
To: Brian Oh; Tiare Welch
Subject: SDC input
Date: Monday, September 26, 2022 11:28:42 AM

EXTERNAL

I've been wanting to submit my contribution to the SDC planning process.
The lighting that is part of any development at SDC needs to be low lighting to preserve dark sky and nocturnal animal hunting and activities.
My husband is an amateur astronomer and has to drive up to Lake Sonoma with his local astronomers group to do sky viewing.
The new lighting these days is atrocious and needs to be carefully planned to preserve quality of life and looking up at the stars.

C173-1

With attention to detail this can be accomplished -

Please include this planning in the SDC going forward - Super Important to minimize the impact of lighting.
Thank-you.
I didn't see anything about lighting in the EIR report. Did I miss it?

I've lived in the valley since 1977.
Our quality of life and wild land habitat are of extreme importance.
Our care for nature is what makes this valley the special place that it is.
Sincerely,

Tiare Welch 707-480-5487

144 Malet St.
Sonoma

Right Here..Right Now
<">

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Tracy Salcedo
To:	Brian Oh
Cc:	Greg Carr; Caitlin Cornwall; Pat Gilardi; Larry Reed; Gina Belforte; Jacquelynne Ocana; Shaun McCaffery; Belen.Grady@sonoma-county.org; PlanningAgency; Logan.Pitts@sen.ca.gov; Senator.McGuire@senate.ca.gov; Senator.Dodd@senate.ca.gov; Wachsberg, Rebecca; Chaaban, Ezrah; Cecilia.Aguiar-Curry@asm.ca.gov; gerald.mclaughlin@dgs.ca.gov; district4; James Gore; district5; Susan Gorin; David Rabbitt; SDC Specific Plan; Hannah Whitman; Arielle Kubu-Jones; Rebecca Hermosillo; Rep. Mike Thompson
Subject:	Comments on DEIR and Preferred Specific Plan for SDC
Date:	Wednesday, September 21, 2022 9:39:19 AM
Attachments:	SMP_DEIR letter_FINAL_9-21-22.pdf
Importance:	High

EXTERNAL

Hi Brian,

On behalf of Sonoma Mountain Preservation, I have attached our comments on the draft environmental impact statement and preferrred specific plan for the Sonoma Developmental Center.

C174-1

Thank you for your consideration. We all hope, with the incorporation of community input into a plan that is truly community driven, we will create a wholesome, viable future for this very special place and for the people who love it.

Kindly, Tracy

Tracy Salcedo
Director
Sonoma Mountain Preservation

(707) 246-0694
laughingwaterink@gmail.com / laughink@vom.com
laughingwaterink.com

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

Vivien Hoyt
1036 Sonoma Glen Circle
Glen Ellen, CA 95442

August 31, 2022

Brian Oh
Comprehensive Planning Manager, Permit Sonoma
County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403

Dear Mr. Oh,

I am writing because I strongly disagree with the most recent proposal to develop SDC for the following reasons:

1) 1000 housing units and 940 on-site jobs is too large for our small town. This monstrosity would significantly impact traffic, water use, and greenhouse gas emissions. We are already in a severe drought and we don't have the water supply to house that many people. C175-1

2) It is an extreme fire risk to add 2000+ cars onto our roads as it took hours to evacuate during the last big fire. Your plan will be putting many people's lives and animals at risk. The idea that creating another road to Highway 12 wouldn't remotely solve the problem. The fire chief's assessment that this new development would only cause 1-2 minutes extra time for evacuation is not based on the reality of the citizens who live here.

3) The plan will negatively effect our wildlife, which is the glory of living here in Glen Ellen. One of the reasons we choose to live here 35 years ago, is because of the wildlife and openness of the area. I believe that is also why tourists love coming to our pristine valley.

My vision for the property is mostly reserved open space, transferring the property to a public or non-profit company, offering community based programs ie: educational, sustainable green techlology center, historic preservation of the main building, bicycle paths and an organic farm. The Wildlife Corridor and Sonoma Creek should be well protected with no more then 200 affordable, sustainable homes with priority to people with disabilities. The State of California should pay to clean up the mess left behind, which is something we were taught as children. Pushing this expense onto Sonoma County or the new builder is unethical. The State has a surplus of funds so they can afford it. C175-2

We have an opportunity to behave differently then our previous generations. The model of “bigger is better” isn't working any more. The planet is suffering so we need to approach this jewel in a sustainable, carbon neutral way. Thank you for your careful consideration.

Sincerley,

Vivien Hoyt

cc: Santa Rosa and Sonoma City Countil Members, Susan Gorin,

Mike Thompson, Gavin Newsom

From: Will Ivancovich
To: Brian Oh
Subject: Sonoma Development Cenger
Date: Saturday, September 24, 2022 8:00:36 AM

EXTERNAL

Our farm labor community could desperately use the housing on site. Don't tell me the buildings aren't suitable to live in. If you ever went to Mexico and saw what the majority of people live in, you would agree that the accomadations at Sonoma Development Center look like palaces. If that is to difficult for the majority to comprehend than do nothing with the property. Let it rot away and become open space for nature to enjoy and the public also!

C176-1

Respectfully,
Will Ivancovich

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From:	Bill Hirsch
To:	Brian Oh
Cc:	Gerald.McLaughlin@dgs.ca.gov; McGuire@senate.ca.gov; Rebecca Hermosillo; Sophia.Schwirzke@sen.ca.gov; Rebecca.wachsbdavid.rabbitt@sonoma-county.org; district3; district4; Susan Gorin
Subject:	Sonoma Development Center Specific Plan Draft Environmental Impact Report, dated August 22, 2022
Date:	Friday, September 23, 2022 10:02:07 AM

EXTERNAL

Brian Oh

Comprehensive Planning Manager

Permit Sonoma

Brian.Oh@sonoma-county.org

Re: Sonoma Development Center Specific Plan Draft Environmental Impact Report, dated August 22, 2022

Dear Mr. Oh:

I live on Arnold Drive, just south of Sobre Vista Drive. These comments are directed to the Sonoma Development Center Specific Plan Draft Environmental Impact Report, dated August 22, 2022. I am quite disturbed by many of the assumptions and conclusions included in the report, and would like a detailed response to the questions and issues raised below.

C177-1

FIRE EVACUATION

In the Specific Plan, the Vision and Guiding Principles are full of references to “well-planned evacuation routes” and "proactively planning for community safety in natural disasters,” but the DEIR somehow concludes that pouring a couple of thousand cars onto Arnold Drive in the event of a disastrous fire will somehow not have a significant impact on emergency evacuation plans. This is a flawed and inadequate analysis for many reasons.

FIRE FROM THE WEST

The DEIR states on p. 515: “Historically, a fire approaching from the west may be less likely, and therefore did not warrant further specific analysis.” This is troubling for at least three reasons.

C177-2

First, the lower likelihood of a fire coming from the west is based on historical

records that are less and less relevant given the impact of global warming and changing weather patterns. For these reasons, it is very difficult to predict how and where fires will originate and spread. Lightning strikes could occur anywhere, as we saw in 2020, and wind and drought conditions could make previously rare situations more common.

C177-2

Second, the DEIR should be planning for all contingencies, even "black swans." This is particularly important since the project will have a permanent impact on the community and will impose threats for decades.

Third, a fire from the west would be particularly devastating, as it likely would give residents much less time to evacuate and cause massive and sudden evacuation by residents and workers at the SDC and the surrounding communities. The assumptions on p. 515 that 25% of residents and employees would evacuate when given an Evacuation Warning and 65% would evacuate when given an Evacuation Order seems false and irrelevant, as most everyone would immediately flee when they saw the fire racing down the mountain (as would the other people on Arnold Drive and the surrounding areas).

Given all this, please respond to these concerns and explain in detail why the impact of a fire from the west was not considered. A full and complete study of this issue needs to be completed, and its results need to be considered and incorporated into the Specific Plan, before the DEIR can be approved

FIRE FROM THE NORTHEAST AND SOUTHEAST

As for the analysis of evacuation from the northeast and southeast, the analysis in the DEIR is also faulty and disconnected with real life experience. On p. 512, the DEIR states that "the travel model represents a typical weekday peak hour…" and then proceeds to add the potential impact of additional traffic from residents and workers at SDC.

C177-3

The total number of cars from residents and workers according to the DEIR would be over 2200. Although the DEIR never directly says how many additional vehicles will flood onto Arnold Drive from the SDC in the result of a fire emergency, it does state that 75% of the residential units, including two cars from each household, and 75% of the workers, with one car each, will be involved (p. 515)- given the Proposed Plans goal of adding 1000 new housing units and employing 940 people (Table 4.1-1 Summary of Alternatives, p. 534), the total is approximately 2205 vehicles. Add hotel guests (possibly one vehicle for each of the 120 rooms) and visitors (shopping, recreation, friends), and the total is probably closer to 2500.

The first problem is that there is insufficient data supporting the travel model which is relied upon. In the Appendix to the DEIR, Appendix F is entitled "Traffic Model Data." It consists of one page. There is no information regarding how the study was

done, when it was done, or what criteria was used. It could have been done so long ago it is irrelevant, or during Covid, when traffic was not typical. According to p. 512 of the DEIR, the DEIR relied upon the Sonoma County Regional Travel Model which "estimates traffic generated by land uses and tracks traffic volume relative to road capacities to calculate the associated levels of congestions and congested speeds." No other information is given regarding the travel model and, significantly, it does not appear to be based on a detailed and empirical study of realistic and existing traffic patterns. This is not acceptable for a project of this magnitude, especially when it is supposed to seriously evaluate emergency evacuation routes in the event of what could be a huge, fast-moving catastrophic fire.

C177-3

Second, the DEIR again assumes that only 25% of the residents will evacuate when they receive an Evacuation Warning. It seems risky and irresponsible to bet the lives of so many people on that assumption, rather than assuming that there will most likely be widespread panic if disaster strikes, especially now that we all know about what happened in Paradise and other communities.

C177-4

It also is important to note that the study that the DEIR cites for these evacuation rates only relies on three fires which took place in 2017 and 2018.[1] Besides the fact that the analysis is based on a limited sample and is therefore unreliable, this raises the question of whether the cumulative psychological impact of yearly devastating fires since 2017-8 has in itself begun to change behavior. That question is unasked and thus unanswered.

Further, the study itself states the following in the section entitled Evacuation or Stay:

> For wildfires, the direct implications of high and variable shadow evacuation rates (ranging form 29.1% to 75% for the three fires) are unclear. One possible explanation is that officials were often unable to issue mandatory evacuation orders before residents needed to evacuate. Another explanation is that residents may have found the environmental cues of the fire to be very high risk, leading them to evacuate without an order. Future research is needed to separate the impacts of poor messaging and environmental cues on shadow evacuations for wildfires.

This suggests that the statistical analysis relied upon by the DEIR is tentative at best and needs further study, something that the DEIR does not recognize. Much more needs to be studied before an emergency evacuation plan can be based on such tenuous assumptions about evacuation rates.

C177-5

The third problem is that the DEIR ignores the fact that if there is a fire, the traffic on Arnold Drive will <u>not</u> be the same as a "typical weekday peak hour." The reason, of course, is that all the people in the area will be impacted during a massive

explosive fire emergency, and they will swell Arnold Drive and Highway 12 well beyond "typical weekday peak" traffic. However, it is odd and indefensible that the DEIR focuses only on daily traffic patterns and employees and residents of the new town envisioned by the Specific Plan, but ignores the significantly increased volume of traffic that would occur from all the other residents of Glen Ellen and along Arnold Drive, as well as those fleeing the fire from other locations in the area. The DEIR also does not take into account the additional traffic that will be generated by the guests at the proposed 120 room hotel (possibly another 120 vehicles) or the visitors to the new commercial and recreational space they seek to build.

C177-5

The fourth problem is that the analysis of the impact of the Proposed Plan on fire evacuation itself provides no backup material explaining exactly how the results were obtained. Table 3.16-1: Peak Hour Travel Times With Fire Evacuation (p. 517) is presented without any further explanation of how the results were actually calculated. This is particularly relevant as the invalid or limited assumptions discussed above skew the results, and a more accurate model would undoubtedly yield different results. It is therefore important to provide a detailed description of the statistical model and the methodology and imputs relied upon, so that the appropriate corrections can be made to yield more accurate results.

C177-6

Finally, none of what the DEIR states is consistent with actual events or personal experience. The DEIR concludes that travel time in the event of an evacuation will increase by only 1.2 minutes - actually, in my experience, even during normal traffic, sometimes it takes several minutes before I can even get onto Arnold Drive, so it seems unlikely that a huge influx of traffic will delay me, and many others, no more than a minute. It seems that the DEIR overlooks the basic fact that Arnold Drive is a two lane country road with hundreds if not thousands of residents on either side of the road with no other escape route. Arnold Drive was backed up for miles and barely moved during the Nuns Canyon Fire and the Kincade Fire evacuations. And sending people to Highway 12 is not the solution – that too is a small congested two -lane road and it is jam packed during normal rush hour traffic, and will be a poor evacuation route under the best of conditions. However the study is skewed to obtain the desired results of "no impact," the actual experiences of people in the area and common sense starkly contradict the conclusion that the addition of close to 2500 vehicles (including hotel guests and visitors) will have no significant impact.

Please address each of these concerns in detail and explain why the DEIR does not adequately address the public safety issues they raise.

CONCLUSION

C177-7

All this raises serious questions about the DEIR's conclusion that "implementation

of the Proposed Plan would not impair an emergency response or emergency evacuation plan and impacts would be less than significant" (p. 517) and that therefore “no mitigation is necessary.” (p. 518). This defies logic and needs to be explained in detail in light of the questions and issues raised above. Beyond this, the DEIR should not be approved until there is a serious, complete and evidentiary based Emergency Response Plan in place and only after there has been a comprehensive and objective study of how the Planned Project will impact public safety and traffic conditions on Arnold Drive during a fire emergency

C177-7

Sincerely,

William B Hirsch

16528 Arnold Drive

Sonoma CA 95476

[1] Cited in DEIR Footnote 137. Wong, S., Broader, J. and Shaheen, P., 2022. Review of California Wildfire Evacuations from 2017 to 2019. [online] Escholarship.org. Available at:<https://escholarship.org/uc/item/5w85z07g>

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Alexandra D Syphard
To: Brian Oh
Subject: Re: Comments on SDC (appendices)
Date: Monday, September 26, 2022 4:06:13 PM
Attachments: image003.png

EXTERNAL

Dear Mr. Oh,

I apologize, but I forgot to send you a link to the appendices.

Please find them here:

C178-1

Attach E Appendices.pdf

Best wishes,
Alexandra

Alexandra D. Syphard, PhD
Senior research ecologist, Conservation Biology Institute
Ph: 619.865.9457
==
Adjunct Professor, Department of Geography, San Diego State University
www.researchgate.net/profile/Alexandra_Syphard

On Monday, September 26, 2022 at 10:58:56 AM PDT, Alexandra D Syphard <asyphard@consbio.org> wrote:

Dear Mr. Oh,

Attached please find my comments on the Sonoma Development Center plan and DEIR. Please let me know if you have any questions.

Best wishes,
Alexandra Syphard

Alexandra D. Syphard, PhD
Senior research ecologist, Conservation Biology Institute
Ph: 619.865.9457
==
Adjunct Professor, Department of Geography, San Diego State University
www.researchgate.net/profile/Alexandra_Syphard

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

September 26, 2022

Via electronic mail

Brian Oh, Comprehensive Planning Manager
Permit Sonoma County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403
Brian.Oh@sonoma-county.org

Re: Sonoma Developmental Center Specific Plan Draft Environmental Impact Report

Dear Mr. Oh,

We provide these comments in response to the County of Sonoma's (County) Sonoma Developmental Center Specific Plan (Specific Plan) Draft Environmental Impact Report (DEIR) published on August 10, 2022.

C179-1

As long-time residents of Glen Ellen and the greater Sonoma Valley, we have significant interests in the Specific Plan and ultimate development of the former Sonoma Developmental Center (SDC) site. We are concerned that the DEIR does *not* provide substantial information about the environmental impacts of the County's proposed Specific Plan (Proposed Plan) as compared to alternatives. While our concerns extend to the cumulative environmental impacts of development under the Proposed Plan, we are particularly struck by the DEIR's failure to study or disclose the impacts to the resources and existing communities in and around the SDC. The analysis in the DEIR focuses on how the proposed development would be experienced by future residents and workers at the SDC site and does not adequately consider how doubling the current population of Glen Ellen would affect the surrounding community. This bias is laid bare by the DEIR's finding that more than doubling the residential population would have comparable impacts to increasing the population by approximately 50 percent. In short, the DEIR does not

fulfill its basic purpose, which is to demonstrate that the County has fully considered and disclosed the potential impacts of implementing the Proposed Plan and alternatives.

C179-1

II.
COMMENTS

We organize our comments according to the headings in the DEIR for ease of reference.

Table of Contents

C179-2

The Table of Contents shows the DEIR is over 600 pages, exclusive of appendices. That is a lot of paper for the public to review and provide written comments on within 45 days. Thus, while the Table of Contents does not contain substantive information, it nonetheless conveys a fundamental deficiency running throughout the EIR, namely that the DEIR does not facilitate the public's understanding of the County's proposal or the environmental impacts of implementing that proposal.

A 600-plus page DEIR is not just a hardship for the public, it is contrary to the California Environmental Quality Act (CEQA). CEQA Guidelines direct that environmental documents be clear and easy to understand: "EIRs shall be written in plain language and may use appropriate graphics so that decisionmakers and the public can rapidly understand the documents."[1] Further, EIRs should be concise: "the text of draft EIRS should normally be less than 150 pages and for proposals of unusual scope or complexity should normally be less than 300 pages."[2] An EIR should "*effectively* disclose to the public the 'analytic route the ... agency traveled from evidence to action.'"[3] Indeed, making the EIR accessible and understandable to the public is necessary to achieve the policy objectives behind CEQA's requirement that state agencies prepare an EIR,

---

1 14 Cal. Code Regs. § 15140.
2 14 Cal. Code Regs. § 15141.
3 *Citizens of Goleta Valley v. Bd. of Supervisors*, 52 Cal. 3d 553, 568, 801 P.2d 1161 (1990) (internal citations omitted) (emphasis added).

which include "protect[ing] the environment *but also … demonstrat[ing] to the public that it is being protected.* (*County of Inyo v. Yorty*, 32 Cal. App. 3d 795)," and "demonstrat[ing] to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action. (*People ex rel. Department of Public Works v. Bosio*, 47 Cal. App. 3d 495.)."[4]

C179-2

The DEIR is over 600 pages and includes an additional 3,500 pages of appendices, yet it still fails to present a clear picture of the County's proposed action or the environmental consequences of it. In making the DEIR unduly long and confusing and providing the public only 45 days to review and provide comments, despite many requests for additional time, the County has effectively deprived the public a fair and meaningful opportunity to understand and engage in the environmental review and consideration of the Proposed Plan.

Section 1.1 Purpose of the EIR

C179-3

According to the County, the DEIR is intended to serve multiple purposes:

- To satisfy CEQA requirements for analysis of environmental impacts by including a complete and comprehensive programmatic evaluation of the physical impacts of adopting and implementing the Proposed Plan;
- To recommend a set of measures to mitigate any significant adverse impacts;
- To analyze a range of reasonable alternatives to the Proposed Plan;
- To inform decision-makers and the public of the potential environmental impacts of the Proposed Plan prior to taking action on the Proposed Plan, and to assist County officials in reviewing and adopting the Proposed Plan; and
- To provide a basis for the review of subsequent development projects and public improvements proposed within the Planning Area. Subsequent environmental documents may be tiered from the Final EIR.[5]

---

4 14 Cal. Code Regs. § 15003(b), (d).
5 DEIR, pp. 41-42.

As described below the DEIR does not achieve these purposes.

The DEIR does not provide a complete or comprehensive evaluation of the physical impacts of adopting and implementing the Proposed Plan. Under CEQA, "[t]he purpose of an [EIR] is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided."[6] To this end, an EIR must describe, in detail, the significant effects on the environment of the project, including cumulative effects.[7]

C179-4

Contrary to the requirements under CEQA, the DEIR's impacts analysis here is largely limited to a description of goals and policies applicable to a given resource or category of resources, followed by a conclusion that, if all future development activities contemplated by the Proposed Plan are perfectly designed and implemented to comply with those goals and policies, then there will be no significant impacts. In other words, the DEIR finds that any and all development under the Proposed Plan would effectively be self-mitigating across all resource areas, except for historic resources and transportation. The DEIR's impacts analysis does not appear to cite to specific evidence as the basis for these findings.[8] The DEIR does not show that the County undertook specific studies or evaluation of the potential impacts of development activities covered under the Proposed Plan. Instead, the DEIR repeatedly states that the County chose to defer field and other site-specific studies.[9]

This facile analysis, which does not point to any mechanism for the County (or other regulatory entity) to ensure that future development activities perfectly comply with all

C179-5

6 Cal. Pub. Res. Code § 21002.1(a).
7 14 Cal. Code Regs. §§ 15126.2, 15355, 15358.
8 14 Cal. Code Regs § 15091(b) (EIR's findings must be supported by substantial evidence).
9 *See, e.g.,* DEIR, pp. 236 (no new field studies for biological conditions or resources), 252 (deferring biological assessments); 253 (deferring wetland delineation).

applicable goals and policies for resource protection, is insufficient to support the DEIR's conclusory findings that any and all reasonably foreseeable impacts of implementing the Proposed Plan can be avoided or effectively mitigated to the point of insignificance. C179-5

As indicated above, we were unable to locate discussion of specific field studies or site-specific analyses that the County undertook to evaluate the potential impacts of development under the Proposed Plan or alternatives. Based on our review, the DEIR does not provide information or substantive explanation adequate to resolve or narrow the issues we raised in our Scoping Comments, including, but not limited to:

- Biological Resources
  - Analysis of impacts to fish and wildlife resources and habitat, including any federally listed endangered or threatened species that are or have the potential to occur in the project area
  - Analysis of impacts to plant and botanical resources
  - Analysis of the potential for development activities to introduce non-native, invasive species

- Energy Resources
  - Analysis of whether there are adequate, cost-effective renewable energy sources available to timely meet anticipated energy needs on the campus under the Specific Plan and alternatives
  - Analysis of whether proposed development under the Specific Plan and alternatives would affect reliability or cost of energy resources locally or regionally

C179-6

- Greenhouse Gas Emissions
  - Quantitative analysis of any changes to greenhouse gas emissions caused by the development program proposed under the Specific Plan and alternatives

- Hydrology and Water Quality
  - Analysis of hydrogeologic impacts, including whether restoration of onsite water supply systems would potentially impact surficial expression of interconnected groundwater sources
  - Analysis of potential geomorphological impacts to natural waterways caused by increased runoff volume and duration from additional impervious surfaces

- Public Services, Recreation
  - Analysis of the Specific Plan's impacts to existing recreational use on the SDC campus, particularly passive recreation
  - Analysis of opportunities to meet latent and future recreational demand under the Specific Plan and alternatives

- Utilities and Service Systems
  - Analysis of whether there are adequate water supplies to reliably meet demand on the campus under the Specific Plan and alternatives into the future, including description of specific sources and whether those sources could be cumulatively affected by other developments within the region, e.g., implementation of the Sustainable Groundwater Management Act, or potential changes to regional surface water supplies caused by the decommissioning of the Potter Valley Hydroelectric Project (FERC No. 77).

C179-7

- Transportation and Traffic
  - Analysis of the availability of feasible existing or future public transit alternatives to serve increased population given the relative geographic isolation of the SDC campus from urban and suburban commercial districts and other services and amenities
  - Analysis of impacts related to pedestrian and bicycle safety on two-lane roads in the broader area, not just within the project boundary

C179-8

- Wildfire Hazards
  - Analysis of the increased risks of wildfire occurrence and severity locally and regionally under the Specific Plan and alternatives
  - Analysis of the impacts to safe and effective evacuation routes locally and regionally in the event of wildfire or other natural disasters.[10]

The DEIR does not recommend a specific set of measures to mitigate any significant adverse impacts. Under CEQA, "[a]n EIR shall describe feasible measures which could minimize significant adverse impacts."[11] As stated above, here the DEIR generally finds that the Proposed Plan will not have any significant impacts that require mitigation.[12] These findings are based on assumptions that specific development projects will be designed and implemented by unknown developer(s) to achieve and adhere to all current goals and policies related to resource

C179-9

[10] Scoping Comments, pp. 3-4.
[11] 14 Cal. Code Regs. § 15126.4; *see also* Cal. Pub. Res. Code § 21002.1(a).
[12] *See* DEIR, Table ES-2.

protection. However, these assumptions are not supported by any specific analysis based on record evidence for how specific development projects could be designed or reliably implemented to attain all resource goals and policies and effectively mitigate project impacts.

C179-9

Further, the DEIR states that the Proposed Plan is non-binding on the state or any future owner. The DEIR does not provide any basis for the assumption underlying the impacts analysis that the state or future owner will implement specific development projects in a manner that is self-mitigating, even where attainment of all the listed resource goals and policies may exceed legal and regulatory requirements. The DEIR's assumption that specific development projects under the Proposed Plan will be designed and built to be self-mitigating is meaningless in the absence of any demonstrated authority to require that outcome.

The DEIR does find that development under the Proposed Plan would adversely impact cultural and historic resources and transportation. However, it finds that these impacts would be "significant and unavoidable" and does not propose any specific mitigation measures for either category of impacts.[13] In sum, the Proposed Plan does not include any specific mitigation measures to lessen even those impacts that the DEIR concedes would be significant.

C179-10

The DEIR does not provide adequate analysis to meaningfully compare the Proposed Plan to alternatives. "One of [an EIR's] major functions ... is to ensure that *all reasonable alternatives* to proposed projects are thoroughly assessed by the responsible official."[14] The discussion of alternatives must "include sufficient information about each

[13] *Id.* at 21, 35.

[14] *Citizens of Goleta Valley v. Bd. of Supervisors*, 52 Cal. 3d 553, 565 (1990) (emphasis in original; internal citations omitted). "An EIR need not consider every conceivable alternative but must consider a range of alternatives sufficient to permit the agency to evaluate the project and make an informed decision, and to meaningfully inform the public." *Fed'n of Hillside & Canyon Associations v. City of Los Angeles*, 83 Cal. App. 4th 1252, 1264 (2000).

alternative to allow evaluation, analysis, and comparison with the proposed project."[15] "Under the 'rule of reason,' an EIR's discussion of alternatives is adequate if it provides sufficient information to compare the project with a reasonable choice of alternatives."[16] The DEIR's alternatives analysis does not meet these standards.

C179-10

In response to the County's Notice of Preparation, we requested that the EIR consider a reasonable range of alternatives to the County's proposal, and further requested that the range of alternatives "not be limited to variations on the same development plan differing only slightly by number of housing or other building units proposed to be constructed."[17, 18] Despite this request, the only meaningful difference in the alternatives considered in the DEIR is the density of the proposed development.

C179-11

The DEIR does not even consider a true no action alternative. Under CEQA, an EIR's discussion of alternatives must include a "no project" alternative.[19] The purpose of discussing a no project alternative is to permit a comparison of the impacts of approving the proposed project with the effects of maintaining the status quo.[20] The no action alternative "is a factually based forecast of the environmental impacts of preserving the status quo. It thus provides the decision makers with a baseline against which they can measure the environmental advantages and disadvantages of the project and alternatives to the project."[21]

---

15 14 Cal. Code of Regs § 15126.6(d).
16 *Fed'n of Hillside & Canyon Associations v. City of Los Angeles*, 83 Cal. App. 4th at 1264.
17 Letter from Caroline Hipkiss to Brian Oh (Mar. 25, 2022) (Scoping Comments), p. 5.
18 14 Cal. Code of Regs § 15126.6(a).
19 14 Cal. Code of Regs § 15126.6(e).
20 *Id.*
21 *Plan. & Conservation League v. Dep't of Water Res.*, 83 Cal. App. 4th 892, 917–18 (2000), *as modified on denial of reh'g* (Oct. 16, 2000).

Rather than continuation of the status quo, the DEIR defines the *no action alternative* to include a similar *or greater* level of development as the Proposed Plan: "the No Project Alternative would result in a palette of uses similar to those outlined in the Proposed Plan, and like in the Proposed Plan, these uses would be located at the Core Campus, and the surrounding land would be preserved as open space."[22] By assuming there would be comparable development under the No Project Alternative and the Proposed Plan, the DEIR omits analysis of the environmental impacts of the Proposed Plan as compared to existing (baseline conditions). *This hides the actual environmental impacts of the Proposed Plan and all alternatives considered in the DEIR.*

C179-12

Under CEQA, "[a] public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures available that would substantially lessen any significant effects that the project would have on the environment."[23] Here, the DEIR identifies the Historic Preservation Alternative as the environmentally superior alternative because it would reduce the "significant and unavoidable" impacts to historic resources under the Proposed Plan to be "less than significant."[24] However, the DEIR does not recommend the Historic Preservation Alternative because it would have "overall environmental impacts that are largely comparable between the Proposed Plan and the alternatives," but would not provide as much housing or "long-term fiscal stability."[25] The DEIR's impacts analysis, which is not based on any specific development design scenarios or supported by field or other site-specific studies, is inadequate to demonstrate that the environmental impacts of the Historic Preservation

---

22 *Id.* at 11.
23 14 Cal. Code Regs. § 15021(a)(2).
24 DEIR, p. 12.
25 *Id.* at 14.

Alternative would be comparable for all resources other than historic resources.[26] It strains credulity to predict that the Proposed Plan for 1,000 housing units and a population of 2,400 would have comparable impacts to a plan for 450 housing units and population of 1,080 (i.e., less than half the housing and population density as the Proposed Plan).[27] Contrary to CEQA's policy objectives, this conclusory analysis does not demonstrate to the public that the County "has, in fact, analyzed and considered the ecological implications of its action."[28] C179-13

The DEIR is inadequate to inform decision-makers or the public of the potential environmental impacts of the Proposed Plan. An EIR should inform decisionmakers of the environmental impacts of a proposed project and ensure that the "government at all levels to make[s] decisions with environmental consequences in mind."[29]

For the reasons discussed above, the DEIR's analysis of the impacts of the Proposed Plan as compared to alternatives is too vague and conditional to provide clear understanding of the environmental impacts of the Proposed Plan or alternatives, or to demonstrate that any government decisions based on the DEIR's analysis will have been made "with environmental consequences in mind."

The DEIR is too vague to serve as a basis for future, project-specific environmental documents. The DEIR acknowledges that additional environmental analysis for specific development projects will be required: "As a program EIR, the preparation of this document does not relieve the sponsors of specific projects from the responsibility of complying with the C179-14

---

[26] The "EIR does *not* assess project-specific impacts that may result from developments pursuant to the Proposed Plan." *Id.* at 2 (emphasis added).
[27] *Id.* at 13-14.
[28] 14 Cal. Code Regs. § 15003(d).
[29] 14 Cal. Code Regs. § 15003(c), (g).

requirements of CEQA (and/or NEPA for projects requiring federal funding or approvals)."[30] However, the DEIR indicates that future environmental documents may rely upon the DEIR's analysis to some extent: "These projects may, however, use the discussion of impacts in this EIR as a basis of their assessment of these regional, countywide, or cumulative impacts, provided that the projects are consistent with the Proposed Plan and the data and assumptions used in this EIR remain current and valid."[31]

C179-14

For the reasons described above, we strongly disagree that the impacts analysis provided in the DEIR could or should be relied upon in future project-specific environmental documents.

IV.
CONCLUSION

We request the County revise the DEIR to address the deficiencies described above prior to finalizing the document. In particular, the County should reconsider its definition and analysis of the No Project Alternative, and rejection of the Historic Preservation Alternative. We thank the County for considering these comments.

Respectfully,

Caroline Hipkiss
948 Martin St.
Glen Ellen, CA 95442
caroline@vom.com

Elizabeth Pastore
1501 Trestle Glen Dr.
Glen Ellen, CA 95442

30 DEIR, p. 42.
31 *Id.*

Kristi Cederborg
3388 Warm Springs Rd.
Glen Ellen, CA 95442

Linn Briner
720 Martin St.
Glen Ellen, CA 95442

George Psaledakis
965 Martin St.
Glen Ellen, CA 95442

Marius Cannard
1855 London Ranch Rd.
Glen Ellen, CA 95442

Skyla Olds
4342 Cavedale Rd.
Glen Ellen, CA 95442

Richard and Ann Schindler
13901 Carmel Ave.
Glen Ellen, CA 95442

Jonathan Loomis
955 Martin St.
Glen Ellen, CA 95442

Rich Flaherty
920 Martin St.
Glen Ellen, CA 95442

David Larson
5059 Warm Springs Road
Glen Ellen, CA 95442

Basha Cohen
227 Bettencourt St
Sonoma, CA 95476

Ana Magnani-Flaherty
920 Martin St
Glen Ellen, CA 95442

Jonathan Karsemeyer
15147 Marty Dr
Glen Ellen, CA 95442

Layla Aguilar
18055 Mulberry Ave
Sonoma, CA 95476

Mayacamas Olds
4342 Cavedale Rd
Glen Ellen, CA 95442

Stepanka Zahradnickova
790 W. Napa
Sonoma, CA 95476

Olga Kulikouskaya
464 Crivelli Dr.
Sonoma, CA 95476

Mieko Imai
994 Petaluma Ave.
Sonoma, CA 95476

Geordie Carr
994 Petaluma Ave.
Sonoma, CA 95476

Sonoma Developmental Center Specific Plan: Draft Environmental Impact Report, August 2022

Comments by Charles Mikulik

C180-1

Numbers in parenthesis proceeding a comment refer to the PDF page number and the document page number of the Draft EIR respectively.

1. It is not clear how the potential loss of historic integrity under CEQA is being assessed. Furthermore, the Draft EIR indicates that the Specific Plan, if implemented, would result in the property to no longer qualifying as a National Register eligible Historic District. How specifically did you determine this? What are the criteria for determining the level of integrity tied to the number of historic buildings that are necessary to retain eligibility? This is particularly confusing as this is something that would generally be determined by the State Historic Preservation Officer. Did Page & Turnbull somewhere state that this loss of integrity is unavoidable? If so, based on what?

ES.1.2 Purpose

C180-2

2. (13/4) "Allow County departments, other public agencies, and private developers to design projects that will enhance the character of the Planning Area, preserve environmental resources, and minimize hazards". While this sounds great, it is vague at best. More specific language would be nice. What do you mean by enhance the character of the Planning Area? Please explain why the preservation of as much the structures, buildings, and landscape does specifically meet this purpose?

ES.1.3 Objectives

3. (16/6) Please explain and define what the criteria for determining feasibility are? My understanding is that cost is not a legal factor for determining whether something is feasible.
4. The use of "feasibility" appears to be open to interpretation. It appears that if adopted, the individual responsible for determining what is feasible will define what that means for themselves. Is true? Why are there no clear guidelines presented in the document?

ES.2.1 Cultural, Historic, and Tribal Resources

C180-3

5. (18/8) Similar to questions 3 and 4 the statements on this page appear to state that the impacts to the historic district are unavoidable and would reduce the integrity to a point where the property is no longer eligible. How was this determined and by whom? Has the State Historic Preservation Officer been notified that the eligibility status has been predetermined without concurrence from the Office of Historic Preservation?
6. Regarding California Code of Regulations Title 14: 15064.5 (which can be reviewed here: https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-5-preliminary-review-of-projects-and-conduct-of-initial-study/section-150645-determining-the-significance-of-impacts-to-archaeological-and-historical-resources#:~:text=Download-,Section%2015064.5%20%2D%20Determining%20the%20Significance%20of%20Impacts%20to%20Archaeological%20and,Commission%2C%20for%20listing%20in%20the).), there is no

discussion regarding what the impacts to the community could be if this lost its integrity. Please explain what consequences are expected if this were to occur?

7. Implementation of goals 2-I, 2-J and policies 4-20 through 4-32 and Standard Conditions of Approval LU1 – LU-6 would be a partial mitigation but not enough but do not legally appear to be enough. Why are there no project specific mitigation measures to support and guarantee proper implementation?

C180-3

ES.4.2 Identification of Environmentally Superior Alternative

8. (23/14) While it is acknowledged that the Historic Preservation Alternative is the more environmentally sound approach, it is then indicated that it would be inferior regarding energy use, biological resources, and wildfire risks. Please present the data used to make this determination.

C180-4

.

2.4.4.1 Core Campus Districts

9. (83/Figure 2.4-2: Districts) I am not sure what to make of this as this depiction of the "Historic Core" seems to fly in the face of everything we know about the history of the campus.

3.1.3.4 Impacts

10. (110/101) Impact 3.1-1. This section does not make sense and is contradictory to other statements. Please explain how the assumption that there is a "less than significant impact" was determined? By definition, a property losing its status as a historic district is a significant impact. This section needs to be redone and the impacts need to be appropriately acknowledged.

Section 3.5: Cultural, Historic, and Tribal Cultural Resources

11. (269/260) The first paragraph on this page states that they are providing a list of all previously identified cultural resources, however, this is not true as no one has consulted with me. My professional assessment is that there are many more contributing resources on the property. I am more than willing to provide that data.

3.5.3.3 Relevant Policies and Implementing Actions

3.5.3.4 Impacts

C180-5

12. (303-304/294-295). Anything that would impact the integrity of the district is a significant impact. Why is that not acknowledged?
13. (304-305/295-296) Lots to be disappointed about here. Every effort should be made to preserve the district including construction of buildings replicating the architectural styles, etc.

Sonoma Development Center Specific Plan

Dear Brian Oh,

The following comments are to make sure that the SDC is transformed into a neighborhood that is accessible and affordable to all, epically people with disabilities. C181-1

Given the SDC's history of being an old hospital for people with disabilities it is vital that the entire development is acesaaible. One of the ways to achieve this is to build as many homes using the Visibility method. Visitability requires a zero-step entrance with a slope no greater then (1:12), 32-inch width pathways and doorways. Bathrooms are also equipped with grab bars and are big enough for a mobility device user. Additionally, the climate controls and light switch are low enough for those who use a mobility device. Petaluma passed their own Visitability ordinance earlier this year and it's a great example. The highlight of their ordinance is the width measurements are several inches great then the minimum 32 inches. Visitability has less extremity requirements then Universal Design which requires lower counters or a roll in shower. This could Visitability more appealing to build since it has less extensive design requirements. It was good to see at least 5 parcels be set aside for people with Developmental Disabilities. Ideally there will be more then 5-10 parcels and are built using Universal Design or Visitability.

It is great that a top priority is to transform the SDC into a pedestrian ordinated and multimodal neighborhood. However, it will need to be acesaaible and safe for people with disabilities. This will mean having a sidewalk network that has no gaps and is well maintained. People with disabilities are more likely to be hit by a car if they need to go into the street to due to a sidewalk gap or an obstacle. They are at greater risk as they may not hear or see the car and if they are in a mobility device they may not be seen by motorist. In addition, sidewalks in disrepair can higher trip/fall hazard. They may not see the crack or bump or it could cause their mobility device to get stuck potentially causing it to flip over. Ideally as much of the bicycle network is built with raised curbs or another physical barrier. This is important for people with disabilities as they may a have specially adopted bike which may be lower the ground and harder to see. It will also allow for someone to safely avoid heavy foot traffic or an obstacle on the sidewalk. The sidewalk and bicycle network should also extend outside of the SDC and provide access to Glen Ellen, and other surrounding areas. In addition, wayfinding will also need to be acesaaible with large bold text and have a section that's in brail. Furthermore, intersections and C181-2

crosswalks will need to be highly visible by being pained in large bold stripes. In addition, curb extension or cut outs should be built to maximize visibility. Having crosswalks that are signalized and adequately timed is also vital for safety and accessibility. For example, a crosswalk may to be extended from 10 seconds to 20 seconds to allow for a safe crossing. While it is good to see Complete Streets as one of the goals adding Vision Zero elements should also be considered.

C181-2

Figure 5.1-4 the Arnold Drive concept is overall pretty good. It excels in having a highly visible intersections, crosswalks and protected bike lanes. Having a narrower road will help motorist driver slower enhancing pedestrian safety. Still other ways to make motorist slow down such as landscaping separating opposite lanes of travel should be considered. Signalized crosswalks, traffic lights or stop signs will need to be added to make it accessible. Figure 5.1-6 Harney Street concept is good in that it has wider sidewalks however, the bike lanes should be protected like the ones on Arnold Drive. The bike lane in the middle should be removed as it is too dangerous for bicyclists with disabilities. It is also hard to tell if the intersections are highly visible which is needed given the potential for heavy traffic. In figure 5.1-8 it is good to see a Class 1 bike lane and should be on both sides of the street. Since there is a Class 1 pathway the bikeways on the streets should be removed. The intersection and crosswalk could also be highly visible with signalized crosswalks.

C181-3

Public transportation is also important for those who may not drive due to their disability. More routes into the Santa Rosa, and other major hubs in the area should be added to enhance service. In addition, the county should strongly consider having some express buses to these major hubs. The stops should also provide real time info on routes and schedules with information being provided in both audio and visual format. The stops will need to be covered to provide protection from the elements. The county should also improve its paratransit service so it is easier to get same day rides.

The SDC presents a great opportunity to build affordable housing and help alleviate the housing crisis. The severe housing widely felt for people with disabilities due to the lack of very and extremely low-income housing. This is because many people with disabilities rely on Social Security Insurance (SSI) and/or other public benefits. All of these benefits pay a few hundred or up to around a thousand dollars less than the average rent across the county. Thus, they fall into

C181-4

the very and extremely low-income. Furthermore, the recipient may receive the money from their benefits after rent is due resulting in late fees. This can further reduce one's budget for the month as they may not have the luxury of getting bi weekly. In addition to everyday items extra costs may include medical, support services, or assistive technology to help them with their disability. Given the severe economic challenges that people with disabilities face it's important there is as much affordable housing as possible. The plan mentions building at least 183 affordable units but the county should strongly consider building a mere 17 more units so it's an even 200. It is also very important that future landlords are willing to accept Section 8 and other housing vouchers. These vouchers are a common way for people with disabilities to obtain housing that would otherwise be unaffordable. However, it can be very challenging to find landlords that will accept these vouchers. It would be good to see the county work with landlords to accept these vouchers. This can look like educating landlords on the importance of accepting them and clearing misconceptions of who uses them.

C181-4

Given that the area is in an extremely high fire danger area it's vital that homes and buildings are built to be fire resistant and fuel loads are cleared from the area. The current road network needs to be studied to see how it will handle the increase in traffic during an evacuation. Due to the challenges from disasters improvements will need to be made like building another road to highway 12. The county will also need to take into account that people with disabilities may need extra assistance while evacuating. They may need a ride out of the area and may bring a mobility device, an oxygen tank or other medical equipment. Alerts and warnings will need to be sent out via landline phone and email as these could be their primary way communication. Police and fire personal may need to go door to door since people with a vision or sight disability may not hear or see the high/low sirens. In addition, some may more advanced warnings as it may take longer for them to pack and be ready to leave. For those with cognitive or learning disabilities they may assistance packing the correct supplies or extra explanation on evacuating. While doing outreach and education with residents on wildfire resiliency make sure the information is presented clearly for those with a cognitive disability. Any pictures or graphics will need to be described for those who with sight disability and in audio format for those who have hearing a disability. The fire station at the SDC is a great idea and it should also operate as an operations center. This will help improve response to both the SDC and greater Sonoma Valley.

C181-5

C181-6

It is important that resources like the Sonoma House or main building are kept to help pay respect and homage to past SDC residents and employees. The Sonoma House or main building should be converted into a museum on the history of the SDC. The cemetery should also be revitalized to pay respect for those who died at the center. Other buildings that are persevered should be turned into community space such as an event center instead of a hotel. The Flex Zone is a great concept and supportive services should be considered to occupy the space. It would also be good to see mixed use which is a good way to maximize affordable housing. If the water recreation area at Suttonfield Lake is created it will need to be designed be acesaaible. This will mean having a paved pathway to the to the water's edge. It is also important that the other open spaces are also accessible. If they have amenities such as play structures or work out machines will need to be able to accommodate all mobility levels. To help finance the project all state, federal, private funding are pursued especially for affordable housing. It would also be good to see at least some community buildings be built in the 1-5-year phase instead of the 5-10-year phase. The development should also take into consideration of where a school could be built if the demand arises.

Thank you for taking time to review my comments on the future of the Sonoma Development Center and for previous comments and focus groups. The plan presents a great opportunity to make a vibrant community that is affordable and acesaaible. If the SDC is developed to be acesaaible it will be a great way to carry on its legacy.

Thank You,

Collin Thoma

Systems Change Adovcate

Disability Serivces and Legal Center(DSLC)

521 Mendocino Ave Santa Rosa CA

(707)636-3076

DSLC
Disability Services & Legal Center

DEBORAH C. NITASAKA, M.A.
Science-Minded Thinker & Freelance Writer
P.O. Box 1054, Glen Ellen, California 95442-1054
707.996.8620; 707.318.7214 (mobile); dclaire77@gmail.com

26 September 2022

Brian Oh, Comprehensive Planning ManagerPermit Sonoma
County of Sonoma
2550 Ventura AvenueSanta Rosa, CA 95403
email: Brian.Oh@sonoma-county.org

RE: Public Comment on SDC Specific Plan and DEIR

Dear Mr. Oh:

We are writing today following our review of the draft environmental impact report pertaining to the Sonoma Developmental Center's (SDC) future.

C182-1

As most following this planning process, including Sonoma County Planning Commissioner Greg Carr, have stated (repeatedly, loudly, emphatically) – we find that this report fails, either in part or in total, to account for several environmental impacts essential to any meaningful understanding of the ways in which the public's safety, true protections for the natural environment, and the many human needs are to be addressed. And so, with but a few scant weeks to pour through a 789 page report that bases its assessments, conclusions, and recommendations on the previous "Plan" - and so is itself deeply flawed and grossly inadequate, we will once more *howl into the void*.

Others with more advanced professional qualifications have pinpointed the flaws in those sections of the report pertaining to the natural environment, historic preservation, public safety, and traffic. We will restrict our comments to concerns for the future housing uses of SDC's Core Campus - and to a planning process that appears to have now gone off the rails – disappearing into the abyss of railroaded transparency!

The first of our issues concerns the so-called "SDC Specific Plan" and the "reasonable range of alternatives to the Proposed Plan" - as required by CEQA in an EIR. Is it just us? We find that the community's input is nowhere to be seen in either of these deeply deficient reports.

To illustrate, we and others have proposed, as one reasonable alternative, using SDC's built footprint, referred to elsewhere as its "historical 180-acre built area," as a campus for those seeking training in the trades, in the applied sciences, public service occupations, and other professions of financial and social benefit to the students, their families, and the entire state.

We see no evidence that this invaluable, desperately needed (see any number of actual empirical studies) educational use was given a moment of consideration. Remarkably shortsighted given that use of SDC's Core Campus as a campus would come with fewer vehicle miles travelled, allocations for affordable housing, to name but a few of the benefits, in part because students, staff, and educators could be offered housing within the campus. Please see the attached letter sent to the Sonoma County Board of Supervisors on November 21, 2021 as it offers a deeply researched look at just such a use.

C182-2

Further, the Draft EIR ignores the county's dire need for affordable housing, calling instead for allocating 90% of the 1,000 proposed new houses as market rate homes. This in defiance of **The Final Regional Housing Needs Allocation (RHNA) Plan**, adopted in December 2021 which determined that Sonoma County's fair share of regional housing would be 3,881 units, with 1,632 allocated as housing affordable to very low- and low-income

households. That would be about half the homes to be built, not 10% as this draft EIR calls for! Just a disgraceful display of the preference throughout the draft for meeting the needs of the wealthy over the rest of us.

C182-2

> "SDC Core Campus: Consists primarily of residential buildings, with medical, educational, recreational, and administrative buildings interspersed. A cluster of utility and support buildings, and fire station sit at the western edge of the Core Campus. On the eastern portion of the site, historic agriculture uses…"
>
> Government Code Section 14670.10.5 (c) (4): The agreement shall require that housing be a priority in the planning process and that any housing proposal determined to be appropriate for the property shall include affordable housing. It is further the intent of the state that priority be given to projects that include housing that is deed restricted to provide housing for individuals with developmental disabilities.

To this end, we propose developing cottage clusters throughout the campus designed to meet specific needs such as supportive housing for individuals with disabilities, older adults, agricultural workers, and young families in need of starter homes. As an enriching environment affording access to the educational, recreational, social, health, and support resources, all on this technical college campus, all bringing full circle the many necessities of life - all without segregating this campus from the rest of Glen Ellen - what could be better?

C182-3

It is outrageous to propose 100 of the 1,000 housing units might be deemed affordable, especially when communities such as Glen Ellen have been ravaged for Tourist Occupancy Taxes since Sonoma County's Vacation Rental Ordinance went into effect more than a decade ago. One hundred units doesn't begin to make up for the hundreds of homes converted into commercial tourist traps over these years. We need to actually, truly, add to our housing stock. By "add to" we mean in addition to recovering, by some means, those dwelling units sacrificed for profit, private and public. The proposed housing outline comes nowhere near to meeting the documented need for affordable housing in Sonoma County.

Although state housing element law is cited in Chapter 3.1.2: Population and Housing, we believe that, beyond this scant mention, it ignores state law and the Sonoma County Housing Element. Certainly, it does not begin to touch on the county's requirement to provide for its burgeoning homeless population, a significant aging population unable to live on its paltry retirement income, or an agricultural community ignored in this process - as usual.

Our second point also concerns process. While the people of Sonoma County, of the State of California have been encouraged to participate in a planning process sold to us as public, above board, and time constrained, we have just learned of another process (see attached 9/23/22 Index-Tribune article). This one private, ongoing, underhanded, free of transparency, a play for SDC by a real estate developer and his business partner - both with lengthy histories of questionable business ethics. This time, having sufficiently inserted themselves into the state system, carrying satchels of cash, of many millions of tax dollars, all offered to Sonoma County in exchange for a deal requiring NO Environmental Impact Report and benefitting only the few, the wealthiest schemers.

C182-4

> "Public records reveal that two Sonoma County businessmen — Darius Anderson and Doug Bosco — played central roles in the backdoor negotiations for the easement sales" in a sham process meant to deflect the public's attention away from the dealmaking between a little-known state agency headed by the same man working to bring coal through Sonoma County on the Sonoma-Marin Area Rail Transit district — SMART line (see two attached 2021 Bohemian articles)

Former congressman Doug Bosco is the CEO of the private freight company Northwestern Pacific Railroad Company (NWP Co.). Along with his business partner, real estate developer (e.g., Treasure Island: Radioactive debris) and owner of the powerful Platinum Advisors political consulting firm, Darius Anderson, they leveraged their influence to lobby state and federal lawmakers for the right to transport coal, among other commodities on the SMART rail line. Although most of their plans failed to pan out, through a series of complex loans and contracts (according to The Bohemian's 2021 report), a publicly chartered rail agency, North Coast Railroad Authority (NCRA), now owes NWP Co. millions of dollars. And today they continue running freight on the SMART rails.

It should be noted that Anderson and Bosco are founding members of Sonoma Media Investments, which owns most of the print media in Sonoma County including the Press Democrat, Sonoma Index-Tribune, Sonoma County Gazette, Petaluma Argus-Courier, North Bay Business Journal, Sonoma Magazine, and La Prensa.

C182-6

So it's business as usual as the high rollers operate behind the scenes, leveraging millions of tax dollars in a play for possession of a community resource. Doug Bosco believes he and he alone can secure SDC, work around the usual requirements for an EIR, and buy off Sonoma County to create his next dream project.

When Supervisor Gorin spoke at last week's (September 21) meeting of the North Sonoma Valley Municipal Advisory Council, there was no mention of the Bosco/Ocean Conservancy deal. Nor did County Planner Oh indicate that he was negotiating a deal with Doug Bosco when he addressed the Sonoma County Planning Commission at its September 15 meeting.

The public is entitled to an explanation - NOW! This planning process must be halted until those who will pay (in oh so many ways) are fully informed of the facts.

And now, one final point that cannot be ignored: The Sonoma Developmental Center, Eldridge, the neighborhoods south of SDC - WE ARE ONE! We are Glen Ellen. We will not stand for further planning hellbent on separating our neighborhoods by this or any other planning process!

With earnest sincerity,



Deborah C. Nitasaka, M.A.
Co-founder, Sonoma County Housing Advocacy Group



Tadashi Nitasaka, M.D.

cc: North Sonoma Valley Municipal Advisory Council <hannah.whitman@sonoma-county.org>
Sonoma County Planning Commission <PlanningAgency@sonoma-county.org>
State Senator Bill Dodd <senator.dodd@senate.ca.gov>
State Senator Mike McGuire <senator.mcguire@senate.ca.gov>
Susan Gorin <Susan.Gorin@sonoma-county.org>
District3@sonoma-county.org
District4@sonoma-county.org
David Rabbitt <David.Rabbitt@sonoma-county.org>
Lynda Hopkins <Lynda.Hopkins@sonoma-county.org>
Chase Hunter <chase.hunter@sonomanews.com>
Sonoma Sun <news@sonomasun.com>

DEBORAH C. NITASAKA, M.A.
Science-Minded Thinker & Freelance Writer
P.O. Box 1054, Glen Ellen, California 95442-1054
707.996.8620; 707.318.7214 (mobile); dclaire77@gmail.com

26 September 2022

Brian Oh, Comprehensive Planning ManagerPermit Sonoma
County of Sonoma
2550 Ventura AvenueSanta Rosa, CA 95403
email: Brian.Oh@sonoma-county.org

RE: Public Comment on SDC Specific Plan and DEIR

Dear Mr. Oh:

We are writing today following our review of the draft environmental impact report pertaining to the Sonoma Developmental Center's (SDC) future.

C182-1

As most following this planning process, including Sonoma County Planning Commissioner Greg Carr, have stated (repeatedly, loudly, emphatically) – we find that this report fails, either in part or in total, to account for several environmental impacts essential to any meaningful understanding of the ways in which the public's safety, true protections for the natural environment, and the many human needs are to be addressed. And so, with but a few scant weeks to pour through a 789 page report that bases its assessments, conclusions, and recommendations on the previous "Plan" - and so is itself deeply flawed and grossly inadequate, we will once more *howl into the void*.

Others with more advanced professional qualifications have pinpointed the flaws in those sections of the report pertaining to the natural environment, historic preservation, public safety, and traffic. We will restrict our comments to concerns for the future housing uses of SDC's Core Campus - and to a planning process that appears to have now gone off the rails – disappearing into the abyss of railroaded transparency!

The first of our issues concerns the so-called "SDC Specific Plan" and the "reasonable range of alternatives to the Proposed Plan" - as required by CEQA in an EIR. Is it just us? We find that the community's input is nowhere to be seen in either of these deeply deficient reports.

To illustrate, we and others have proposed, as one reasonable alternative, using SDC's built footprint, referred to elsewhere as its "historical 180-acre built area," as a campus for those seeking training in the trades, in the applied sciences, public service occupations, and other professions of financial and social benefit to the students, their families, and the entire state.

We see no evidence that this invaluable, desperately needed (see any number of actual empirical studies) educational use was given a moment of consideration. Remarkably shortsighted given that use of SDC's Core Campus as a campus would come with fewer vehicle miles travelled, allocations for affordable housing, to name but a few of the benefits, in part because students, staff, and educators could be offered housing within the campus. Please see the attached letter sent to the Sonoma County Board of Supervisors on November 21, 2021 as it offers a deeply researched look at just such a use.

C182-2

Further, the Draft EIR ignores the county's dire need for affordable housing, calling instead for allocating 90% of the 1,000 proposed new houses as market rate homes. This in defiance of **The Final Regional Housing Needs Allocation (RHNA) Plan**, adopted in December 2021 which determined that Sonoma County's fair share of regional housing would be 3,881 units, with 1,632 allocated as housing affordable to very low- and low-income

households. That would be about half the homes to be built, not 10% as this draft EIR calls for! Just a disgraceful display of the preference throughout the draft for meeting the needs of the wealthy over the rest of us.

C182-2

> "SDC Core Campus: Consists primarily of residential buildings, with medical, educational, recreational, and administrative buildings interspersed. A cluster of utility and support buildings, and fire station sit at the western edge of the Core Campus. On the eastern portion of the site, historic agriculture uses…"
>
> Government Code Section 14670.10.5 (c) (4): The agreement shall require that housing be a priority in the planning process and that any housing proposal determined to be appropriate for the property shall include affordable housing. It is further the intent of the state that priority be given to projects that include housing that is deed restricted to provide housing for individuals with developmental disabilities.

To this end, we propose developing cottage clusters throughout the campus designed to meet specific needs such as supportive housing for individuals with disabilities, older adults, agricultural workers, and young families in need of starter homes. As an enriching environment affording access to the educational, recreational, social, health, and support resources, all on this technical college campus, all bringing full circle the many necessities of life - all without segregating this campus from the rest of Glen Ellen - what could be better?

C182-3

It is outrageous to propose 100 of the 1,000 housing units might be deemed affordable, especially when communities such as Glen Ellen have been ravaged for Tourist Occupancy Taxes since Sonoma County's Vacation Rental Ordinance went into effect more than a decade ago. One hundred units doesn't begin to make up for the hundreds of homes converted into commercial tourist traps over these years. We need to actually, truly, add to our housing stock. By "add to" we mean in addition to recovering, by some means, those dwelling units sacrificed for profit, private and public. The proposed housing outline comes nowhere near to meeting the documented need for affordable housing in Sonoma County.

Although state housing element law is cited in Chapter 3.1.2: Population and Housing, we believe that, beyond this scant mention, it ignores state law and the Sonoma County Housing Element. Certainly, it does not begin to touch on the county's requirement to provide for its burgeoning homeless population, a significant aging population unable to live on its paltry retirement income, or an agricultural community ignored in this process - as usual.

Our second point also concerns process. While the people of Sonoma County, of the State of California have been encouraged to participate in a planning process sold to us as public, above board, and time constrained, we have just learned of another process (see attached 9/23/22 Index-Tribune article). This one private, ongoing, underhanded, free of transparency, a play for SDC by a real estate developer and his business partner - both with lengthy histories of questionable business ethics. This time, having sufficiently inserted themselves into the state system, carrying satchels of cash, of many millions of tax dollars, all offered to Sonoma County in exchange for a deal requiring NO Environmental Impact Report and benefitting only the few, the wealthiest schemers.

C182-4

> "Public records reveal that two Sonoma County businessmen — Darius Anderson and Doug Bosco — played central roles in the backdoor negotiations for the easement sales" in a sham process meant to deflect the public's attention away from the dealmaking between a little-known state agency headed by the same man working to bring coal through Sonoma County on the Sonoma-Marin Area Rail Transit district — SMART line (see two attached 2021 Bohemian articles)

Former congressman Doug Bosco is the CEO of the private freight company Northwestern Pacific Railroad Company (NWP Co.). Along with his business partner, real estate developer (e.g., Treasure Island: Radioactive debris) and owner of the powerful Platinum Advisors political consulting firm, Darius Anderson, they leveraged their influence to lobby state and federal lawmakers for the right to transport coal, among other commodities on the SMART rail line. Although most of their plans failed to pan out, through a series of complex loans and contracts (according to The Bohemian's 2021 report), a publicly chartered rail agency, North Coast Railroad Authority (NCRA), now owes NWP Co. millions of dollars. And today they continue running freight on the SMART rails.

It should be noted that Anderson and Bosco are founding members of Sonoma Media Investments, which owns most of the print media in Sonoma County including the Press Democrat, Sonoma Index-Tribune, Sonoma County Gazette, Petaluma Argus-Courier, North Bay Business Journal, Sonoma Magazine, and La Prensa.

C182-6

So it's business as usual as the high rollers operate behind the scenes, leveraging millions of tax dollars in a play for possession of a community resource. Doug Bosco believes he and he alone can secure SDC, work around the usual requirements for an EIR, and buy off Sonoma County to create his next dream project.

When Supervisor Gorin spoke at last week's (September 21) meeting of the North Sonoma Valley Municipal Advisory Council, there was no mention of the Bosco/Ocean Conservancy deal. Nor did County Planner Oh indicate that he was negotiating a deal with Doug Bosco when he addressed the Sonoma County Planning Commission at its September 15 meeting.

The public is entitled to an explanation - NOW! This planning process must be halted until those who will pay (in oh so many ways) are fully informed of the facts.

And now, one final point that cannot be ignored: The Sonoma Developmental Center, Eldridge, the neighborhoods south of SDC - WE ARE ONE! We are Glen Ellen. We will not stand for further planning hellbent on separating our neighborhoods by this or any other planning process!

With earnest sincerity,



Deborah C. Nitasaka, M.A.
Co-founder, Sonoma County Housing Advocacy Group



Tadashi Nitasaka, M.D.

cc: North Sonoma Valley Municipal Advisory Council <hannah.whitman@sonoma-county.org>
Sonoma County Planning Commission <PlanningAgency@sonoma-county.org>
State Senator Bill Dodd <senator.dodd@senate.ca.gov>
State Senator Mike McGuire <senator.mcguire@senate.ca.gov>
Susan Gorin <Susan.Gorin@sonoma-county.org>
District3@sonoma-county.org
District4@sonoma-county.org
David Rabbitt <David.Rabbitt@sonoma-county.org>
Lynda Hopkins <Lynda.Hopkins@sonoma-county.org>
Chase Hunter <chase.hunter@sonomanews.com>
Sonoma Sun <news@sonomasun.com>

California Coastal Conservancy funds study to create climate hub at Sonoma Developmental Center



SLIDE 1 OF 2

The Main Building of the Sonoma Development Center in Eldridge, California. The building is currently not it use. June 29, 2015. (Photo: Erik Castro/for Sonoma Magazine)

AddThis

CHASE HUNTER

INDEX-TRIBUNE STAFF WRITER

September 23, 2022, 12:57PM | Updated 23 minutes ago

The California Coastal Conservancy on Thursday approved a $250,000 grant to explore an addition to the Sonoma Developmental Center redevelopment project that would invest in climate research and rehabilitation.

Doug Bosco, chairperson of the conservancy's board, said it represented a "major change" to the project's current $100 million redevelopment project, which is to sell the 945-acre property to a real estate developer and build up to 1,000 homes, potentially with a hotel and retail spaces.

"It's a beautiful campus, it should be used for something that really enriches people," Bosco said.

The grant directs the county's planning department to develop a plan for adding a climate center to the project and establish financial partnerships that would help pay for it.

"Although real estate developers have proposed typical uses for the campus, the county would like to explore the possibility of dedicating a portion of the site to producing and demonstrating practical solutions for climate change adaptation," according to the staff report on the grant.

The funding comes as part of a $500 million appropriation from the state legislature for the Coastal Conservancy to invest in resiliency projects in 2022-23 and 2023-24.

DAILY HEADLINES
DAILY

Subscribe to the Press Democrat's Daily Newsletter.

Enter your email address

Subscribe Now

Read our Privacy Policy

The proposed climate center would diversify the economy of the Sonoma Valley — which significantly employs low-paying hospitality and agriculture jobs — and bring in "innovators, inventors and investors" to be the "economic engine of the center," according to the report.

"It would run the gamut" on climate innovation, Bosco said, who served as a member of the U.S. House of Representatives between 1982 and 1990. Bosco has been chair of the state's Coastal Conservancy for 17 years and an environmental advocate since the 1970s.

"Anyone that thinks that the world of climate change adaptation is going to be a poverty stricken world is wrong," Bosco said. "Smart people and smart investors are getting into it fast. What we would like to do is have a place where there's synergy among people similar like to what happened with Silicon Valley."

While other climate centers exist throughout the state, many focus research on a single topic, like agriculture or electric vehicles, Bosco said. The proposed climate center at the developmental center would be unique in seeking innovative solutions for a wider variety of issues related to climate change.

"It's the future. There's no two ways about," Bosco said. "No one knows climate change like Sonoma County."

The draft environmental impact report for developmental center is to be finalized Sept. 23, with the final report to be released Oct. 17. The redevelopment plan is scheduled to go before the Sonoma County Board of Supervisors by the end of the year.

Contact Chase Hunter at chase.hunter@sonomanews.com and follow @Chase_HunterB *on Twitter.*

MOST POPULAR

2 mountain lion sightings have Sonoma Valley residents on alert

Bay Area pizza maker named among world's top 50. Here's where to get his pies in Sonoma County

Police: Masked person seen on doorbell cameras prompts increased patrols in Rohnert Park

Sonoma County airport

California Coastal Conservancy funds study to create climate hub at Sonoma Developmental Center



SLIDE 1 OF 2

The Main Building of the Sonoma Development Center in Eldridge, California. The building is currently not it use. June 29, 2015. (Photo: Erik Castro/for Sonoma Magazine)

AddThis

CHASE HUNTER

INDEX-TRIBUNE STAFF WRITER

September 23, 2022, 12:57PM | Updated 23 minutes ago

The California Coastal Conservancy on Thursday approved a $250,000 grant to explore an addition to the Sonoma Developmental Center redevelopment project that would invest in climate research and rehabilitation.

Doug Bosco, chairperson of the conservancy's board, said it represented a "major change" to the project's current $100 million redevelopment project, which is to sell the 945-acre property to a real estate developer and build up to 1,000 homes, potentially with a hotel and retail spaces.

"It's a beautiful campus, it should be used for something that really enriches people," Bosco said.

The grant directs the county's planning department to develop a plan for adding a climate center to the project and establish financial partnerships that would help pay for it.

"Although real estate developers have proposed typical uses for the campus, the county would like to explore the possibility of dedicating a portion of the site to producing and demonstrating practical solutions for climate change adaptation," according to the staff report on the grant.

The funding comes as part of a $500 million appropriation from the state legislature for the Coastal Conservancy to invest in resiliency projects in 2022-23 and 2023-24.

DAILY HEADLINES
DAILY

Subscribe to the Press Democrat's Daily Newsletter.

Enter your email address

Subscribe Now

Read our Privacy Policy

The proposed climate center would diversify the economy of the Sonoma Valley — which significantly employs low-paying hospitality and agriculture jobs — and bring in "innovators, inventors and investors" to be the "economic engine of the center," according to the report.

"It would run the gamut" on climate innovation, Bosco said, who served as a member of the U.S. House of Representatives between 1982 and 1990. Bosco has been chair of the state's Coastal Conservancy for 17 years and an environmental advocate since the 1970s.

"Anyone that thinks that the world of climate change adaptation is going to be a poverty stricken world is wrong," Bosco said. "Smart people and smart investors are getting into it fast. What we would like to do is have a place where there's synergy among people similar like to what happened with Silicon Valley."

While other climate centers exist throughout the state, many focus research on a single topic, like agriculture or electric vehicles, Bosco said. The proposed climate center at the developmental center would be unique in seeking innovative solutions for a wider variety of issues related to climate change.

"It's the future. There's no two ways about," Bosco said. "No one knows climate change like Sonoma County."

The draft environmental impact report for developmental center is to be finalized Sept. 23, with the final report to be released Oct. 17. The redevelopment plan is scheduled to go before the Sonoma County Board of Supervisors by the end of the year.

Contact Chase Hunter at chase.hunter@sonomanews.com and follow @Chase_HunterB *on Twitter.*

MOST POPULAR

2 mountain lion sightings have Sonoma Valley residents on alert

Bay Area pizza maker named among world's top 50. Here's where to get his pies in Sonoma County

Police: Masked person seen on doorbell cameras prompts increased patrols in Rohnert Park

DEBORAH C. NITASAKA, M.A.
Science-Minded Thinker & Freelance Writer
P.O. Box 1054, Glen Ellen, California 95442-1054
707.996.8620; 707.318.7214 (mobile); dclaire77@gmail.com

27 November 2021

Sonoma County Board of Supervisors
Tennis Wick, Permit Sonoma
Brian Oh, Planning Manager
Dyett and Bhatia
Santa Rosa, CA
Submitted 11/28/21: engage@sdcspecificplan.com

RE: Sonoma Developmental Center: Best Use Planning Means Enrichment Planning For A Sustainable Future For All!

Dear Supervisors, Staff, and Consultants:

We have been asked to select from the three options laid out in the SDC Alternatives Report released just a few weeks ago (November 1, 2021). Each offering little realistically plausible beyond an audacious open door for upscale developers to bring in projects bound to fail if past is prologue (i.e., Rohnert Park's Sonoma Mountain Village]aka Hewlett-Packard] and Petaluma's telecom boom (and bust). Beyond some open space promises (with little detail), the rest in no way addresses the very real and urgent needs of Sonoma County residents. C183-1

More tourist-serving accommodations? This valley has been decimated by the county's cash-cow (Transient Occupancy Tax), converting units built for, zoned for, subsidized for, intended for - residents to live in - now operating as disruptive commercial enterprises in residential neighborhoods. The costs to our communities are innumerable. It is clear we have been sold out by our civic leaders. Any further moves toward "tourist-trapping" our community will not go down well. Forget the hotel! Give us back our housing stock!

Industrial parks? For which segment of our undereducated population? According to The Sonoma County Workforce Investment Board's draft Local Workforce Development Plan 2021 – 2024:

> Over the next five years, the following are the top five occupations that will be in-demand for Sonoma County:
> 1. Office and Administrative Support
> 2. Sales
> 3. Food Preparation and Serving
> 4. Transportations and Material Moving
> 5. Management

C183-2

Unless Sonoma County changes course, opting for a more enriching, visionary future, these will be the jobs of tomorrow. I see no reason to settle, to offer so little to our children, to our community. My vision is one calling for opportunity, advancement, growth, fulfillment in work and play.

The people of Sonoma County have been told there must be a plan covering how anything we ask for will be paid for. Curiously, I see no such level of detail in this consultant's report. Why the dichotomy? Maybe it's time to get real, to try a bit more transparency, to actually explore feasible options that will bring to the county what residents so urgently need, with top of the list being decent affordable housing for agricultural workers, students, developmentally disabled, the unhoused, and others most sorely in need. This housing might well be thought of as that needed to replace the hundreds of homes lost to the vacation rental industry as well as to the fires of 2017 - 2020.

C183-3

Sonoma County may not have fulfilled its promise of a community-driven process, but the people of Glen Ellen and beyond are stepping up on their own. For my part, I am pushing past what some say is the line of possible to envision the day students live, learn, and work on SDC's campus. Imagine SDC as a place flourishing with innovation, preserving history, expanding its role to enrich the surrounding community with lifelong learning opportunities, special needs housing and education, visiting professor lecture series, and all while graduating people prepared with the skills essential for fulfilling, well-paying careers, ably set to meet and exceed the demands of today and the future.

I am in full agreement with the thoughts and recommendations sent to you by the Sonoma Land Trust concerning the need to preserve the wildlife corridor. Therefore, the remainder of my comments will pertain to the built portion of the campus.

C183-4

To start, I have to say that the prospect of jamming together thousands of homes in the southern end of SDC is appalling. How does such a banal idea enrich the quality of life for Sonoma County residents? As a housing advocate clocking in more than 30 years, I endorse incorporating housing into SDC's future, especially special needs housing. To do so well will require far more thought than we see here. Questions remain as to how many homes can safely be added to the this part of the valley, how the units would be protected from further loss to Sonoma County's Vacation Rental Conversion Program or to any other misuse. As well, I need to see much more detail regarding the intended population.

As others have said (and I concur), "The alternatives do not provide for adequate emergency egress in the event of wildfire, are not compatible with the rural character of the surrounding communities within the Sonoma Valley, and do not realistically address impacts on infrastructure, such as water recharge, inadequate roadways, sewage system capacity, etc."

Too often Sonoma County officials have ignored what is needed for what is easiest, furthering the human toll. I've seen it all. The matter of public safety became alarmingly clear as a planning oversight when we learned, through the series of meetings held within a single week earlier this month (11/13/21, 11/16/21, 11/17/21), that the consultants did not meet with CalTrans when developing their traffic outline, yet calculated traffic flow by comparing apples and oranges.

C183-5

Able-bodied drivers (2,000-4,000 new local residents, those traveling into Glen Ellen for work, tourists, and others are likely not comparable to developmentally disabled people who have never driven. Their traffic pattern predictions would be laughable if they weren't also potentially deadly (as we have seen when residents attempting to escape the Paradise fire and who were incinerated while desperately fighting to escape the flames).

A related shock, we also learned the consultants never met with local fire agencies. Simply appalling comes nowhere close to my outrage that Sonoma County is, once more, cashing in at the expense, at an ultimate cost of the very lives of the people who live and work here.

Yes, the pressures for change have arrived. Sonoma County's needs are:

- Development (commercial: housing imbalance) - We need to plan for a rebalancing;
- Poverty escalation due to promotion of industrial sectors paying less than living wages (hospitality, tourism, and agriculture) must be addressed by accepting nothing less than **living wage jobs**. We need to prepare our young people for a brighter future;
- Economic collapse following the housing bust;
- Brain drain: SDS closure, the relocation of well-paying industries (telecommunications, Hewlett-Packard, etc.;
- An insatiable hunger for revenue derived from new sources such as recreational drug production and sales, vacation rental conversion of thousands of Sonoma County homes;
- A growing homeless population;
- Escalating real estate prices - pricing most local residents out of the market;
- Housing codes prejudicing construction of large homes over more modest sized units;
- The impact of a collapsing infrastructure (fires, contaminated drinking water, unkept electrical systems);
- The decline of our professional and degreed populace;
- Climate change;
- Questionable practices at the county level (planning, code enforcement, zoning, emergency services);
- Student housing shortage: Santa Rosa Junior College opted to use bond revenue for the construction of an elaborate parking structure instead of desperately needed student housing - resulting in thousands of students now sleeping in their cars (some in that very parking structure [PD article about JC students living in their cars]);
- Low to middle income and special needs housing loss due to VACATION RENTAL industry & lack of building;
- Shortage of skilled tradespersons: Sonoma County lacks cutting-edge jobs training for a sorely-needed workforce - one able to meet national trades workforce shortage.

C183-6

What is the best possible use for SDC as one answer to the issues listed above? Let's start with the dilapidated SDC structures. Their condition is undoubtedly the result of the state's neglect. Therefore, it is incumbent upon Sonoma County to insist that the state acknowledge it is theirs to repair.

C183-7

Not only must the restoration be paid for by the state, we have recently learned that California has a revenue surplus to cover those costs. And those resources have attached to them some stringent guidelines as to how the reported surplus can be spent. Lucky for us infrastructure and colleges are among the options:

> "California is — once again — overflowing with money, and will likely have a $31 billion budget surplus next year, according to a Wednesday report from the independent Legislative Analyst's Office. And because the state is forbidden from spending more tax dollars per Californian than it did in 1978, once adjusted for inflation, it only has a few options for handling most of the cash windfall: slashing taxes; issuing tax rebates; funneling it to schools and community colleges; or earmarking it for certain purposes, such as infrastructure." (Hoeven, 11/18/21)

C183-8

As indicated above, Sonoma County's workforce predictions are not encouraging. They mirror a sad national trend wherein opting out of college are also coming up short on the skills needed to succeed in the workplace:

Two-thirds of Americans over 25 don't have a bachelor's degree or higher. A Harvard study uncovers inconsistent efforts to give these workers skills for economic mobility and calls for improving the problem.

C183-8

Academic work on training programs has been somewhat static, says Rachel Lipson, director of the Harvard Project on Workforce. A paper from 30 years ago might not look much different from one published today. "There's been a lot of attention on K-12 quality and college access and completion, but a lot less on the types of educational and training pathways that sit in between high school and four-year college," she says.

These pathways are critical to the future of economic mobility, and the Project on Workforce hopes to raise the research community's interest in them. "The plurality of the U.S. labor force does not have a four-year college degree," says Lipson. "We can't throw up our hands and say four-year colleges are the only answer." (Smith, 2021)

~~~~~~~~~~~~~~~~~~~

Answers:

C183-9

Having outlined the need and some substantial financial avenues, I will now outline how to put SDC to work for the betterment of the people of Sonoma County. Instead of continuing to produce cooks and tourism graduates, we need to give our kids a better future, one promising living wage opportunities, not a serf's subsistence; one grounded in an understanding of California's history as essential to knowing how best to go forward!

Some Educational & Housing Models As Best Fits For The SDC Campus:

- High Tech "Trade Tech College" -
- Satellite Junior College Campus: Vocational Tech!
- Berea College: I have learned that Berea is interested in expanding to develop this unique college model in every state: Every student attends tuition-free! Every student works on campus, putting to work the lessons learned in the classroom. Majors include education, agriculture, the trades, the arts, and much more.
- The University of Oregon, Phil and Penny Knight Campus for Accelerating Scientific Impact: a 160,000-square-foot campus built to accelerate groundbreaking scientific discovery and development in a collaborative multidisciplinary environment <https://inhabitat.com/leed-gold-targeted-knight-campus-advances-scientific-innovation/>
- Career Technical Education, (Sonoma County) also referred to as CTE, is a multi-year sequence of courses that integrates core academic knowledge with technical and occupational knowledge to provide students with a pathway to post-secondary education and careers. CTE programs deliver an enriched educational experience that promotes student interest and academic success while developing technical and career readiness skills necessary for the workplace of the future. Graduates of today's rigorous and relevant CTE programs are better prepared for high-wage, high-skill and high demand careers.
- "State-supported technical college" - Clark Howard 9/13/18 show
- "Upskilling For Today & Tomorrow" - The Hill Event: Streamed Live 9/22/21 <https://youtu.be/ph9f1Z_P45c>
~~~~~~~~~~~~~~~~~~~

I would add that it is entirely feasible within these models to:

- Incorporate an affordable housing component, including special needs housing, into the campus plan;
- Offer on-site housing for students, staff, faculty which will reduce traffic impacts and provide additional incentives to prospective applicants;
- Training/Educational offerings might include an emphasis on high tech (environmental sciences, construction trades - including 3-D printing for housing production, modern firefighting and law enforcement courses, certificate programs in mental health, special education, & so much more);
- Traditional Trades (Carpenter, electrician, plumber, telecommunications engineer, auto mechanics, fire fighting, law enforcement - emphasizing community policing!, ecological land/resource management, nursery management [plant propagation, marketing, shipping], etc.), w/emphasis on high tech tools;
- LEED Certification program;
- Environmental Sciences: building in internships around campus grounds care (maintenance, repairs, upgrades, etc.) - Forestry, Firefighting technology, Alternative Energy Program;
- Sustainable Farming Program;
- Indigenous People's Program: History & Culture;
- Health/Medical: Psych techs, med techs;
- Arts & Crafts Program (including student work program, sale to the public of hand-made goods);
- Retail Management: (w/training to include time spent running on-campus market);
- Day school for students with developmental disabilities (plug in tech students for "on-the-job" psych tech training aspect);
- Carve-outs for Crisis Management Clinic for Developmentally Disabled in need of care beyond that available in their community settings;
- Permanent Supportive Housing: See as a model Sweetwater Spectrum, Fifth Street West, Sonoma - a "mini-community" for autistic adults (Kory Stradinger, Executive Director);
- Community Center & History Museum: Oversight of cemetery, Sports/Playing Fields, Historic Preservation (Cemetery, buildings, overall site);
- Emphasis on: Economic and Racial Diversity.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

References:

A housing plan "must encompass the basic housing needs of the population as a whole." —Senator Robert F. Wagner in 1936. (Bryce Covert. 5/24/18. The Deep, Uniquely American Roots of Our Affordable-Housing Crisis Nearly half of all renters can't afford rent, and over half a million Americans are homeless on any given night. How did we get here? The Nation.) <www.thenation.com/article/give-us-shelter/>

A Roadmap to Reducing Child Poverty (2019). The National Academies of Science Engineering Medicine. <https://www.nap.edu/child-poverty/?utm_source=NASEM+News+and+Publications&utm_campaign=7ab6f52000-NAP_mail_new_2019_03_11&utm_medium=email&utm_term=0_96101de015-7ab6f52000-101867381&goal=0_96101de015-7ab6f52000-101867381&mc_cid=7ab6f52000&mc_eid=f658cd220a>
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Dyett & Bhatia (11/1/21). Alternatives Report. SDC Specific Plan, Sonoma County. <sdcspecificplan.com>

Fuller, J.B., Lipson, R., Encinas, J., et al. (4/7/21). Working to Learn: New Research on Connecting Education and Career. Harvard Project on Workforce. <https://www.pw.hks.harvard.edu/post/working-to-learn>

Future of Work in California - A New Social Compact for Work & Workers (3/21). Future of Work Commission, State of California. <https://www.labor.ca.gov/labor-and-workforce-development-agency/fowc/>

Gettinger, Aaron (3/6/19). One Reason Rural Students Don't Go To College: Colleges Don't Go To Them. KQED News. https://www.kqed.org/mindshift/53232/one-reason-rural-students-dont-go-to-college-colleges-dont-go-to-them

Kathy Goodacre, CEO & Executive Director, Career Technical Education Foundation (CTEF). CTEF works to align industry and education to strengthen economic development and student success through the development of innovative career to education strategies. <https://ctesonomacounty.org/about-cte/>

Hoeven, Emily (11/18/21). California's $31 billion surplus: More stimulus checks possible. CalMatters.<https://calmatters.org/newsletters/whatmatters/2021/11/california-stimulus-checks/>

Joshua Sabatini (7/2/18). Construction boom expands need for SF job training programs. <http://www.sfexaminer.com/construction-boom-expands-need-sf-job-training-programs/?utm_source=The+Examiner+E-dition&utm_campaign=c91c4a0814-EMAIL_CAMPAIGN_2018_02_02_COPY_01&utm_medium=email&utm_term=0_e2b97b1e7f-c91c4a0814-260813973>

LEED Gold-targeted Knight Campus advances scientific innovation: University of Oregon, Phil and Penny Knight Campus for Accelerating Scientific Impact <https://inhabitat.com/leed-gold-targeted-knight-campus-advances-scientific-innovation/>

LA Trade Tech College (213/763-7000): <http://college.lattc.edu/>

Sims, Christo (6/13/19). How Idealistic High-Tech Schools Often Fail to Help Poor Kids Get Ahead. Zocalo Public Square. https://www.zocalopublicsquare.org/2019/06/13/how-idealistic-high-tech-schools-often-fail-to-help-poor-kids-get-ahead/ideas/essay/

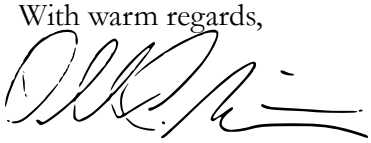
Smith, Carl (5/13/21). Workforce Training Programs Need Employers at the Table. Governing, The Future of States and Localities. <https://www.governing.com/work/low-skill-worker-training-needs-more-employer-input>

Sonoma County Workforce Investment Board: Local Workforce Development Plan 2021 -2024 (draft). <https://sonomawib.org/wp-content/uploads/2021/03/SCWIB-DRAFT-Local-Workforce-Development-Plan-2021-2024_compliant.pdf>

Kory Stradinger, Executive Director, Sweetwater Spectrum (Sonoma, Fifth Street West, "mini-community" for autistic adults).

Anisa Thomsen, Redwood Empire Chapter, National Electrical Contractors Association (see 11/4/21 PD LTE: Jointly run labor-management training programs & DIGNIFIED wages & benefits!).

With warm regards,



Deborah C. Nitasaka



The COVID-19 pandemic crushed SMART's ridership numbers and cast further doubt on the passenger train's long-term viability. Photos by Chelsea Kurnick

Railroaded: Behind the Scenes of SMART's Freight Takeover

By Will Carruthers

A Story in Two Parts. Read the second story here.

Nov 3, 2021

On the muddy banks of the Petaluma River in downtown Petaluma, a new housing complex is rising. Crews employed by the A.G. Spanos

Corporation, a Stockton-based developer, are constructing a 184-unit apartment complex on a lot sandwiched between a row of historic businesses and the tidal slough.

Before laying out the concrete foundations, the crews ripped out a few hundred feet of railroad tracks that crossed the lot. The old rails were part of a spur located less than a mile off the century-old main line running between Sausalito and Eureka. Planning and construction could not commence until Spanos controlled the legal "rights of way" on the tracks.

Rights of way are contractual easements that allow their owners to travel across another's property. In this case, the easements on the riverfront tracks had value because the developer needed to extinguish them in order to build. That fact cost Spanos millions of dollars.

Public records reveal that lengthy negotiations between the Spanos corporation and two state-created rail transportation agencies for ownership of the rights of way preceded breaking ground for the construction project. One right of way was owned by a passenger line, Sonoma-Marin Area Rail Transit district — SMART. A second right of

way was owned by a state-owned freight line, North Coast Railroad Authority (NCRA). Both railway agencies saw the sale of the easements as potential cash cows.

In April 2017, Spanos reached an agreement with the two agencies, shelling out $2.4 million for the right to remove the track. But that is not the end of the story. Millions of taxpayer dollars have been deployed to bail out and close down the NCRA, which leases the right to use its rails to a private company called Northwestern Pacific Railroad Company, or NWP Co.

Public records reveal that two Sonoma County businessmen — Darius Anderson and Doug Bosco — played central roles in the backdoor negotiations for the easement sales.

Who are they and why does this story matter?

Darius Anderson is a real estate developer who owns Platinum Advisors, a powerful California lobbying and political consulting firm. He also owns the *Press Democrat*.

Records show that during the negotiations over the railway easement sales price, Anderson apparently leveraged Platinum Advisor's position

as a SMART lobbyist to, in effect, benefit the aforementioned Northwestern Pacific Railroad Company or NWP Co, which is controlled by another *Press Democrat* owner, former congressman Doug Bosco.

Records obtained by the *North Bay Bohemian* and *Pacific Sun* using the California Public Records Act reveal that SMART director Farhad Mansourian allowed Anderson to guide SMART's participation in the Petaluma right of way deal, even though that task was outside of the scope of Platinum Advisor's state lobbying contract with SMART. Mansourian also asked Anderson to lobby federal lawmakers, another task outside the scope of Platinum's original contract.

During his five years representing SMART, Anderson's firm lobbied for state and federal legislation involving the fate of Bosco's private freight company. SMART paid Platinum Advisors $600,000 before the contract ended in February 2020.

In order to grasp why the lobbying contract and the railway right of way deals stink of conflicts of interest, we must take a step back into the recent history of rail freighting in the North Bay, a

domain which Bosco and his allies have overseen for at least 15 years, with financial consequences that are not in the public's best interests.

How It All Began

Our story starts with the gradual demise of a once-lucrative railroad line stretching about 300 miles from Sausalito to Humboldt Bay that chugged into existence in 1914.

At first, sections of the Northwestern Pacific Railroad were operated by a potpourri of privately owned companies that profitably hauled lumber and other commodities up and down the North Coast, while also operating passenger trains.



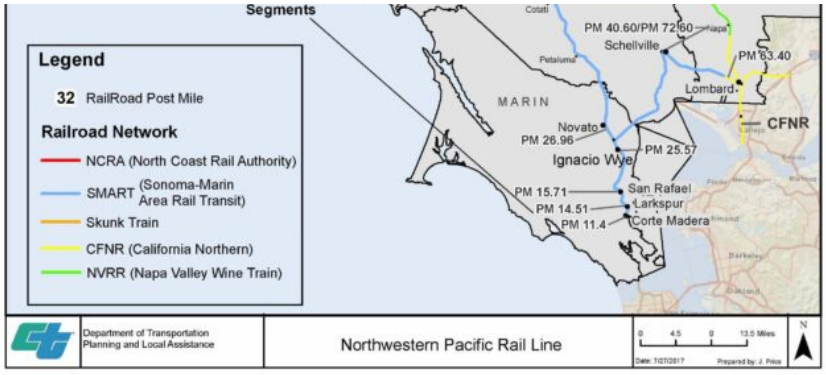


Figure 4. Map of Northwestern Pacific Railroad - Southern Section

However, the rail line's profitability was ultimately doomed by the decline of the North Coast's resource extraction industries, a catastrophic tunnel fire in 1978, and an endless series of floods. In the 1980s, storm-induced landslides destroyed the mid-section of the line, running through the Eel River Canyon. Increasingly, the railway appeared to have no future.

Trying to preserve the viability of the defunct rail line for freighting, state lawmakers created the North Coast Railroad Authority in 1989. Over the next two decades, state and federal agencies spent $124 million purchasing the railroad from various private companies and funding the NCRA's efforts to restore sections of the decaying track for use by freight trains. But the hoped-for regeneration of the historic railroad was stymied by the failure of the California government to consistently fund the substantial costs of restoring the entire rail

line and the NCRA's ongoing operating costs.

Enter Bosco

In June 2006, a group of businessmen formed the privately owned Northwestern Pacific Railroad Company or NWP Co. The venture was designed to rejuvenate the freight line by creating a "public-private partnership" with the flailing NCRA to reopen the entire line. In short, NCRA and NWP Co would collaborate to improve and maintain the rail infrastructure using public and private funds. NWP Co would privately lease the right to operate freight trains from the NCRA and (somehow) make money.

Among NWP Co's founders was Doug Bosco, a former state assemblyman and congressman who had worked on transportation issues at the state and federal levels during his time in office.

According to the NWP Co business plan submitted to the California Transportation Commission in October 2006, Bosco and his partners had grand plans. The document outlined multiple business prospects which NWP Co claimed would allow the company to generate annual revenues of more than $3 million within a few short years.

First, on the southern end of the line, NWP Co projected annual revenues of about $1.1 million hauling lumber and agricultural products. The company estimated revenues of about $2 million transporting garbage from Sonoma County's landfill to a solid waste dump in Nevada, with which it claimed to have an "exclusive right to negotiate" for 200 years.

If reopened, the northern end of the line would be even more lucrative, NWP Co claimed. The company asserted that it would partner with Evergreen Natural Resources to transport rail cars packed with gravel from the Island Mountain Quarry at the border of Mendocino and Trinity counties. Once the decaying rail lines to the quarry were reopened, the gravel shipping business could generate revenues of "at least $30 million per year," the business plan stated.





As the general counsel for NWP Co, Bosco would "assist in the interface between NWP Co. and NCRA and various funding agencies in order to ensure ... that the public agencies' reimbursement funding flows smoothly to NCRA," according to the NWP Co business plan. Public records show that Bosco now also serves as CEO of NWP Co.

If the company's Island Mountain plans had panned out, NWP Co — and the NCRA in turn — would have gained a rich stream of income. At the time, the NCRA estimated the capital cost of rehabilitating 300 miles of rails was $150.6 million — $42.6 million for the portion south of the Russian River, and $108 million for the northern Eel River Division, according to NWP Co's plan. A *Los Angeles Times* report in 2001 was less optimistic, citing a federal study which calculated the cost of reopening the entire line for freight and passenger rail at $642 million.

The NCRA-NWP Co main lease agreement was signed in September 2006. In 2011, the NCRA and NWP Co started running freight cars along 62 miles of refurbished track in the North Bay. But, according to a recent report by SMART, the

freight revenue appears to be lower than the amounts originally projected by NWP Co. Nor did Bosco's company secure a contract to ship Sonoma County's waste to Nevada. And the Island Mountain quarry project, and other shipping opportunities potentially served by rejuvenation of the northern two-thirds of the line, never materialized.

To make up for the shortfall between revenues and capital, legal and operating costs, the NCRA entered into a complex series of loans and contracts with NWP Co, which somehow resulted in the publicly chartered rail agency owing millions of dollars to the privately owned NWP Co.

> *"AN IMPARTIAL OUTSIDE OBSERVER ... COULD CONCLUDE THAT ... THE PUBLIC IS NOT CURRENTLY GETTING — AND MAY NOT EVER GET — THE BENEFIT OF TENS OF MILLIONS OF TAX-PAYER DOLLARS USED IN THE LINE'S REHABILITATION."*
>
> Bernard Meyers

But a 2020 state assessment of the NCRA — in effect, an autopsy — examines how the public rail agency's intertwined relationship with the private NWP Co came to pass. Remember, the NCRA was theoretically created for the purpose of saving the publicly owned railroad, but it became, in effect,

forever indebted to Bosco's privately owned company, according to government reports and a former NCRA board member.

According to the report, prepared by a handful of state agencies, including the California State Transportation Authority and California Department of Finance, "When the Legislature created NCRA, it did not designate NCRA as a state or local agency and did not appropriate funding for its operations. Since its inception, NCRA has covered its expenses from rail revenues; state grant funding; public and private loans; loan forgiveness; proceeds from lease agreements; and leasing or sale of assets." (Since it never received much revenue from its lease agreement with NWP Co, NCRA's most valuable assets became the excess properties and rights of way it owned up and down the line, including the property rights on the Spanos lot bordering the Petaluma river — and we shall return to *that* story.)

For decades, California agencies have been wary of funding the NCRA due to its convoluted accounting practices, which are intertwined with the accounts of NWP Co. CalTrans and FEMA have long branded the NCRA a "high risk"

recipient of state and federal funds.



A Sweet Deal

Bernard Meyers, a former NCRA board member, says that the NCRA's long-running debts to NWP Co and its myriad financial problems can be directly traced to the problematic 2006 lease agreement with NWP Co.

Mitch Stogner has served as executive director of NCRA since 2003. Stogner worked as Bosco's chief of staff for 15 years, first in the California Assembly (1976-1982), and then in Congress (1983-1991).

Remarkably, the 2006 agreement states that NWP

Co is not required to pay rent on the tracks *until* the company has booked $5 million in net revenue in a single year — "net" meaning $5 million after taxes and other expenses. Because NWP Co has not met the $5 million threshold, it has paid very little to the NCRA for the use of the tracks.

Between 2006 and 2019, the NCRA "entered into 8 agreements, 7 amendments, and 1 informal financing arrangement with NWP Co. to fund NCRA's operations," according to the 2020 state assessment. The partially revealed paper trail delineates a strange relationship between the two, with NCRA acting as landlord and NWP Co acting as tenant. It's a relationship in which the tenant does not pay rent, because it does not net more than $5 million a year, but it has enough, somehow, to loan the landlord millions of dollars to cover rail maintenance and capital construction costs.

Without the investment of hundreds of millions of dollars, however, reaching the $5 million annual revenue benchmark was clearly a pipe dream.

Meyers represented Marin County on the board of the NCRA for six years. In 2013, he wrote a brutally accusatory and detailed exit memo to his

colleagues laying out a litany of complaints about the way the NCRA was run — and whom the oddly crafted agency seemed designed to benefit.

"An impartial outside observer coming afresh to the NCRA's books and the NWP lease could conclude that this organization is primarily run for the benefit of its lessee, NWP Co., that the public is not currently getting — and may not ever get — the benefit of tens of millions of tax-payer dollars used in the line's rehabilitation, and that public benefit was not a primarily intended consequence," Meyers wrote.

Four years later, in June 2017, the California Transportation Commission revisited the financial status of the NCRA after state staff noticed that a recent audit had raised "substantial doubt about NCRA's ability to continue as a going concern." Testifying to the Commission, Stogner did not deny the charge of insolvency. Instead, he leaned into it, commenting that such a concern "is a comment that our auditors have made for at least the last seven or eight years" due in part to the fact that the agency did not have a dedicated source of state funding. As a remedy, Stogner proposed that the state transfuse the moribund NCRA with cash plasma. Instead, in January 2018,

the commission signaled its support for the state legislature to shut the NCRA down, a process which has been dragging on and on.

In early 2018, State Senator Mike McGuire introduced legislation to transform much of the 300 mile long railroad right of way into a bike and pedestrian trail dubbed the Great Redwood Trail, running from Larkspur to Humboldt Bay.

This legislation requires the freight business on the southern end of the line, where its lessee, NWP Co, had been running freight since 2011, to be controlled by Sonoma-Marin Area Rail Transit district, SMART. The passenger rail agency was created by state legislation in 2002. It is funded by a combination of federal, state, and local tax dollars. When NWP Co started to run freight on the NCRA rail lines in 2011, it agreed to share the rails with SMART. In August 2017, SMART started to run passenger trains.





Enter Anderson

On Jan. 1, 2015, SMART hired Darius Anderson's Platinum Advisors to represent the transit agency's interests in Sacramento.

By choosing to hire Platinum Advisors, SMART's board of directors chose a firm with deeply intertwined business and political interests in the North Bay.

Anderson is a North Bay native who reportedly got his start in politics as a driver for Bosco in Washington D.C.

He went on to work for billionaire Ron Burkle's Yucaipa Investments. Burkle has partnered with Anderson in real estate ventures, such as developing Treasure Island in San Francisco Bay. In 1998, Anderson founded a Sacramento-based lobbying firm, Platinum Advisors. Public records from 2018 show that Burkle is Anderson's "partner" and that Burkle "owns ten percent or more" of the political consulting firm.

Notably, in 2017, San Francisco Superior Court found that Anderson and Doug Boxer, the son of former US. Senator Barbara Boxer, had defrauded the Federated Indians of the Graton Rancheria while working as consultants to the tribe's casino venture in the early 2000s. Anderson was ordered to pay $725,000 to the tribe to cover its legal fees and arbitration costs in the civil action. Defrauding the Graton Rancheria does not seem to have negatively affected Anderson's reputation amongst the political and corporate classes, however. Today, Platinum Advisors represents dozens of public and private clients from its offices in San Francisco, Sacramento and Washington D.C. Anderson enjoys insider access to many Democratic and Republican politicians, as he is a prolific campaign fundraiser.

In 2011, Anderson and Bosco joined forces as founding members of Sonoma Media Investments, which now owns most of the print media in Sonoma County, including the *Press Democrat*, *Sonoma Index-Tribune*, *Sonoma County Gazette*, *Petaluma Argus-Courier*, *North Bay Business Journal*, *Sonoma Magazine*, and *La Prensa*.

SMART's contract with Platinum Advisors includes a conflict of interest clause, requiring

Anderson to promise that he and his firm did not own — and would not develop — any "direct or indirect" financial holdings which conflict with their work for SMART.

The contract allowed SMART to ask Anderson and his employees to divulge their economic interests, but SMART spokesperson Matt Stevens said that SMART's outgoing director Farhad Mansourian, who directly oversaw Anderson's work, did not request such disclosures, and that SMART staff was "not aware of any financial conflicts of interests that would conflict in any way with Platinum Advisors performance regarding its services."

Darius Anderson did not respond to requests for comment.

Mansourian deployed Platinum Advisors to push for state funding and favorable legislation in Sacramento. And he often turned to Anderson and Platinum Advisors' transportation specialist Steven Wallauch to lobby state officials on legislation involving the NCRA and Bosco's NWP Co, according to emails obtained by the *Bohemian*/*Pacific Sun* through a public records request. On multiple occasions, Mansourian also

requested that Bosco himself contact the governor's office and federal lawmakers on behalf of SMART.

When McGuire introduced Senate Bill 1029 in 2018, it needed language to effectuate the closure of the NCRA's debts and business relationships with its contractors, chief among them Bosco's NWP Co.

Emails show that Bosco was involved in crafting the legislation.

On June 27, 2018, Mansourian emailed Anderson for an update on the legislation: "Did you talk to Doug?! ... Should we go and see Governor's chief of staff on SB 1029 ??"

Anderson responded the next day: "I did talk to Doug. Once they have language solidified, they will go to the Governor's office."

"What language? Who is working on that?" Mansourian asked.

"There is language being worked on to pay off the debts and liabilities. I am sure that Jason [Liles] will be sharing with us all before it moves forward. It's the same language that you are working on

with Jason," Anderson wrote. Jason Liles, the McGuire aide working on the legislation to close down the NCRA, is also a Bosco alumnus.

The last paragraph of McGuire's bill, as signed by Gov. Jerry Brown in September 2018, allocated $4 million in state funding to SMART "for the acquisition of freight rights and equipment from the Northwestern Pacific Railroad Company [NWP Co]." At a board meeting last May, SMART's directors agreed to purchase NWP Co's freight rights and equipment for $4 million, and to add freight services to its passenger rail offerings.

Liles did not respond to requests for comment. SMART's spokesman said the agency's staff does not know how the $4 million figure was reached. Bosco wrote "I do not recall where the $4m sales price came from," but called the price a "bargain" for the state. The 2020 state assessment of the NCRA, which was prepared and published after the $4 million figure was calculated, argues that SMART taking ownership of freight service in the North Bay will have some financial benefits over allowing a separate private freight company to purchase the freight rights from NWP Co.

In subsequent NCRA-related bills authored by

McGuire, the state set aside more millions of dollars to cover NCRA debts. On top of paying $4 million to NWP Co for freight rights and equipment, the state paid NWP Co $3.47 million to cover NCRA's interest-bearing debts to the company, according to Garin Casaleggio, a CalSTA representative.

That amounts to a $7.47 million cash payout to the NWP Co enterprise that had failed to deliver on the prospects it outlined in the 2006 business plan. It does not look like the freight rail business is going to do any better under SMART, however.

The move to take on the additional responsibility of running a freight line came at a trying time for SMART. On March 3, voters in Sonoma and Marin counties rejected Measure I, a ballot item intended to extend the sales tax supporting SMART from 2029 to 2059 — giving SMART a financial buffer for decades to come. Weeks after the failure at the ballot box, a global pandemic hit, crushing the agency's ridership numbers and casting further doubt on the passenger train's long-term viability.





Bosco, who appeared at a virtual SMART meeting in May 2020, wasn't much help in predicting the future. Asked about his company's current revenue, Bosco wouldn't give a specific answer.

"I don't want to disclose the exact numbers because that's our proprietary information. But I can tell you that we take in about $2 million in revenues a year," Bosco said.

Yet, despite having few details about how much money Bosco's freight company earned or spent, and lacking an assessment of how much it would cost SMART to take over the freight operation, 11 of SMART's 12 board members voted in favor of the paying off and taking over NWP Co's freight operations at the May 2020 meeting.

The supporters of the decision highlighted the fact that Senator McGuire and state officials had

endorsed the deal, and that McGuire promised to secure $10 million in state funding over the coming years to cover SMART's freight startup costs. Still, it remains unclear to this day how much it will cost SMART to cover day-to-day freight operations or how much revenue the business is expected to bring in.

Adding to the pressure, SMART staff told board members at the May 2020 meeting that the board had to make a decision by June 30 or risk losing the state money on the table.

Only one board member, then-San Rafael Mayor Gary Phillips, abstained from supporting the takeover, citing a lack of financial information.

"We've been told by Mr. Bosco, and I like Doug, that it's highly profitable or at least profitable. I don't have anything — I don't know if any of us have anything that would indicate that. And so we're going to take on this obligation with the unknowns that are present. I think that, quite frankly, would be quite foolish of the board," Phillips said during the meeting.

This February, SMART contracted with a Marin County consultant, Project Finance Advisory Limited, to study the feasibility of the freight

takeover plan the agency's board had approved nine months earlier. In early September, the consultant provided board members with an executive summary of the report. The full report is not complete, according to Stevens, the SMART spokesman.

The executive summary is revealing about NWP Co's business history, even though Bosco's company declined to disclose its operating costs to the consultant.

The document estimates that NWP Co's freight business brings in between $1.2 and $1.3 million per year by hauling agricultural products to four North Bay manufacturers, including Lagunitas Brewing Co. and Hunt & Behrens, Inc., and storing excess railroad equipment and liquid petroleum gas for Bay Area refineries. Although most people associate freight companies with transporting goods, the report estimates that nearly half of NWP Co's revenue comes from storing rail equipment and "LPG" filled tankers at a train yard near Schellville.

The report cannot estimate how much it costs NWP Co — and by extension will cost SMART — to offer freight services because "detailed,

itemized financial records for NWPCo. were not provided" to SMART.

The report posits that running freight cars can offer a "comfortable profit margin," but it's not clear how many, if any, North Bay companies are interested in switching from conventional trucking to rail freight.

Since the actual freight operating costs are unknown, outsourcing operation of the freighting back to NWP Co or another contractor could run up a deficit for SMART, which is having enough trouble trying to provide adequate passenger services.

While SMART studies the North Bay's freight market, NWP Co has continued to serve its customers without paying SMART.

In his written response to the *Bohemian*/*Pacific Sun's* questions, Bosco said that "The NWP/NCRA lease has not yet been transferred to SMART nor has NWP relinquished its operating rights. Accordingly, NWP is not paying rent to SMART." Stevens, the SMART spokesman, confirmed that NWP Co continues to run freight under its lease agreement with the NCRA while SMART and NWP Co negotiate an interim agreement.

Next week, the *Bohemian*/*Pacific Sun* will report on the secret negotiations over the price of the rights of way in Petaluma that took place between Bosco, Anderson, the Spanos Corporation, and SMART.

Peter Byrne contributed to this report and edited it.

From: liz brand
To: Brian Oh
Subject: Q. on noise and light pollution for Draft EIR for SDC
Date: Monday, September 26, 2022 4:55:29 PM

EXTERNAL

Hello,

In reading about noise on page 323 in the DRAFT EIR, I am curious what mitigations planned to keep noise down in the future development that harm the wildlife?
Our society is noisier and higher volume with humans pushing the limits on modified mufflers, house parties, and electronic music. We know these excessive noise levels affect humans in negative ways, and also stresses our native wildlife. What will be done to limit the stress due to noise on the critical habitats surrounding SDC, including the wildlife corridor?

C184-1

I have another Q. This time about light pollution. Our nocturnal species need dark skies to feed, procreate and navigate at night. What is the plan to limit lighting at the new development with special consideration to native wildlife?

What will be the plan to educate future residents of the area on living in harmony with wildlife, esp. with respect to the above subject areas?

Thank you for your work,
Elizabeth Brand
9030 Bennett Valley Rd.
Glen Ellen, CA 95442

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Joanna Felder
To: Brian Oh
Subject: SDC Environmental Report
Date: Monday, September 26, 2022 4:11:43 PM

EXTERNAL

Dear Mr. Oh:

I do not feel that the environmental report considered the wildlife corridor sufficiently. The stated goals of the project are at odds with the environmental report. There did not appear to be cognizance of current migratory pathways — where the animals are now using the land — and how that would be considered in such a dense residential project.

C185-1

The other issue that was not addressed is water. What aquifer does SDC draw from. What is the current state of that aquifer in terms of capacity, depth and anticipated longevity. With water being a state-wide concern, more consideration needs to be given to this issue. Long-term residents are suffering now and the Environmental Report short-shifted this critical issue.

Obviously the number of proposed dwellings is out of scale with the size and character of Glen Ellen but perhaps that is beyond the scope of the Environmental Report. Hiring a San Francisco firm to assess such a fragile and rural landscape was a problem in itself. Their ideas of "walkable village environment" — very hip and very urban in its concept is ridiculous in the isolated setting of the SDC.

Anyway, thank you for letting us comment and let's hope someone listens.

Joanna

Joanna Felder

170 Rancho Bonita Way (very nearby)

Sonoma, CA 95476

(415) 505-5170

feldercreative@earthlink.net

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Deb Votek
To: Brian Oh
Subject: Questions and comments regarding Draft Environmental Impact Report
Date: Monday, September 26, 2022 3:29:56 PM

EXTERNAL

Dear Mr, Oh,

We have been residents in Glen Ellen for 38 years recording rainfall. The rainfall average at our home on Sonoma Mountain Road is 45 inches. Last year we recorded 14.5 inches with the average steadily getting lower over the years. There are many cases of neighbors' residential well water levels also getting lower over the years. Where is the evidence that the development of the scale proposed for SDC will not further impact water availability for those of us who do not have municipal water available to them?
The DEIR is inadequate while the so-called self-mitigated Specific Plan contains many general policies, goals and conditions of approval to address environmental impacts, the DEIR does not meet CEQA requirements. The DEIR clearly does not adequately analyze and prevent or reduce environmental impacts in most if not all of the areas studied as evidenced by too few requirements and many vague words such as “promote” or “encourage” or “if feasible.” The DEIR definitely needs to be amended and the Conditions of Approval strengthened and moved into a **legally enforceable Mitigation and Monitoring Program.**

C186-1

Respectfully,

Joseph & Deborah Votek

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don’t know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: Linn Briner
To: Brian Oh
Subject: Water Demands and the SDC
Date: Monday, September 26, 2022 4:23:48 PM

EXTERNAL

Dear Mr. Oh,

I have many concerns about where the planning for the future of the SCD is going. For example: to state that effectively doubling the size of Glen Ellen would increase commute or evacuation times by only 15 seconds is outlandish. What type of modeling did you use I wonder. I personally had to evacuate during the 2017 fires and part of my property was destroyed. I live just one row of houses from a property line for the SDC. The traffic was bumper to bumper on one of the only two roads out from town.

C187-1

The main topic of this letter, however, is water. Again, what type of modeling did you use? As you know, we're experiencing climatic change and more erratic weather, and more droughts are predicted for our area. Putting the load of so many new people (2+ thousand) on the local, fragile water supply seems a ticket for disaster.

Additionally, I am concerned about the safety of the creeks, streams and rivers on the SDC property. I do not think that a 50 foot setback is enough to protect the waterways and the wildlife associated with those same waterways. Demolition and building projects will release pollutants into the soil and water, as would the increased population. Right now, this area is a delicate sanctuary for many other types of life as well. Please increase setbacks to 100 ft from all waterways.

Thank you for considering my concerns.

Linn Briner
720 Martin St.
Glen Ellen, CA 95442

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

From: glenellencav@comcast.net
To: angela morgan
Subject: Addendum to GEHS Public Comments on Eldirdge

The Glen Ellen Historical Society requests that the video and minutes of the September Landmarks Commission be reivewed for inclusion in documentation regarding the DEIR and the Draft Specific Plan via landmarkcommision@sonomacounty.org. Minutes nor video are not yet posted however the Commisssion's dismay and lack of background on these two documents should be documented.

C188-1

From:	Tamara Boultbee
To:	Brian Oh
Cc:	Susan Gorin; David Rabbitt; Chris Coursey; Lynda Hopkins; James Gore
Subject:	Draft SDC EIR
Date:	Monday, September 26, 2022 3:27:59 PM

EXTERNAL

Dear Mr. Oh,
There are several areas that I wish to address today concerning the draft SDC EIR. The areas are:
1. Density
2. Traffic
3. Environmental
4. Consistency with Goals & policies of GP as well as Specific Plans

C189-1

Density: Proposed density is much too high for the location and creates inherent negative impacts on the existing population, environment and adjacent locales. High density, such as proposed (housing as well as commercial), increases the danger of wildfires, changes the world of wildlife and nature (a critical need to preserve), changes the cultural, visual and societal quality of life, presents a considerable impact (both now and in the future) on agriculture, and such density should be restricted to existing developed areas within major city boundaries, not in rural areas.

C189-2

Traffic: Increased traffic would negatively impact roads, especially those designated to remain rural roads in the county General Plan as well as Specific/Area Plans due to large scale commuting, avoidance of congested major roadway, and other rationale. Also, would have a serious impact on emergency evacuations in this area as well as adjacent areas due to wildfires, earthquakes, emergency services, etc.

C189-3

Environmental: Negatively impacts the rural environment/quality of life, scenic resources, wildlife corridors and existence, and is in conflict with the General Plan for areas that are to be maintained "rural."
Treats a rural area more as an urban area in proposed design. Ignores the personality of an area and the needs of existing occupancy/usage. It appears to desire to create a large area of relative high density in contrast to existing and long time usage as well as expressed future designations (GP). Additionally, the existing inadequate water usage and recycling as well as inadequate energy provisions are major obstacles - and costly. (Prior to building any major density growth the infrastructure needs, residential as well as commercial, must be in place prior to any new development or usage i.e. any new or adequately restructured roadways, improved and adequate water availability and reuse thereof. Also, alternative transportation needs such as buses, etc.should be in place.

C189-4

Consistency with GP and Specific/Area Plans: These BOTH need to be thoroughly reviewed as the impacts of this proposal is far reaching - the negative impacts extend far beyond the confines of this project. Per the GP-to maintain the rural quality (visual as well as technical/environmental) with development to be in sync with established precedents and within established urban/rural locations.

C189-5

You have received, I am sure, numerous letters from a wide variety of persons and

perspectives. Herewith are my suggestions (based upon my many years of being involved in voluntarily working with the county on the General Plan and more specifically a Specific/Area Plan). Maintain the general character of the area. Any development should be low profile, provide for a greater percentage of low-middle income housing within a set total allotment, keep any additional commercial to a minimum, no hotels, and the total number of new housing (including any bonuses) should be capped @ 450! And by all means, protect the open space, wildlife corridors, rural amenities and the character of the existing locale.

C189-5

Thank you.
Sincerely,
Tamara Boultbee

THIS EMAIL ORIGINATED OUTSIDE OF THE SONOMA COUNTY EMAIL SYSTEM.
Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and never give out your user ID or password.

To: Permit Sonoma

From: Teresa Murphy

Subject: Eldridge Draft EIR/Draft Specific Plan

I have been a strong community advocate for the preservation and prudent management of the Eldridge Property formerly known as Sonoma Developmental Center since 2012.

C190-1

I STRESS that the urbanization of Eldridge is not portrayed accurately in the Draft EIR. The number of houses, population and vehicles are not realistic The Draft EIR does not stress the preservation of cultural integrity, history, conservation and housing in scale. The inadequacy of the term 'self-migrated" is repeated over and over. Specific plan appears to fall short of CEQA. Legally enforceable Mitigation and Monitoring should be included in the DEIR that currently states in many instances, "no mitigation needed.'

I respectfully request the following;

There should be a review of the Landmarks Commission meeting at which the Commissioners self-disclosed that they were uninformed due a less than seven day opportunity to review the documents. Permit Sonoma did not send the DEIR and DSP until Friday before Labor Day and the hearing was the next week. It appeared that the Commission would like more time to study the historic aspects of the property. Why was not the Landmarks Commission brought in two YEARS earlier for their expert opinion? Include a reference or rationale of why Sonoma County has not responded to a two-year-old application for Historical Landmark status for Eldridge.

C190-2

A CEQA level identification of potential impacts of known or potential historic sites and landscapes.

Consider the historic sites as an entire cultural landscape. Do not individual buildings individually to be demolished.

Require a future developer prepare a historic preservation plan, based on desired development and suitability of buildings for adaptive reuse, with the overarching objective of preserving a set of buildings that reflect the diversity of building types and the continuum of life at the former SDC.

Explain how the demolition of buildings reduces the eligibility of the property for the National Register of Historic Places. The property application has been submitted by SHPO and the GEHS has been asked for additional and expanded information on the property, specifically the east side of Arnold Drive. According to the Draft not all buildings, structures, and landscape elements within the historic district boundary are considered contributing resources because some of them are outside the 1889- 1949 period of significance and others do not have sufficient historical integrity. Due to the expansion of the historic district boundary as requested by SHPO, the number of

C190-3

contributing resources grew from 46, as identified in JRP's May 2017 report, to 94 buildings and structures. Where is any reference to Wallace, Roberts and Todd or Page and Turnbull or JRP and their findings regarding historical preservation of building and landscapes?

C190-3

Why is there no mention of historic preservation in the initial bullet points? The statement of Balance with Historic Resource Conservation is acceptable however it is qualified with 'where feasible.' What is the definition of the phrase 'where feasible?'

Did the consultants confer with CALFIRE developed recommendations for fire prevention in older buildings and evacuation plans for the Valley?

C190-4

CALFIRE identified the oldest fire suppression buildings in the State dating to 1931-2. The Eldridge Fire Department was built in 1932 yet it is not considered significant and one to be potentially removed. Then the plan calls the area Fire House Commons. Why will the area be named for a building to be remove as 'insignificant?

The Historic Core according to Dyett and Bhatia appears to consist of two buildings: The Sonoma House and the Professional Education Building. The buildings adjacent to them (Oak Lodge, Hatch and McDougall) are important representatives of early 20th century institutional care. This section is nearly contiguous with the cemetery and Jack London HISTORICAL State Park. Has there been any rationale to create a historic area within the property historic district and how the Department of Parks and Recreation could be expanded to include this historic area?

What is the definition of a 'flex' area?

Thank you for your consideration

Teresa Murphy

glenellencav@comcast.net

103 Riddle Rd.

Glen Ellen, CA 95442

707 235-8130

Vicki A. Hill

Land Use and Environmental Planning

Office: (707) 935-9496
Email: vicki_hill@comcast.net

September 26, 2022

RE: Comments on Sonoma Developmental Center (SDC) Draft Specific Plan EIR and Draft Specific Plan

Dear Staff, Planning Commissioners, and Consultant Team,

This letter contains my comments on the Draft Environmental Impact Report (DEIR) for the SDC Specific Plan and on the Draft Specific Plan (proposed plan) itself. Thank you for considering and responding to these comments and sharing them with the planning team.

C191-1

I agree with and support the comments submitted by the Sonoma Land Trust (SLT). Also, I agree with and support the comments identified in the North Sonoma Valley MAC comment letter. In addition to the issues identified in those two letters, I have submitted comments to the County Landmarks Commission and the County Planning Commission – the comments in both these letters (attached at the end) are hereby incorporated by reference and should be addressed in the Final EIR.

C191-2

Overall, as a 30 plus year land use planner and CEQA specialist, I am disappointed with the failed process to prepare a plan that represents at least a modest amount of responsible land use planning, mindfulness of site constraints, and community input. Sonoma Valley residents, including the community surrounding SDC, supports housing, especially affordable housing. However, there is no support for the high-density scale reflected in the proposed plan, which would double the size of the existing semi-rural community. At even half the proposed size, the project would represent the largest development in Sonoma Valley in decades. The plan reads as if it belongs in an existing urban area in a city and does not reflect the rural character and special qualities of the site and surrounding area that are valued by residents and visitors. The proposed plan does not reflect a "community-driven" process - it fails to incorporate a moderate scale that was requested by the vast majority of public comments over the past two years. The plan also lacks many mitigating policies that were requested multiple times.

C191-3

The DEIR is fundamentally flawed, as outlined in my comments below. Overall, the DEIR reflects a bias towards the proposed dense development and tends to dismiss the proposed plan's environmental disadvantages when comparing it to other reduced-scale alternatives. Many comments from wildfire experts have already been submitted and I share their concerns, having had to evacuate twice from my home. Revisions to both the EIR and the Specific Plan are necessary to address these potentially significant impact issues and to develop a more balanced plan that will reduce significant impacts.

C191-4

GENERAL EIR COMMENTS – Please respond to each of these concerns

1. **Deferral of analysis –** In many topical areas, the DEIR states that sufficient details are not available to conduct the environmental analysis and that the analysis will occur when individual projects are

proposed. However, many of the projects will not be subject to CEQA due to exemptions provided once the Specific Plan is completed. Therefore, this deferral is not adequate.

2. **Minimization of impacts** - The DEIR assumes plan policies will mitigate impacts, but the feasibility of these policies is unknown (such as increasing transit and building a road connection to Highway 12) and many policies are unenforceable. So, the DEIR grossly underestimates the impacts. The DEIR is clearly result-driven.
3. **Skewed Alternatives Comparison** - The DEIR identifies the Historic Preservation Alternative as environmentally superior, but then dismisses advantages of this smaller alternative and incorrectly claims that impacts of the proposed plan and the Historic Preservation Alternative are "comparable." Some mitigating components (e.g., widening creek corridors) were arbitrarily excluded from the Historic Preservation Alternative, making it look worse than it is. For a fair unbiased analysis, the alternatives must be evaluated in an "apples to apples" comparison to the proposed plan, using the same or similar assumptions about project components that offer mitigation.

C191-4

4. **Environmentally Superior Alternative Should Be Selected:** Given the sensitivity of the site, the onsite wildlife corridor, surrounding open space, rural location, wildfire risks, and guiding principles, both a reduction in the number of homes and substantial reduction in commercial development size should be the preferred plan. A reduced-size alternative is the only way to mitigate the many significant impacts of the proposed high intensity project. Design guidelines will not mitigate the impacts. The market study did not identify a high demand for non-residential development. The Historic Preservation Alternative, while not ideal, is the only alternative that presents a level of land use development at a scale compatible with the site, surrounding rural lands, and overall Sonoma Valley character. There has been an overwhelming number of public comments requesting a smaller alternative.

C191-5

5. **Comparison to Previous SDC Use:** The continued argument that the SDC property should be able to accommodate thousands of residents and workers because it used to house and employ thousands of residents and workers is not valid. Nor is it valid to compare existing building square footage to proposed square footage, in an attempt to justify the proposed plan and minimize impacts, as it is the proposed use (not necessarily footprint) of the buildings that drives most of the impacts. The reason this comparison is invalid is as follows:
    a. As an institution, SDC tread very lightly on the environment and adjacent community. At its most populous, most of the residents of SDC did not leave the property. They did not drive cars, they didn't go offsite to schools, doctors, restaurants, etc.
    b. Vehicle trips were primarily limited to employees who worked three shifts so that traffic was spread out, rather than concentrated at peak hours.
    c. Because of the limited outdoor activities and absence of constant vehicle traffic onsite, people and cars did not interfere with wildlife movement; the campus was open, peaceful, and not occupied with uses that generated a substantial amount of traffic (e.g., hotel, restaurants, etc.).
    d. There were no retail uses drawing visitors and vehicles to the site.

C191-6

e. It should also be noted that employment and resident numbers at SDC reached a peak during a time over 50 years ago when there was very little cumulative growth in Sonoma Valley and both Arnold Drive and Highway 12 were still well-functioning roadways.

C191-6

6. **Lack of supporting evidence –** Throughout the DEIR, conclusions and assumptions are made without providing supporting information, thus providing no rationale or transparency.
7. **Project Scale is Source of Significant Impacts and Failure to meet project objectives:** The proposed plan's size and scale contradicts the County's transit-oriented growth and land use policies; and is inconsistent with its own guiding principles, failing to balance development with resource and historic protection. Another SDC Specific Plan guiding principle directs the plan to balance redevelopment with existing land uses and calls for looking at how uses fit the character and values of the site and surrounding area, as well as benefit local communities and residents. It does not appear that the proposed project abides by this principle. Regardless of whether the housing is low, medium, or high density, it's the total amount of housing and commercial development that is particularly important in evaluating the project. The community will not benefit from clogged roadways and increased fire risks and evacuation delays.

   C191-7

   Because of its size, the project will have significant impacts in both transportation and historic resources, but no mitigation is offered in the way of downscaling the size to reduce these impacts. There is no way that the site can provide all the goods and services needed for this large population. To try to provide that undermines the function of the surrounding open space and destroys the semi-rural character of the existing community on both sides of the site.
8. **Missing Project Phasing and Performance Standards –**
   a. The proposed Specific Plan is missing mandatory phasing requirements that would help mitigate impacts. The phasing components of the proposed Specific Plan are advisory only and not enforceable. There is no guarantee that the needed housing will be developed before the hotel or other commercial uses. There is nothing stopping the future landowner from building the hotel first, which would be contrary to the project objectives.

      C191-8

   b. Affordable housing should be prioritized in a mandatory phasing plan.
   c. The project description needs to identify a project phasing plan to address all the demolition and remediation that will need to occur, as well as site preparation, infrastructure repairs, etc. This plan needs to be fully evaluated in terms of impacts on traffic and roadways, wildlife and open space resources, and surrounding land uses (noise, emissions, glare), etc.
   d. Project phasing should be tied to performance standards. There are no performance standards to gauge or monitor project impacts. Since many of the future impacts are unknown and feasibility of some policies is unknown, performance standards are needed to ensure that future development can be modified if policies or mitigation measures are not effective. For example, biological surveys should be required to monitor how well wildlife adapts to demolition, construction, and new land uses. If it becomes clear that the wildlife corridor is being adversely impacted, additional measures and design features could be implemented to reduce impacts before proceeding with additional development phases. VMT and roadway congestion thresholds should also be established and traffic impacts mitigated to the maximum extent feasible before continuing with buildout. Performance standards could be developed for each environmental resource area.

9. **Flawed Market Demand Study –** The market demand study prepared in 2020 for the SDEC Background Report and the Alternatives Report that preceded the DEIR was updated via a short memo (July 14, 2021), with assumptions that were never reviewed by the public or peers. The update was to attempt to justify larger housing numbers, using a straight-line projection over the next 20 years. This updated study was then used as the basis for including and defending the proposed 1000 homes in the proposed Specific Plan. However, there is no justification for the projections methodology, which is over-simplified. There is no evidence that housing demand in Sonoma Valley will increase at the rate presented in the updated market study. This "update" to the market study cannot be used as a basis for the housing in the proposed plan.

C191-9

DETAILED DEIR COMMENTS

DEIR EXECUTIVE SUMMARY

C191-10

Page 3, "…does not mandate that the State will accept the outcome of the County-driven process…" **–** This statement implies that somehow the State has jurisdiction over the approval of the Specific Plan. It does not have any Specific Plan approval authority and this misleading wording should be stricken. The County planning process does not require approval from the State. Whoever buys the property from the state will be bound by the Specific Plan. This type of wording has been used by the County as a thinly veiled threat to the community that if we don't accept the County's plan, the state will enact a far worse redevelopment.

Page 3, "The Planning Area includes all SDC property, encompassing approximately 945 acres ‑which includes a developed Core Campus covering approximately 180 acres, the 755 acres of contiguous open space, and the 11-acre non-contiguous Camp Via grounds within Jack London State Historic Park." Is this planning area equivalent to the study area for the EIR? The study area should go beyond the site itself and must be clearly defined for each impact topic.

C191-11

Page 7, Buildout: "Buildout projections of this EIR do not include the total amount of potential development that could be accommodated by the Proposed Plan; rather, the buildout outlines the most likely development that would occur by 2040, including additional bonus housing units that would result from provision of affordable housing as mandated by the Proposed Plan."

Basing the DEIR analysis on this assumption of the "most likely development" is insufficient and is not supported by any evidence that this level of development is the most likely scenario. The DEIR underestimates the overall impacts because it does not evaluate the reasonable worse case buildout scenario. The DEIR must evaluate a reasonable worse case of development to ensure that all potential impacts are identified.

Page 7, Buildout: "The Proposed Plan is anticipated to result in a total buildout of approximately 2,400 residents, 1,000 housing units, and 940 jobs." This does not clarify whether this is the total maximum buildout or the "likely development" referenced in the previous paragraph. Looking at the

minimums/maximum table in Chapter 4 of the plan shows that over 1200 units could be built and that doesn't even include bonus densities.

C191-11

Page 7, Areas of Controversy: "Many members of the public expressed opposition to new housing development in the area…" This appears to be another attempt to paint the community as NIMBYS. This statement is not true, which I can say after listening to hours of public testimony and reading countless comment letters. This statement must be modified to note that people support housing, especially affordable housing, but are opposed to the large number of houses, especially the large number of market rate housing, based on the fact that the site is outside of the urban growth boundary and not along a transit corridor.

Page 11 acknowledges that "the market demand for non-residential uses (with the exception of a hotel) is limited and higher employment levels will reduce financial feasibility." Yet, the DEIR still analyzes a proposed plan with more than 900 jobs, which detracts from financial feasibility and substantially contributes to significant impacts. What is the basis for this high amount of commercial development?

C191-12

Page 11, Reduced Alternative – The text states that this alternative would be less economically viable – what does that mean? Is it viable or not? There is no provision in the state legislation or in the project objectives to maximize economic viability. Yes, the plan must be feasible but it does not need to maximize financial gains.

Page 12, Historic Preservation Alternative – There is no basis given for only a partial reduction in jobs - why not reduce the jobs proportionately? With 600 jobs, it would be heavier on commercial development than housing, when in fact the State has prioritized housing, not commercial development.

C191-13

Page 14, Environmentally Superior Alternative (also in Section 4.5): "Overall, the Historic Preservation Alternative is the environmentally superior alternative, although significant impacts of the Proposed Plan and the two alternatives are largely comparable, and the Historic Preservation Alternative would be less superior in some environmental features such as energy use, biological resources, and wildfire risks. Additionally, this alternative would not support key project objectives related to increased housing supply, varied housing opportunities, community vibrancy, and long-term fiscal stability to the same degree as the Proposed Plan." This statement is incorrect and misleading for several reasons.

C191-14

- To say that the proposed plan's impacts are "largely comparable" to the impacts of other alternatives is seriously flawed. The types of impacts may be the same, but the magnitude of impacts is much less under the Historic Preservation Alternative, with the substantial reduction in buildout. This needs to be acknowledged and corrected throughout the EIR. The Historic Preservation Alternative, in addition to reducing historic resources impacts, would substantially reduce impacts in the issue areas of traffic, biological resources, land use, noise, visual, air quality, Greenhouse Gas emissions, and public services. Traffic impacts may still be significant, but they would be much less severe in the Historic Preservation Alternative.
- It is reasonable to assume that impacts across the board would be reduced with a smaller development.

- The way the Historic Preservation Alternative is crafted, it excludes components that allow a fair comparison between it and the proposed plan. For example, widened creek corridor setbacks are included in the proposed plan but arbitrarily excluded from the Historic Preservation Alternative, resulting in a conclusion that this alternative would cause greater biological impacts. Corridor setbacks could be easily incorporated into the Historic Preservation Alternative in most locations. The connection to Hwy 12 is also excluded from this alternative, thus making the traffic impacts greater. This alternative (or the proposed plan) must be modified to include the same impact-reducing features such as creek corridor setbacks, roadway connections, etc. to at least provide a fully transparent, apples to apples comparison. If properly compared, the impacts in biological resources and wildfire risks would be reduced compared to the proposed plan.
- The Historic Preservation Alternative would support multiple key project objectives, including significantly increasing housing supply with the largest housing project ever in the Sonoma Valley; contributing to community vibrancy and long-term fiscal stability; AND reducing both traffic and historic resources impacts, as well as other impacts. The DEIR provides no supporting information to substantiate the claim that the Historic Preservation Alternative would not support key project objectives.
- There is no basis for the claim that the Historic Preservation Alternative would not achieve long-term fiscal stability similar to the proposed plan.

C191-15

EIR MAIN BODY

C191-16

Page 41, Section 1.1.1, Purpose: One of the purposes of the DEIR is stated as: **"**To recommend a set of measures to mitigate any significant adverse impacts." Yet, there is no mitigation included in the DEIR. Even in the two significant impact areas, no additional mitigation is recommended although there is feasible mitigation. For example, the proposed hotel size could be reduced, or the overall development size could be reduced to minimize environmental impacts.

C191-17

Page 43, **Scope of EIR**: "…nor does it assess project-specific impacts of potential future projects under the Proposed Plan, **all of which** are required to comply with CEQA and/or the National Environmental Policy Act (NEPA) as applicable." This statement contradicts statements elsewhere that indicate that most, if not all, future development will be exempt from CEQA due to streamlining provisions. Please clarify which individual projects will be subject to environmental review. Even if project-specific impact assessment is not possible at this stage, it is feasible to assess the types and magnitude of impacts of buildout and to identify appropriate types of mitigation measures. This has not been done in the DEIR.

Page 47: "Subsequent to certification of the Final EIR, the Board of Supervisors may approve the Proposed Plan." Isn't it possible for them to approve one of the alternatives, as well? Please clarify.

C191-18

Page 51, "In addition, the Proposed Plan includes amendments to the County's General Plan and Zoning Code." The DEIR is incomplete in that these proposed amendments, particularly the zoning code amendments, are not included in the plan or DEIR project description.

Page 51, Location: The description of the project location is erroneous in claiming that it is between Glen Ellen and Eldridge, as if it will not disrupt these two communities. Why does the County insist on

continuing to ignore the neighborhood south of SDC and call it Eldridge? It is part of Glen Ellen and the SDC site is in the middle of Glen Ellen, dividing it. Furthermore, there's nothing in the text noting that this location is OUTSIDE of an urban growth area, which is an important land use policy consistency issue. C191-18

Page 53, Planning Area: Sonoma Valley Regional Park is not located to the south of the SDC site.

Page 53, Section 2.1.2.1, Land Use: "…designed in a relatively compact footprint within the expansive grounds to maximize the benefits of the tranquility and peacefulness of the site." These tranquil features are at the core of the existing land use pattern and must be considered in assessing the proposed plan's consistency with County land use policies, the proposed plan objectives, and Glen Ellen Design Guidelines. C191-19

Page 55, Section 2.1.2.3, Environmental Resources and Natural Setting: This section fails to discuss the critical wildlife corridor that covers the entire property.

Page 57, Water: The text states that the water system components "have the capacity to provide drinking water, irrigation, and fire suppression to a resident population in the neighborhood of 6,600 people." Please cite the source of this statement and provide documentation to support it. Also, if the water system is going to be restored to service this number of people, this growth-inducing impact needs to be evaluated in the DEIR. C191-20

Page 58: "…WTP is in relatively good condition." This conclusion is not supported by any analysis. Assessments in earlier reports indicated problems with the system.

Page 61: "SDC was the valley's largest employer until it closed." Please provide documentation to support this statement. Employment at SDC dropped off dramatically in the past 10 years before closing, as the client population was reduced.

Page 68, Section 2.4.3: "It also aims to improve multi-modal access from the SDC to Highway 12 (State Route 12 or SR 12) by exploring the feasibility of constructing an additional east-west emergency access connection from the site." This makes the connection to Hwy 12 sound very tentative and, therefore, the road connection cannot be assumed in the DEIR analysis. It is not known whether this roadway is feasible or could be permitted by CalTrans. C191-21

Page 71: "8 to 30 units per gross acre and a maximum FAR of 2.0" – This is a very broad range – what was assumed for the EIR analysis?

Page 72: Institutional Use: FAR of 2.0 – There is no discussion of the acreage provided for this category so the project description is incomplete.

Page 72, Buffer areas: Who will be responsible for maintaining these buffer areas and ensuring they are fire resistant and appropriate for wildlife use?

Page 73, Hotel: 120 rooms is entirely out of scale for this rural location, outside of an urban growth area and within a high fire risk area. This use will substantially increase VMT, hamper wildfire evacuation, and generate the need for other goods and services demanded by clientele at such a high-end hotel. The community has been very vocal about not turning SDC into a tourist destination. How does this fit in with a primarily residential area and lower income residential population? Furthermore, there is nothing in the state legislation calling for a large-scale hotel. This use was not adequately analyzed in the DEIR. C191-22

Page 73, Section 2.4.4.1, Core Campus Districts: There is no documentation or analysis of how these districts fit in with the surrounding land uses on neighboring lands. It is not clear how these districts comply with the fundamental objective of the project:

"Balance Redevelopment with Existing Land Uses. Use recognized principles of land use planning and sustainability to gauge how well proposed land uses protect public trust resources and fit the character and values of the site and surrounding area, as well as benefit local communities and residents."

What benefits are provided to the surrounding and neighboring Sonoma Valley communities?

Page 77, Build Out: "While the project buildout projection reflects a reasonably foreseeable maximum amount of development for the Planning Area through 2040, it is not intended as a development prediction or cap that would restrict development in any of the five subareas." This statement contradicts other statements about buildout assumptions. Doesn't the plan need to have a development cap? The DEIR needs to identify the maximum buildout for each land use and then analyze that maximum development scenario. C191-23

Table 4-2, DEIR assumptions regarding buildout: Table 4-2 in the Specific Plan lists the minimum and maximum number of housing units for each district. The maximum totals 1210 and the table footnote states that this number does not include additional county and state density bonuses. Density bonuses are likely to occur and are reasonably foreseeable. Therefore, the EIR substantially underestimates the full project impacts by more than 200 units or 20 percent of the project.

Arnold Drive Overlay: Figure 5.3-1 in the Specific Plan shows maximum building heights of 45 feet in the historic core, right up to Arnold Drive. This height contradicts the proposed policies for Arnold Drive and conflicts with multiple requests to maintain the open feel of Arnold. This is a significant visual impact.

Page 81, "This EIR serves as the environmental document for all discretionary actions associated with development under the Proposed Plan." This statement implies that all development will be exempt from CEQA and contradicts the statement noted on page 43. Please clarify these contradicting statements and document what projects will and will not be subject to subsequent CEQA. The road connection, for one, will not be exempt. Is the site in a designated "transit-priority area"? C191-24

Section 3.1 Aesthetics

Section 3.1.2, Environmental Setting: The description fails to discuss the existing scenic landscapes created by the former SDC. Broad lawns and vistas to both the east and west mountain ranges exist within the campus and along Arnold Drive and these scenic vistas need to be acknowledged. The

campus was intentionally designed to provide open spaces and extensive landscaping between buildings to establish a calming, tranquil environment for the clients. Please include this information in the setting and include an assessment of these visual features in the impact analysis. C191-24

Page 103: "Given that construction will be clustered only in the previously developed Core Campus and that new development will keep with the overall scale and development height variation of the current SDC campus, adverse effects on the scenic vistas of SR 12 on the eastern edge of the Planning Area and the scenic landscape unit on the western edge of the Planning Area would be less than significant." There is no guarantee that new development will be required to comply with the advisory goal of keeping with the overall scale and development height of the current SDC campus so compliance cannot be assumed. This conclusion fails to acknowledge the increased density and overall increased number of buildings at higher heights than existing, not in keeping with surrounding land uses. The proposed plan will not maintain the large internal open space expanses. This impact analysis also fails to address the impacts on scenic vistas of Sonoma Mountain and the Mayacamas along Arnold Drive. C191-25

Page 104: "With adherence to existing and proposed policies and standards, development of an SR 12 connector under the Proposed Plan would ensure that damage to scenic resources along SR 12 would be less than significant." But many of the proposed policies are not mandatory and therefore cannot be assumed in the analysis. C191-26

Page 104, impact 3.1.3: The analysis states that the site is nonurbanized but fails to acknowledge the significant impact that will occur as a result of the proposed urban development plan – it represents a significant change in visual character. Instead, the analysis attempts to justify the project because it will create a new vibrant community. How does creating a "vibrant" community protect rural scenic qualities? The proposed plan's urban features are in direct conflict with rural scenic resources, both onsite and on surrounding properties, especially since SDC is in the middle of the rural village of Glen Ellen.

Page 104, impact 3.1.3: The analysis fails to address the fact that the introduction of new modern, urban architectural features will significantly impact existing historic visual character of the campus and surrounding land uses. There is no discussion of impacts on surrounding land uses. What policies will ensure that architecture blends in with surrounding land use character?

Consistency with Glen Ellen Development and Design Guidelines: There is no mention of these existing guidelines that address Glen Ellen. How does the proposed redevelopment conform to these existing guidelines?

Section 3.3 Air Quality

Page 167, Construction: The analysis fails to mention or address demolition impacts, which will be substantial. C191-27

Page 167, Construction: Even though this EIR is programmatic, the deferral of construction impact analysis is not acceptable. There is substantial information available to develop reasonable demolition

and construction scenarios. The aggregate dust and toxic air contaminants released from demolition activities must be analyzed because the amount of demolition will be enormous. C191-27

Page 169: "Furthermore, because the SDC facility has been closed since 2018, there has been no change in the amount of development or types of land uses in the Planning Area between 2019 and 2022 – meaning that the 2019 baseline year conditions are comparable with existing conditions as of the release of the NOP for this EIR." Please define both the Planning Area and study area for the air quality analysis. Is the Planning Area the same as the study area? The study area for air quality should include the surrounding community. Please provide evidence to support the conclusion that there has been no change in development. As a local resident, I can verify that conditions have indeed changed since 2019. In 2019, Glen Ellen had just lost 180 homes. These homes are still being rebuilt, as of 2022 and many empty lots are waiting to be rebuilt. There continues to be demolition, site-grading, and construction.

Relevant Proposed Policies: There are no mitigating policies for reduction/avoidance of demolition impacts on air quality or GHG emissions.

Page 183, VMT: It is incomprehensible that VMT would increase by less than 1000 as a result of the proposed plan, with so much new development and the introduction of thousands of new residents. The SDC site's location outside of an urban area will necessitate vehicle use for daily goods and services. Because the VMT is grossly underestimated, the air quality and greenhouse gas analysis both underestimate impacts and must be revised. C191-28

Impact 3.3-1: The DEIR impact analysis relies on proposed plan policies to reduce air quality impacts and conform to the 2017 Clean Air Plan. Some of these policies are enforceable, and the feasibility of several policies has not been determined. For example, relying on multi-modal transportation to reduce VMT is unrealistic given the site's rural location and lack of existing or planned frequent transit service. There are no schools within walking distance, nor are there doctors' offices, hospitals, farm jobs, or winery jobs. People will be required to drive on a daily basis, most likely to Santa Rosa, Sonoma, or Napa.

Also, there is no discussion of the massive amounts of demolition and associated emissions that will occur to develop a plan of this size.

Impact 3.3-2: The DEIR claims that construction impacts cannot be assessed at this time. How will these impacts be assessed if future projects are exempt from CEQA? C191-29

Page 200, Impact Summary: "Future development would be subject to individual review; new sources would be evaluated through the BAAQMD permit process and/or the CEQA process to identify and mitigate any significant exposures." This deferral of analysis and mitigation measures is not acceptable, especially since future projects may be exempt from CEQA and many uses will be allowed by right. The DEIR should at least require a buffer between new development at SDC and existing residential uses adjacent to the southern boundary, as mitigation for future potential impacts.

Missing Analysis: The DEIR fails to analyze the numerous types of land uses permitted under the proposed plan that will involve toxic emissions, such as fertilizer plants and laundry facilities. C191-29

Section 3.4 Biological Resources

Missing Species: The wildlife species list is missing Bald Eagle, observed multiple times at the Lake Suttonfield reservoir. C191-30

Missing Analysis: Impacts on wildlife movement through the campus are not discussed in the EIR. The campus itself is part of the wildlife corridor. Proposed development will result in far more activity within the campus than ever existed, even during SDC's peak operation. There will be significant impacts on wildlife movement from the introduction of thousands of people and vehicles. Furthermore, there is no overall prohibition or restrictions on fencing within the campus so wildlife will likely be blocked from movement through the campus. The proposed fencing policies refer to the open space and campus interface areas, not the campus itself.

Section 3.5 Cultural Resources

Page 295: "Furthermore, at the time when rehabilitation projects for these two individual historic resources or new work immediately adjacent to the historic resources are proposed, the project-level CEQA document would need to identify potential impacts to historic resources." This conclusion is flawed in that it attempts to defer necessary impact analysis. Again, many future projects will be exempt from CEQA so there will be no way to analyze potential impacts and develop appropriate mitigation measures. C191-31

Section 3.10 Land Use Analysis

Page 321, Land Use Impact Analysis: The DEIR states that the proposed policies will be incorporated into the zoning codes that will be concurrently adopted by the Board. Where are the proposed amendments to the Zoning Code? Don't they have to be specified in an official proposed zoning code amendment and analyzed in this DEIR in order to proceed with adoption? C191-32

Page 317, Impact 3.10-1: The DEIR claims that there is no impact associated with physically dividing an established community. This conclusion is in error. There is no discussion of the fact that the proposed dense development, which is in effect a new city, is in the middle of the existing semi-rural village of Glen Ellen. There have been many references to the proposed development as a self-contained "closed community" - this indicates that it will indeed cut off the two parts of Glen Ellen. The massive size and scale of the proposed plan will certainly divide Glen Ellen. There is no attempt to integrate the land uses on the site with neighborhoods to the north and south because the large amount of proposed commercial development is basically inconsistent with the nearby residential and semi-rural village uses. Instead, the proposed plan will create gridlock on Arnold Drive, preventing local residents from passing from one side of the village to the other side. The previous low-intensity institutional use did not create a barrier or divide the community.

Impact 3.10-2, General Plan Policy Consistency Analysis

C191-33

The Sonoma County General Plan (GP) contains many policies aimed at preventing urban sprawl and encouraging development within or adjacent to urban growth areas. The high-density development proposed for SDC is neither within nor adjacent, or even near, urban growth boundaries. Furthermore, all the land around it is within a community separator. As such, the proposed plan's size and scale is in direct conflict with County General Plan policies and therefore, the plan's project description is inconsistent with the General Plan. These existing policies still apply to the SDC site and will not be replaced by the Specific Plan. As noted on Draft EIR page 312, under CEQA, if a proposed project conflicts with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, then a significant land use impact would occur.

The DEIR analysis of consistency with existing policies, contained on pages 319 to 321, does not address individual policies and fails to address the many significant impacts associated with policy conflicts. Furthermore, by failing to identify impacts, it fails to recommend mitigation measures (such as downscaling, reducing overall density and bulk, etc.) to reduce these major conflicts. This DEIR land use section includes conclusions without providing any analysis or evidence to support the claims that the proposed plan is consistent with the General Plan policies. Instead, it ignores the relevant policies and concludes that the project is consistent and no mitigation is required. The analysis of this land use impact must be revised to address each applicable General Plan policy and any other existing relevant policy.

Page 321, DEIR states:

C191-34

> "Further, the Proposed Plan retains the overall land use framework of the General Plan with some targeted changes to promote economic development and appropriate residential and commercial infill development in the Core Campus. The Proposed Plan's land use designations (see Figure 3.10-3) are generally consistent with those in the General Plan, although they differ in some instances. In these limited exceptions, the Proposed Plan's designations differ from the General Plan in order to more accurately reflect either the existing zoning or current use on the property. While the Proposed Plan does include some targeted changes to land use designations, these changes are generally consistent with the General Plan vision of supporting transit-oriented residential and commercial development, encouraging new retail opportunities, and preserving open space."

This paragraph is full of inaccuracies and misleading statements. Placing high density development in a semi-rural area does NOT retain the overall land use framework of the General Plan in Sonoma Valley. It is not an infill site in an urban area. The Proposed Plan's high density land use designations are not consistent with General Plan designations outside urban growth areas. The statement that the Proposed Plan's designations differ from the General Plan in order to more accurately reflect existing zoning or current use on the SDC site is completely erroneous. The site is zoned Public Facility and the current use is vacant. The prior use was an institution, not a high-density urban residential and commercial community. This is not a transit-oriented development site (not along a major travel corridor in an

C191-34

urban area, with existing frequent transit service) and is inconsistent with General Plan policies regarding transit-oriented development.

The following policy conflicts would occur, as a result of the proposed plan. These policies need to be addressed in the DEIR. It is likely that there are other relevant policies not listed below that need to be analyzed as well.

C191-35

OPEN SPACE/AESTHETIC POLICIES

Goal OSRC-1: Preserve the visual identities of communities by maintaining open space areas between cities and communities.

Objective OSRC-1.1: Preserve important open space areas in the Community Separators shown on Figures OSRC-5a through OSRC-5i of the Open Space and Resource Conservation Element.

Objective OSRC-1.2: Retain a rural character and promote low intensities of development in Community Separators. Avoid their inclusion in City Urban Growth Boundaries or Spheres of Influence. Avoid their inclusion within Urban Service Areas for unincorporated communities.

Objective OSRC-1.4: Preserve existing specimen trees and tree stands within Community Separators.

Goal OSRC-2: Retain the largely open, scenic character of important Scenic Landscape Units.

Objective OSRC-2.1: Retain a rural, scenic character in Scenic Landscape Units with very low intensities of development. Avoid their inclusion within spheres of influence for public service providers.

Goal OSRC-3: Identify and preserve roadside landscapes that have a high visual quality as they contribute to the living environment of local residents and to the County's tourism economy.

Objective OSRC-3.1: Designate the Scenic Corridors on Figures OSRC-5a through OSRC-5i along roadways that cross highly scenic areas, provide visual links to major recreation areas, give access to historic areas, or serve as scenic entranceways to cities.

Objective OSRC-3.2: Provide guidelines so future land uses, development and roadway construction are compatible with the preservation of scenic values along designated Scenic Corridors.

Goal OSRC-4: Preserve and maintain views of the nighttime skies and visual character of urban, rural and natural areas, while allowing for nighttime lighting levels appropriate to the use and location.

COMMENT: The above General Plan policies point out the importance of maintaining rural landscapes and land uses and protecting the very qualities that make Sonoma Valley attractive to residents and visitors. The intensity and density of uses in the proposed Specific Plan are contrary to these policies. Implementation of the proposed plan will not preserve the scenic values of the Arnold Drive and Highway 12 scenic corridors. The visual identity of Glen Ellen and Sonoma Valley will be permanently altered.

COMMENT: Arnold Drive is a designated scenic corridor. It serves as a scenic component of the village of Glen Ellen; it provides expansive views of both the Mayacamas and Sonoma Mountain; it instills a sense of calm and peacefulness with its beautiful large mature treescape. The proposed land uses, development and new roadway construction will NOT be compatible with the preservation of scenic values along this scenic corridor. The policies in the proposed plan do not protect these scenic values, as the plan allows tall out of scale buildings adjacent to Arnold, inconsistent with existing land uses on the site and nearby developed properties. Figure 5.3-1 (Specific Plan) shows maximum building heights of 45 feet in the historic core, right up to Arnold Drive. The policies intended to protect qualities are "should" statements rather than shall statements. Therefore, the proposed plan is inconsistent with General Plan policies intended to mitigate an environmental effect. This is a significant impact.

C191-36

LAND USE POLICIES

Goal LU-3: Locate future growth within the cities and unincorporated Urban Service Areas in a compact manner using vacant "infill" parcels and lands next to existing development at the edge of these areas.

C191-37

Objective LU-3.3: Encourage "infill" development within the expansion areas of the cities and unincorporated communities.

COMMENT: This is NOT an infill project. Infill development is within urban areas, as in "urban infill." This site is not an edge to urban areas – it is within the semi-rural unincorporated low-density village of Glen Ellen, some distance away from urban goods and services (e.g., doctors, schools, etc.). Nor is the site an "expansion" area – it was a low-intensity institution that had very little impact on the surrounding community. The proposed plan will destroy the existing rural, scenic character of this area with massive removal of trees, highly dense construction, and urban development features. It is inconsistent with these existing General Plan land use policies.

Sonoma County Code: The DEIR summarizes relevant sections of the County Code: "Article 82 of Chapter 26 of the Sonoma County Code details general design review standards. The intent of Article 82 is not to stifle individual initiative, but to set forth the minimums necessary to achieve a healthful community whose property values are protected from unplanned developments. General development standards favor preserving natural topography, landmark sites and trees, views and vistas of the landscape, harmony with site characteristics and nearby buildings, and local architectural motifs. Article 82 also details general development standards that pertain to light and glare. Requirements include that the number, location, size, design, lighting, materials, and use of colors in signs are compatible with the architectural style of the structure they identify and harmonize with their surroundings. The color, size, height, lighting and landscaping of appurtenant signs and structures shall be elevated for compatibility with local architectural motif and the maintenance of view and vistas of natural landscapes, recognized historic landmarks, urban parks, or landscaping.

C191-38

Article 64 of Chapter 26 of the Sonoma County Code outlines the purpose and development criteria for the Scenic Resources Combining District which applies to the Planning Area. The purpose of this district is to preserve the visual character and scenic resources of lands in the county and to implement the provisions of Sections 2.1, 2.2 and 2.3 of the General Plan Open Space Element. Article 64 provides

specific provisions that impact development for scenic landscape units and scenic corridors within the county. Such requirements include that structures should be sited below ridgelines, be screened by vegetation, and that development should be clustered. Further, Article 64 outlines requirements regarding Community Separators which also apply to the Planning Area. Except for most of the Core Campus area, the SDC site is located within a local voter-approved Community Separator overlay that preserves lands with very low densities between communities. The Community Separators help to achieve the County's General Plan Land Use Element goal to maintain natural character and low intensities of development in open spaces between cities and communities.

C191-38

The Historic Combining District (HD) also applies to the Planning Area. As stated in Article 68 of Chapter 64 of the Sonoma County Code, the purpose of the HD is to protect those structures, sites and areas that are remainders of past eras, events and persons important in local, state or national history, or which provide significant examples of architectural styles of the past, or which are unique and irreplaceable assets to the county and its communities. Alterations to existing structures and construction of new structures within historic districts shall be consistent with the historic district design guidelines adopted by the board of supervisors.

COMMENT: It appears that the proposed plan conflicts with numerous provisions of the County Code, as it will not preserve existing character and will introduce high-density development directly adjacent to designated community separator lands. Also, the proposed removal of many historic structures will violate the intent of County Code provisions.

TRANSPORTATION POLICIES

C191-39

COMMENT: The County General Plan establishes Level of Service (LOS) standards for roadway operations. Although CEQA no longer requires LOS analysis, the LOS standards still apply to the proposed Specific Plan. The proposed Specific Plan is in direct conflict with these existing LOS standards. This policy conflict must be evaluated and disclosed in the DEIR.

Section 3.14 Transportation

Flawed Analysis: The transportation analysis is deficient because of the lack of transparency, missing supporting documents, underestimation of impacts, and missing analysis. The assumptions used in the transportation impact analysis must be transparent and based on existing conditions and traffic patterns. Policies to encourage onsite jobs are not enough to reduce the impact. People will still need to drive to schools, doctors, grocery stores, etc. and commercial uses onsite and a hotel will draw visitors and generate many additional vehicle trips. It cannot be assumed that providing a jobs/housing balance will substantially reduce VMT.

Vehicle Trip Generation: VMT is underestimated likely because of unrealistic assumptions about transit and vehicle use. The DEIR's proposed plan trip generation estimate was developed using the SCTM19 travel demand forecasting model maintained by the Sonoma County Transportation Authority (SCTA). However, the trip generation factors used in the analysis were not included in the DEIR. Consequently, it

is impossible to evaluate the reasonableness of either those factors or the resulting trip generation estimates. This information is critical to understand and independently review the DEIR conclusions. C191-39

Underestimation of impacts: The transportation analysis must evaluate a reasonable worse-case scenario, meaning it should be assumed that the large amount of proposed commercial space could accommodate regional businesses that generate a high volume of vehicle trips (e.g., Amazon distribution center or large retail facility). These types of facilities are being proposed in other parts of Sonoma County.

Missing baseline and impact analysis: One glaring omission in the transportation analysis is that there is NO MENTION of Warm Springs Rd., which connects to Bennett Valley Road (also not addressed) and is a major commuter route between SDC (as well as Sonoma and Napa) and Santa Rosa. People and trucks use this route to bypass the congestion on Highway 12 because it's faster. The VMT on this rural, winding, two-laned roadway will dramatically increase, yet there is no analysis. C191-40

As a 30-year resident on Warm Springs Road, I can speak from experience regarding Glen Ellen traffic patterns. Arnold Drive is used as an alternative to Highway 12 for commuting between Santa Rosa and Napa, Vallejo, and San Francisco. The commuting route includes Bennett Valley Road, Warm Springs Road and Arnold Drive. It has gotten to the point of being dangerous to pull out onto Warm Springs Road from private driveways between Arnold Drive and Bennett Valley Road. The narrow two-lane winding country Warm Springs and Bennett Valley roads provide poor line of sight, and commuting vehicles drive at excessive speeds. There is no bicycle lane or even a roadway shoulder, yet it is a very popular bicycle route to avoid Highway 12 between Glen Ellen and Kenwood – literally hundreds of bicyclists use the road on some days. With the increase in traffic from the Specific Plan buildout, this hazardous roadway situation will be significantly exacerbated, yet it was not studied.

Other commuters coming from Santa Rosa use Highway 12 to Arnold Drive to bypass congestion in Boyes Hot Springs on Hwy 12. The intersections of Arnold Drive/Highway 12 and Arnold Drive/Warm Springs Road must be added to the analysis. Traffic in Sonoma Valley has dramatically increased during the past 20 years, as evidenced by congestion on Highway 12 and Arnold Drive. All studies should be conducted using current traffic counts. Traffic counts conducted in 2018 for the referenced study "Sonoma Valley Capacity Threshold Study, Draft Report" are not reflective of current conditions. This was a time period after the fires and many residents were dislocated to other parts of the valley due to their homes being lost.

Missing Analysis – Traffic Safety on Arnold Drive: Because VMT is substantially underestimated and there is no LOS analysis (that is required by General Plan policies), there is no consideration of the traffic safety implications for Arnold Drive both north and south of the SDC site. Arnold Drive bisects the central village of Glen Ellen where commercial business and private driveways join the street and pedestrians cross back and forth between businesses. This semi-rural village will very likely experience gridlock with the addition of thousands of vehicles on a daily basis. There will be substantially increased safety risks for cars trying to turn onto Arnold Drive and for pedestrians using this segment of Arnold Drive. In effect, the increased traffic on Arnold Drive will divide the existing village of Glen Ellen. South C191-41

of the SDC site, vehicles exiting the multitude of private driveways (including the several hundred apartments just south of SDC) will have an extremely difficult time trying to turn onto Arnold Drive. The existing hazardous condition will be significantly exacerbated with the addition of project-related traffic. C191-41

Page 409, Highway 12 Connection: The DEIR refers to Caltrans comments regarding the proposed Hwy 12 connection, "noting that the new connector should not be designed to increase vehicular throughput, since doing so could result in induced auto travel and prior Caltrans studies have indicated that Highway 12 and Arnold Drive already have sufficient capacity to accommodate growth." What previous studies? When? Did those previous studies anticipate the size of redevelopment at SDC? How will the new connector NOT increase vehicular throughput? By its very nature, it will increase vehicle throughput to Hwy 12.

Highway 12 Connection: The impact analysis assumes that the possible road connection to Hwy 12 will be implemented despite the absence of any feasibility study. The Specific Plan makes the proposed road seem tentative, which it is since it will have to undergo a lengthy CalTrans review process. It should not be assumed in the transportation impact analysis.

Page 409-410: "…though a feasibility analysis of the viability of future transit service increases is beyond the scope of a programmatic CEQA assessment." The proposed Specific Plan identifies numerous policies regarding provision of transit services. How can we know if these policies are feasible and will reduce/avoid impacts if no feasibility analysis is conducted now? Infeasible mitigation policies cannot be assumed to reduce impacts. C191-42

Page 410: Where is the following referenced traffic study available for review: Focused Traffic Operation Analysis for the SDC Specific Plan, W-Trans, August 2022? This report is necessary in order to conduct an independent review of the traffic numbers.

Page 417: "The segment of Arnold Drive between Harney Street within the Planning Area and Glen Ellen carried a daily volume of approximately 5,400 vehicles per day in 2021." Please clarify where in "Glen Ellen" the traffic volumes on Arnold Drive were counted. Is the northern terminus of this segment at Hwy 12 or where?

Page 417, incomplete sentence: "To the south of the Proposed Plan area between Harney Street and Madrone Road, daily volumes in 2021 were approximately 6,200 vehicles, as compared to approximately 7,100" – when?

Page 425: "Areas that have a diverse land use mix and ample facilities for non-automobile modes of travel, including transit, tend to generate lower VMT than auto-oriented suburban areas." The SDC site is an example of an "auto-oriented" location. It is not located on a transit corridor and will generate higher VMT than a site closer to an urban area. C191-43

Page 427, Historical traffic volumes: How is this discussion of historic traffic volumes relevant? The method to estimate old volumes is not accurate; also, this was 7 years ago, before regional growth

occurred. "…estimated to have generated approximately 3,800 vehicle trips per day in 2015 when it was fully operational." It wasn't fully operational in 2015 – the clients had dramatically decreased.

C191-43

Table 3.14.3 Traffic Volumes: How can it be that the proposed plan results in lower traffic volumes than No Project? This makes no sense and is not valid. The assumptions for the No Project Alternative need to be revised to reflect a truly No Project scenario.

Proposed Project Scenario – The traffic analysis assumes construction of the Hwy 12 connection but there are no details on this connection and no project-specific CEQA analysis of the connection to satisfy CalTrans approval requirements. Therefore, this connection cannot be reasonably assumed. As requested by Planning Commissioner Carr, please redo the analysis without the Hwy 12 connection and then compare it to the Historic Preservation and other alternatives.

Page 432, Transportation Methodology: "The model's 2040 cumulative year includes growth that is consistent with adopted general plans within the County and with regional projections contained in Plan Bay Area 2040." There is no way to determine if the multiple Sonoma Valley projects that are reasonably foreseeable are included in these growth forecasts.

C191-44

Page 440: "For informational purposes, it is estimated that the Sonoma Developmental Center historically generated approximately 3,800 daily vehicle trips, suggesting that the Proposed Plan would generate approximately 13 percent more vehicular traffic than historical uses." This type of statement skews the analysis and attempts to minimize the impacts of the proposed plan, by comparing trips to historical levels that are not relevant to current conditions. This type of bias should be removed from the DEIR.

Internal Circulation Impacts: The DEIR claims that there would be little or no traffic impacts resulting from internal vehicle trips at the SDC site. However, if Arnold Drive is considered part of the "internal" roadway system, this conclusion is invalid. Arnold Drive, as a major connector roadway and essential part of the internal roadway system will be adversely impacted by the large increase in vehicle use.

Specific Plan Policy 3-27, "Provide no free parking within campus." The EIR did not analyze the impacts of this policy. This policy must be removed from the specific plan. There will be impacts on neighboring narrow streets and restrictions on vehicular access. Furthermore, where do people park their extra cars, given that only 1 space per unit is required? Impacts on recreation users – people who can't afford to pay for parking. Also, visitors to the site? Nowhere in Sonoma Valley are there parking meters.

C191-45

Specific Plan Policy 3-30: "Allow adjacent on-street parking spaces to apply towards minimum parking requirements." How would this work if there is no free parking on campus?

Back-in diagonal parking – this technique doesn't work in semi-rural areas where there are large trucks, trailers, etc. This parking configuration will have adverse impacts on roadway operations and safety.

Policy 3-43, "Work with Sonoma Regional Parks Department to ensure that there is adequate off-street parking for parks users on both the east and west sides of Arnold Drive, including through the use of

shared parking areas, and eliminate existing on-street parking along Arnold Drive north of the Core Campus."

C191-45

This area is not part of the campus, is it? It is in the county road right of way and is an extremely popular trail access and should NOT be deleted. People with disabilities use this parking area to access the paved pathway because it is the closest area to park to pavement. Removal of this parking area will have adverse impacts on recreation access. This policy should be removed from the plan.

Specific Plan Components Causing Impacts

There are numerous proposed Specific Plan policies and components of the proposed site plan that will have direct impacts that have been underestimated. As mitigation, revisions must be made to certain plan features. Here are some examples.

C191-46

Page 4-6, Specific Plan: "Employment uses are clustered in the northwest, creating a job center" – this is one of the most sensitive places for wildlife movement. Structures, employees, and vehicles will have significant impacts on the wildlife corridor in this area. Revisions to the plan are needed to avoid this impact.

Specific Plan Figure 4.1-3 (FAR) doesn't show 2.0, which is what much of the campus will be allowed. Permitting 2.0 FAR reflects a strictly urban plan. There is no consideration of the site's special landscape features or of its semi-rural location, or the people living in adjacent neighborhoods. The FAR should be reduced in highly visible scenic areas along Arnold Drive and in areas where wildlife movement is important.

Specific Plan Page 4-7, Plan Impacts: Provide an "active jobs center for the broader Sonoma Valley" – this will generate thousands of extra vehicle trips that are unnecessary to meet the project objectives. The state legislation does not mandate a job center nor is it appropriate in this semi-rural location, not on a transit corridor. This land use is inconsistent with county city-centered growth policies and should be identified as such in the DEIR land use policy consistency analysis.

Page 4-10, Specific Plan: Creek buffer is only 50 feet – is this adequate for protection of wildlife movement?

Specific Plan Permitted Uses Table 4-3 and Potential Impacts:

C191-47

- Laundry plant, fertilizer plant, etc. - These uses would result in use of highly toxic chemicals, in close proximity to homes. This impact has not been analyzed.
- Timberland Conversions – Impact 3.2-3 states that: "Further, the proposed plan does not contemplate allowing any timber harvesting activities in the area." However, Table 4-3 of the Specific Plan allows Timber Conversions as a permitted use in both the Preserved Open Space lands

and in the Flex zone. This is a significant impact that has not been identified. Impact 3.2-3 must be modified to note this impact.

C191-47

- Tasting rooms would be permitted by right in flex zone - Please remove this from the list of permitted uses. Glen Ellen and Sonoma have been overrun by tasting rooms and they do not benefit residents.
- Resort permitted by right in Hotel Overlay zone and the flex zone - Elsewhere, a hotel is referenced, which is different from a resort. Neither a resort nor hotel should be allowed by right, potentially circumventing public review and CEQA.
- Both a conference center AND a 120 -room hotel are listed as permitted uses. This combination of uses is not discussed or analyzed in the DEIR. What was assumed for VMT of these two combined uses? Why are both a conference center and a hotel allowed – this was never discussed with the community?

C191-48

Specific Plan Policy 4-3, "Require completion of at least 10,000 square feet of retail and eating and drinking establishments and of at least 200 housing units west of Arnold Drive before beginning construction of any housing east of Arnold Drive." This policy could hamper housing development. If the County truly wants to promote housing, why is there a condition limiting housing until at least 10,000 square feet of commercial is developed? This provision seems contrary to the purpose.

Policy 5-K Arnold Drive Overlay: "Along Arnold Drive, development should maintain the feel and scale of the buildings and landscape along Arnold Drive, including with a variety of building types and scales, a continuous landscape setback, activity, and views into the SDC site."
This goal and its implementing policies must be modified to say "shall" and include provisions to protect views of Sonoma Mtn. and Mayacamas from Arnold Drive. Otherwise, there will be a potentially significant impact on both historic resources and visual resources (scenic views and scenic view corridor). There is no mention of protecting these views or the existing beautiful mature trees that line Arnold Drive. Also, existing setbacks and lower building heights must be maintained along Arnold Drive. Current proposed policies don't provide those protections that the community has requested, repeatedly.

Policy 5-52 "Vary building heights and types along Arnold Drive to avoid a monolithic appearance and to foster an interesting streetscape, and the existing setbacks along Arnold Drive should be maintained." This policy needs to be strengthened by replacing "should" with "shall."

Chapter 4 Alternatives

C191-49

Page 529, No Project Assumptions: "While this EIR cannot pre-judge the State's actions, the EIR tries to frame these in light of the State Legislature's established land use objectives for the site, per Govt. Code Section 14670.10.5. Furthermore, the State has already released a developer request for proposal for development of the site pointing to the Proposed Plan underway, and can enter into long-term ground leases with private developers—cited as a mechanism for the site in the Government Code for SDC redevelopment—so that the State retains planning control over the campus unfettered by local regulations to achieve these land use objectives, should the County be unwilling to plan and zone for these uses."

Under the No Project alternative, it cannot be assumed that the state will take control of the site and that the county will have no land use authority. If the state proceeds with sale of the property, any private developer would be subject to county land use controls. The RFP issued by the State clearly states that the property is being offered for sale. There is nothing in the RFP referencing the possibility for a long-term ground lease with private developers. Furthermore, there is no documentation of how the EIR preparers derived the housing and job numbers for the No Project scenario. The State legislation does not specify that jobs are a high priority. C191-49

Historic Preservation Alternative: It appears that the Historic Preservation Alternative arbitrarily excludes some elements in order to make it look less environmentally superior. For example, the road connection to Highway 12 (for emergency response) is not included. As a result, the Draft EIR claims that the Historic Preservation Alternative has greater evacuation impacts than the proposed plan. All things being equally compared, the proposed project will have substantially greater impacts on evacuation times.

Page 533: "Thus, it is anticipated that some new development would occur under the Historic Preservation Alternative, and this alternative would prioritize market rate housing units over affordable housing units in order to generate adequate financial returns, undermining the State mandate and project objectives to promote affordable housing." There is no documentation of this conclusion – please provide evidence to support this statement that market rate housing would be prioritized over affordable units. In fact, compared to current and projected construction costs for new buildings, adaptive reuse is an effective way to reduce costs. The alternative could still promote affordable housing, which may be more viable with lower adaptive reuse costs. Furthermore, there are financing mechanisms to fund affordable housing and policies can be included in the Specific Plan to promote more affordable housing. C191-50

Page 570, Environmentally Superior Alternative: "Overall, the Historic Preservation Alternative is the environmentally superior alternative…" The text goes on to dismiss this alternative and minimize its environmental benefits. To say that the proposed plan's impacts are "largely comparable" to the impacts of other alternatives is inaccurate and misleading. The types of impacts may be the same, but the magnitude of impacts is much less with a reduced size alternative. The Historic Preservation Alternative, in addition to reducing historic resources impacts, would substantially reduce impacts in the issue areas of traffic, biological resources, land use, visual, air quality, climate change, and public services, if properly compared to the proposed plan. Even if reuse of existing buildings may be more expensive than new construction, it would offset the significant greenhouse gas emissions and site disruption that will result from demolition and new construction. The reuse analysis conducted by the planning team did not factor in the costs of mitigating greenhouse gas impacts, which will be substantial. Therefore, the Historic Preservation Alternative provides significant advantages over the proposed Specific Plan. C191-51

Growth-Inducing and Cumulative Impacts

C191-52

Section 5.1.1.2 Jobs/Housing Growth: It is completely inaccurate to say that the proposed job growth of 940 jobs outside of an urban growth boundary, within the rural village of Glen Ellen is a "modest" number. The number of jobs cannot be compared to the county-wide number. Compared to jobs in Sonoma Valley, the addition of 940 jobs is significant and is growth-inducing. Commercial businesses are struggling to find employees for existing retail services so it is not clear how the EIR can claim that there is a shortage of jobs. Furthermore, the market study conducted for the Specific Plan determined that non-residential development did not generate overall revenues and was not a contributing factor for financial feasibility. As quoted in the SDC Alternatives Report (November 2021), "Commercial and industrial uses may support building construction costs but are unlikely to have a significantly positive impact on overall development feasibility."

While there is a large demand for affordable housing in Sonoma Valley, creating over 700 market-rate homes is a significant growth-inducing impact because there is no evidence to demonstrate the existing or projected demand for this high number of market-rate homes. These housing units will not serve the existing Sonoma Valley population – they will attract people from outside the valley and outside of Sonoma County.

C191-53

Page 568, Historic Preservation Alternative, Growth Inducement: "The Historic Preservation Alternative would result in 600 jobs, which is much lower than both the historical employment level of 1,365 employees at SDC prior to its closure, as well as jobs to fully balance the projected population and would thus not induce growth. Additionally, as with the Proposed Plan, all development will occur in already developed areas. The Historic Preservation Alternative would not induce substantial unplanned population growth in the Planning Area and the impact would be less than significant and comparable to the Proposed Plan. However, this Alternative would accommodate a lower proportion of the projected regional growth within the SDC campus, and lead to greater development pressures elsewhere in the region."

This is not a growth-inducing impact, yet the table shows it as having a greater impact than the Proposed Plan, which is absurd. There is no basis provided for this conclusion and no evidence of regional growth projections that show this demand in Sonoma Valley. It cannot be justified that this site should accommodate a disproportionate amount of the Countywide projected growth. There is no large-scale "projected growth" for this rural area because it is outside the urban growth boundary. Growth should be placed in urban growth areas, consistent with city and county policies to avoid leapfrog development and urban sprawl.

TRANSPORTATION POLICIES

C191-54

The County General Plan establishes Level of Service (LOS) standards for roadway operations. Although CEQA no longer requires LOS analysis, the LOS standards still apply to the proposed Specific Plan. The proposed Specific Plan is in direct conflict with these existing LOS standards. This policy conflict must be evaluated and disclosed in the DEIR.

C191-54

DEIR Section 7.2: Section 7.2 of the plan references additional project review but does not address any future CEQA review.

MISSING SPECIFIC PLAN POLICIES THAT WOULD HELP MITIGATE IMPACTS

Despite the large number of policies in the proposed plan, there are numerous critical policy omissions. Here are suggested policy additions and modifications. These policies should be incorporated into the EIR as mitigation measures.

- Prohibit Big Box Developments – this type of development would significantly impact the site and surrounding area and draw large numbers of vehicles.
- Prohibit exclusionary fencing within the campus, in order to allow wildlife movement throughout the campus.
- Establish MANDATORY project phasing programs to ensure that housing development is prioritized over hotel and commercial development.
- Require design features to incorporate permeability.
- Establish performance standards to guide project phasing.
- Establish mandatory policies to minimize demolition impacts associated with noise, air toxics, dust, etc. This should include project phasing.

Thank you for carefully considering and addressing my comments.

Regards,

Vicki Hill, MPA

Environmental Land Use Planner

Vicki A. Hill

Land Use and Environmental Planning

September 13, 2022

Sonoma County Planning Commissioners

RE: Preliminary Comments on Draft SDC Specific Plan and Draft EIR for 9/15/22 Meeting

Dear Planning Commissioners,

I am a land use planner and CEQA specialist in Sonoma County and have many concerns regarding the proposed large-scale SDC Specific Plan and the adequacy of the SDC Specific Plan Draft EIR. I am still reviewing the Plan and EIR and will submit detailed comments by the comment due date. However, I wanted to bring to your attention a few of the many issues that need to be addressed. Overall, the DEIR reflects a bias towards the proposed dense development and tends to dismiss the proposed plan's environmental disadvantages when comparing it to other reduced-scale alternatives. Substantial revisions are necessary to the EIR and Specific Plan to make the EIR adequate, under CEQA, and to create a plan that represents sound land use planning.

C191-55

Specific Plan Scale

C191-56

The planning process has failed to result in a plan that even remotely resembles a community-supported alternative. The promised community-driven process has not occurred. Despite widespread, valid public concerns about the proposed high-density plan and the Board of Supervisors direction to evaluate a plan with 450 to 800 residential units, the proposed Specific Plan still includes an extreme amount of development (1000 plus homes, 410,000 square feet of commercial), which is totally out of scale for this location outside of an urban growth boundary and in the middle of the semi-rural village of Glen Ellen. There is no project comparable to this size in the entire Sonoma Valley. This urban sprawl development, including a 120-room hotel and potential conference center, will, in effect, create a new city, in direct conflict with good land use planning principles and County growth policies. Yes, we need and want housing, but there must be a balanced approach that factors in site constraints, impacts, surrounding land uses, historic resource values, and limited transportation network. This balanced approach is even reflected in the plan's guiding principles (see DEIR page 5-6) but the plan fails to conform to these principles. Project objectives to "balance redevelopment with existing land uses" and "balance development with historic resource conservation" have been ignored.

The Draft EIR identifies significant, unavoidable impacts on historic resources and traffic from the proposed Specific Plan due to its size. There is no mitigation identified for destroying so many historic buildings and converting the site to a new urban development. These issues could be addressed with a smaller alternative.

Environmentally Superior Alternative

C191-57

DEIR page 570 states: "Overall, the Historic Preservation Alternative is the environmentally superior alternative…" The text goes on to dismiss this alternative and minimize its environmental benefits. To say that the proposed plan's impacts are "largely comparable" to the impacts of smaller alternatives is false and misleading. The types of impacts may be the same, but the magnitude of impacts on traffic, climate change, historic resources, noise, biological resources, public services and land use would be much less with a reduced-scale alternative. The Historic Preservation Alternative is feasible and its size and scale should be pursued as the preferred plan. Some modifications to this alternative could be incorporated to further reduce impacts, such as even more adaptive reuse and more compact development design. It appears that some impact-reducing elements included in the proposed plan were arbitrarily excluded from this alternative (e.g., the road connection to Highway 12 for emergency access), thus making this alternative appear less environmentally advantageous. Also, there is no reason to conclude that this alternative couldn't achieve affordable housing goals. Compared to current and projected high construction costs for new development, adaptive reuse can be an effective strategy to reduce overall project **costs and impacts.**

Deferral of Analysis

C191-58

The Draft EIR defers analysis of impacts on some resources to a future time when individual projects are proposed. However, most if not all future projects will be exempt from CEQA under permit streamlining legislation so there will be no means to limit full buildout or implement much-needed future mitigation measures.

Specific Plan Phasing

SDC Planning Advisory Team (PAT) members and public comments stressed the importance of project phasing to reduce impacts on the environment and on the community. There is only one requirement for phasing (Policy 4-3, which requires completion of at least 10,000 square feet of retail businesses and at least 200 housing units west of Arnold Drive before beginning construction of any housing east of Arnold Drive) and this policy does not reduce any environmental impacts. The Specific Plan itself has a section on "Recommended Phasing" but these provisions are advisory and not mandatory. The EIR must identify phasing as mitigation to help further reduce traffic and other impacts.

Need for Performance Standards

C191-59

Project phasing should be based on performance standards adopted for each environmental issue area. In this way, impacts can be monitored and additional mitigation measures developed, as needed. For example, there is no certainty that massive demolition and construction activities, as well as the introduction of a large mobile population to the site, will not dramatically affect the surrounding open space resources. Before proceeding with full buildout, it should be proven that the site can actually accommodate the projected buildout.

Specific Plan Policy Language and Enforceability

C191-59

Many of the policies in the proposed plan are intended to reduce/avoid impacts but the wording is such that it is not mandatory and many policies are not carried forward to Appendix A, Standard Conditions of Approval. Thus, these policies cannot be relied on to be implemented and fully mitigate impacts. Any policy that does not have a strong "shall" statement is not enforceable.

Jobs/Housing Growth (DEIR Section 5.1.1.2)

C191-60

It is completely inaccurate to say that the proposed job growth of 940 jobs outside of an urban growth boundary is a "modest" number. The number of jobs cannot be compared to the county-wide number – this methodology purposefully minimizes the impact. Compared to the rest of Sonoma Valley, which is a distinct planning region, the addition of 940 jobs is significant and is growth-inducing. Also, there is no documentation of the need for these jobs in Sonoma Valley. The market study conducted as part of the Specific Plan alternatives report (November 2021, see sdcspecificplan.com/documents) determined that non-residential development did not generate overall revenues and did not contribute to financial feasibility. The alternatives report states: "Commercial and industrial uses may support building construction costs but are unlikely to have a significantly positive impact on overall development feasibility." Also, the EIR (page 11) states: "…the market demand for non-residential uses (with the exception of a hotel) is limited and higher employment levels will reduce financial feasibility."

While there is a large demand for affordable housing in Sonoma Valley, creating over 700 market-rate homes is definitely a significant growth-inducing impact because there is no existing demand for this high number. These housing units will not serve the existing Sonoma Valley population – they will attract people from outside the valley and outside of Sonoma County.

Comparison to Previous Institutional Use

C191-61

The EIR analysis, including the growth-inducing section as well as other sections, attempts to justify the large-scale plan by erroneously comparing the proposed plan population and employee growth to the previous institutional use and number of clients/employees. This comparison is invalid and should not be used as a basis for over-developing the site due to the fact that:

- As an institution, SDC tread very lightly on the environment and adjacent community. At its most populous, most of the residents of SDC did not leave the property. They did not drive cars, they didn't go offsite to schools, doctors, restaurants, etc.
- Vehicle trips were primarily limited to employees divided into three shifts so that traffic was spread out, rather than concentrated at peak hours. There were no retail commercial uses or a hotel to generate trips.
- Because of the limited outdoor activities and absence of constant vehicle traffic onsite, people and cars did not interfere with wildlife movement; the campus was open, peaceful, and not occupied with uses that generated a substantial amount of traffic (e.g., hotel, restaurants, etc.).

C191-61

- Employment and resident numbers at SDC reached a peak during a time over 50 years ago when there was very little cumulative growth in Sonoma Valley and both Arnold Drive and Highway 12 were still well-functioning roadways.

Nor is it valid to compare existing building square footage to proposed square footage in an attempt to minimize impacts, as it is the proposed **use** of the buildings that drives most of the impacts.

EIR Traffic Assumptions

C191-62

There is no guarantee that people who live onsite will work there. That cannot be assumed for purposes of analyzing traffic impacts. Also, it cannot be assumed that the roadway connection to Highway 12 will be developed. Therefore, the traffic impacts are substantially underestimated in the EIR.

Wildlife Corridor Impacts

C191-63

Despite many scoping comments, impacts on wildlife movement **through** the campus are not addressed in the EIR. The campus itself is part of the wildlife corridor and must be acknowledged as such. Furthermore, there is no overall prohibition or restrictions on fencing within the campus (only prohibition on wooden fences) so wildlife will likely be blocked from movement through the campus. There will be significant impacts on wildlife movement from the introduction of thousands of people and vehicles, as well as fences.

No Project Alternative Definition

C191-64

Under the No Project alternative, it cannot be assumed that the state will take control of the site and that the county will have no land use authority. If the state proceeds with sale of the property, any private developer would be subject to county land use controls. The RFP issued by the State clearly states that the property is being offered for sale. The RFP contains no reference to the possibility for a long-term ground lease with private developers. Therefore, this is not a reasonable assumption.

Financial Feasibility

C191-65

Despite making references to financial considerations, there is no definition or accurate assessment of the financial feasibility of the proposed plan or alternatives. While financial feasibility is required, there is no mandate to maximize revenues at the cost of other resources and values, or at the cost of reasonable land use planning.

Thank you for considering my comments. Please feel free to contact me if you have any questions or need clarification on any of these comments.
Regards,



Vicki Hill, MPA

Email sent to Landmarks Commission:

September 5, 2022

Dear Landmarks Commissioners,

I am unable to attend the Landmark Commission hearing regarding the SDC Specific Plan and Draft EIR but have the following comments. As a land use planner and CEQA specialist, I have serious concerns about the proposed Specific Plan and it's impacts on historic resources (and many other environmental impacts). These impacts could be substantially reduced by a smaller alternative, as identified in the Draft EIR.

C191-66

1. A redevelopment plan of this scale (over 1000 homes and 900 jobs) on the historic SDC campus will destroy multiple significant historic structures and the historic setting and values of the site. Although the Draft EIR assumes 1000 homes, Specific Plan Table 4-2 identifies maximum buildout numbers, which total 1210 residential units. This total does not include density bonuses that will likely be granted to the future developer. It will not be possible to preserve the historic character of the site with a project of this size.

2. The proposed plan is inconsistent with one of the fundamental project objectives, which calls for balancing development with historic resource conservation. The high-density plan does not provide a balance and would not maintain the historic integrity of the site. The SDC site has been determined eligible for listing as a Historic District under the National Register of Historic Places.

C191-67

3. The Draft EIR identifies **significant, unavoidable** impacts on historic resources from the proposed Specific Plan. There is no mitigation identified for destroying so many historic buildings and converting the site to a new urban city-like development, as called for in the proposed plan.

4. The Draft EIR identifies the **Historic Preservation Alternative** as the **environmentally superior alternative**. Because of its reduced size, impacts on historic resources would be **less than significant** under the Historic Preservation Alternative. This alternative would also be consistent with the project objectives. Furthermore, this alternative has other environmental advantages, some of which have been dismissed in the Draft EIR.

5. While financial feasibility is required, there is no mandate to maximize revenues at the cost of historic resources. The Historic Preservation Alternative is feasible and its size and scale should be selected as the preferred plan. Some modifications to this alternative could be incorporated to further reduce impacts, such as even more adaptive reuse and more compact development design. It appears that some impact-reducing elements of the proposed plan were arbitrarily excluded from this alternative (e.g., the road connection to Highway 12 for emergency access). Also, there is no reason to conclude that this alternative couldn't achieve affordable housing goals. Compared to current and projected high construction costs for new development, adaptive reuse can be an effective strategy to reduce overall project costs and impacts.

C191-68

6. The Draft EIR defers analysis of impacts on individually significant historic resources to a future time when individual projects are proposed. However, many future projects will not be subject to CEQA and therefore the analysis cannot be deferred – it must take place as part of the Specific Plan EIR and mitigation measures must be identified.

C191-69

Thank you for considering my comments during your deliberations.

Regards,

Vicki Hill, MPA

Environmental Land Use Planner

(707) 935-9496

BEFORE THE SONOMA COUNTY PLANNING COMMISSION In the Matter of SONOMA DEVELOPMENTAL CENTER SPECIFIC PLAN _____/ PARTIAL TRANSCRIPT OF PROCEEDINGS _____

Thursday, September 15, 2022 1:03 p.m. - 4:21 p.m.

REPORTED BY: MICHELLE D. BARBANTE, CSR NO. 12601 ----------

---------- CAL-PACIFIC REPORTING

45 Mitchell Boulevard, Suite 12 San Rafael, California 94903

(415) 578-2480 Support@CalPacificReporting.com

I N D E X

PAGE PUBLIC COMMENT 14 COMMISSIONER COMMENTS 58 -

oOo-

A P P E A R A N C E S (Appearances Via Zoom) PLANNING COMMISSION: Commissioner Chairman Larry Reed Commissioner Greg Carr Commissioner Jacquelynne Ocana Commissioner Shaun McCaffery Commissioner Eric Koenigshofer STAFF MEMBERS: Scott Orr, Deputy Director Brian Oh, Division Manager Tasha Levitt, Secretary Jennifer Klein, County Counsel

-oOo-

Pursuant to Sonoma County Planning Commission Agenda on Thursday, September 15, 2022, commencing at the hour of 1:03 p.m. via Zoom videoconference, before me, MICHELLE D. BARBANTE, a Certified Shorthand Reporter and Deposition Officer of the State of California, the following proceedings were had: -oOo- CHAIRMAN REED: Thank you, Brian. That was very clear and succinct.

Any commissioner questions or clarifications? Commissioner Carr?

COMMISSIONER CARR: Just one, Brian. Maybe you could go over the process for the Board of Supervisors with respect to the final EIR. The County system is set up so that the Planning Commission's responsible for recommending a final EIR to the Board. The Board can hear comments -- as I understand it, the Board can hear comments on the adequacy of that final before they vote on certification, but they would not go through another draft comment and response process. Is that still the case? MR. OH: That is correct. And so through the Chair. Just there's what will be before you, potentially, at the end of October is just that the Planning Commission may make a recommendation either to

approve -- deny or approve with something with recommendations, and so they're sort of three different paths the Commission can take, and then ultimately that would need to happen to set us up to get in front of the Board of Supervisors for their final deliberation, potential approval, and that can't happen -- well, it can only happen no sooner than ten days after the -- the draft -- the final is released.

DEPUTY DIRECTOR ORR: And through the Chair. Just to offer a little more clarity on one point. So the public is able to comment on the process all the way up through the Board of Supervisors making a decision. We do have some stops along the way that -- like with, you know, during the draft EIR period for us to incorporate it into the final EIR, you know, the line has to be drawn somewhere, but on the process, public comment continues until the end of the public hearing at the Board of Supervisors.

CHAIRMAN REED: Good. Thank you.

Commissioner Koeningshofer.

COMMISSIONER KOENIGSHOFER: Thank you. Relative to the Plan itself, the Proposed Plan, if they're -- if people have concerns about the Plan that would potentially lead to some modification of the Plan, has that ship sailed entirely?

MR. OH: Through the Chair. No, it has not. So when we release both documents, I mean, that was really the first time the actual draft was up for public review, and so at this point, it's -- it's still very much a draft document for input.

COMMISSIONER KOENIGSHOFER: So I thought that the intro was that we're hearing comments on the DEIR today only. Could you clarify your -- that with the answer you just made? MR. OH: Certainly. So part of -- this isn't a CEQA requirement. It's part of our County Code that we conduct a public hearing as just another opportunity to maximize community input into the draft Environmental Impact Report, and so Commissioner Carr had alluded to this, you know, should the Commission want to have further discussion on the contents of the draft Plan, that's something that, you know, the Commission can request, and I will certainly accommodate.

DEPUTY DIRECTOR ORR: So Chair Reed, you're currently on mute.

CHAIRMAN REED: I was suggesting that Commissioner Koenigshofer was muted. Did that answer your question, Commissioner Koenigshofer?

COMMISSIONER KOENIGSHOFER: No.

MS. KLEIN: Would it help to put up the schedule again so you can see the meeting at which the item is coming back for consideration by your Commission and if there's a need for, you know, more? Would that help to look at that again? COMMISSIONER KOENIGSHOFER: Yeah. Well, they're fishing for it.

MR. OH: So the last day for comment on the draft EIR is September 26, so there's nothing that wouldn't be outside of the Planning Commission's purview to have a series of discussions or workshops focused on the Plan itself. And so to Direct -- Deputy Director's Orr's -- Deputy Director Orr's point, it -- the public, as well as the Commission, you know, at this point it's a draft, and so depending on how the Commission would like to provide input up until the presentation of the final EIR and Plan, which is right now tentatively set for October 27th, we can -- we can make that happen.

CHAIRMAN REED: Commissioner Koenigshofer.

COMMISSIONER KOENIGSHOFER: I may be the only one who's kind of confused about this. If there were potential changes to the Plan, couldn't that trigger potential changes of required analysis by an EIR? So -- and if today we're not hearing comments on the Plan, I -- I just -- I don't understand how that works. You

know, if everybody else does, let's just go ahead.

DEPUTY DIRECTOR ORR: Through the Chair. So it really depends on, you know, the magnitude of the change, and, you know, at that October 27th hearing, Staff will do its best to let you know things that would likely require changes in the EIR or things that can be accommodated in that day as we get towards -- as we move towards a recommendation.

CHAIRMAN REED: Scott, just to clarify. If this is a self-mitigating plan let's say, that comments to the Plan would automatically be directed towards a response in the draft EIR so that if there were some comments to suggest, let's -- let's strengthen the -- the Plan in terms of historic resources, that that comment could be received and that the Plan, you know, could

consider that; is -- does that make sense? DEPUTY DIRECTOR ORR: I believe that makes sense, and I believe I agree with that.

CHAIRMAN REED: Okay.

DEPUTY DIRECTOR ORR: You know, we're going to get a range of comments, and, you know, we are going to err on the side that it's something that needs to be addressed in the EIR and that it wasn't specific to the Plan in a bubble, in a vacuum, and not overlapping with the EIR at all.

CHAIRMAN REED: Got it.

Commissioner Carr? COMMISSIONER CARR: Well, I was going to hold off until after the public comments came in on the EIR, but part of my purpose in talking about the schedule is to first say that the schedule is completely inadequate and insufficient to have a good plan, even if we were to largely accept the Plan that's before us; that having a hearing and a decision on one day at the Planning Commission on a project of this magnitude is not possible, and we would not be doing our -- our due diligence on a plan in that time frame.

And so what I'm going to suggest, whenever the time is right after we get through this, is that we set up a schedule that realistically allows us to go through and deliberate on the Plan to make sure we have plenty of time for public input and -- and take, you know, probably months to go through this. And I know there are folks out there that probably don't want to hear that, maybe -- maybe a few, but it just is not possible to do a legitimate planning process job at one hearing, or even two.

And I -- I'm willing to commit myself to as many hearings as possible and in as short a time frame as we can and as many meetings as possible, as long as we go through the -- the Plan, and I would suggest probably page by page

and look at the policies and make changes as appropriate based on the -- you know, the comments that we get in the public hearing and based on Staff's input.

We -- we just took over a year to do the local postal plan. The local postal plan had nowhere near the input from the public that this plan is going to have. This is a major planning process, and to suggest -- I realize that you're under the constraint of having to tell the state that you're going to do this in three years, but it isn't going to happen. It's not going to happen in three years, and it's time that we just face facts. Let's do the right thing, have a legitimate expedited hearing process and deliberation process on this plan so that we do a good plan.

The EIR may or may not suffice for whatever we end up deciding. I don't know that. There's going to be eons of comments come in on the adequacy of this draft EIR that we're going to have to read through and read the responses and go through that. I just think we're -- it's unrealistic to try to do this. And I further doubt that the Board of Supervisors is going to do this in one hearing either. It's just not going to happen, and it's time that we face the music, talk to

our state partners and say, "Look, we're willing to hurry this thing up, but it is not going to be done by the end of the year." CHAIRMAN REED: With that, Scott, Brian, I don't know how you want to respond or if we want to just dive into public comment. I -- do you want to address the process to date, you know, in terms of the public input and how we've gotten to where we are? I mean, when I read through the Plan and read through the DEIR, it's -- it's a pretty thorough and thoughtful proposal, and it seems clearly evaluated, and I -- and I don't think we've spoken to what the

process has been to date.

DEPUTY DIRECTOR ORR: So I will start off and then I'll defer to Brian Oh on the process to date, and I'll focus on where we are and what's coming. You know, from the Staff perspective, you know, we've tried our hardest to balance, you know, the -- all of the competing interests. Our local needs both, you know, as a community and as a -- you know, as planning professionals with, you know, the state statutes and requirements in order to set our Board of Supervisors up for making -- being able to make a decision within the agreed upon time. So but I'm sure we'll talk about it more as we continue this meeting, and then after we receive public comment.

But Brian, do you want to expand on the process to date a little bit? MR. OH: Sure. Through the Chair. So typically with any of our long-range initiatives, most of that time in that three-year process involves working directly with the community, and so this project is unique in that it started and likely will end virtually, and so we've had to deal with a number of challenges and learn -- and learning experiences along the way, but ultimately what is before you today -- and again, there's -- there's no action here. What we're trying to do is move us to getting the draft into a final, but a lot of engagement has gone into that, so everything from larger 200-plus -- 200-person-plus Zoom workshops focused on refining those draft policies that are in the document, the 200-page document, to much more focused engagement.

And so last year we invested a lot of time and -- and money into developing a community engagement strategy, which was inclusive, which could allow us to hear and maximize our input across all parts of our county, and so there was a number of focused -- sort of focused -- focus group meetings with

people with developmental disabilities. We work closely in direct partnership with our Latino community in the

Sonoma Valley, and so there's a lot of strategies that we employed that went into what is out there in the public for review, and so we're continuing to refine that as we get comments and input from the community. And so while there -- you know, when you look at that schedule, there's, you know, just a handful of hearings. My job, as Staff for the Planning Commission here, is to provide, you know, all that -- all the information that the Commission may need to feel comfortable, and so to whatever degree the number of meetings that may be, again, that's something that I'm -- I'm ready, you know, to clear the -- the schedule and the calendar for us to -- to set us up for consideration on October 27th and to get in front of the Board by November 8th.

CHAIRMAN REED: Great. Okay. Thank you for that. It looks like we have close to 100 attendees, and I think we probably want to limit comment to two minutes at this point just so we can try to keep on track. And let's try to focus on, you know, the Plan as it is presented and the adequacy of the environmental review, and then we'll pick up after public comment and get back to Commissioner Carr's concerns and discuss it more.

Scott, do you want to run the timer? DEPUTY DIRECTOR ORR: Yeah. So just for

members of the public who this may be your first Planning Commission meeting, so I will be sharing my screen with the timer that will tick down from two minutes. Generally I will say the name of the next person up, followed by the person after that, just to, you know, have a smoother flow, so just please be on the lookout for your name.

We -- we will get to everyone who wishes to speak, but just for the purposes of meeting planning, it really helps if everyone who wants to speak can put their hand up now, if only so we can pause and reconsider halfway through if we need to have a bathroom break. Because we do expect a lot of comments. I do have 15 hands up at the moment, so we're going to be going for at least a half an hour.

So the first speaker is going to be Bean Anderson, followed by John Stalcup. And as soon as I share my screen, I will allow you to speak. And just confirming everybody's seeing the two minutes? I see thumbs up, so, Bean, you should be able to unmute yourself.

PUBLIC COMMENT BEAN ANDERSON: Great. Thank you everyone. I appreciate this opportunity to speak. I'm going to speak mostly about the EIR as it relates to the

historical alternative.

On page 561, it states the Historical Alternative assumes a preference for more large lot, single-family homes in order to maximize financial feasibility. My question is, based on what analysis or precedent?

C192-1

I'd like to point out the Community's Alternative Plan that we submitted last Friday to the DGS does not rely on large lot single-family homes but contains a mix of all types of housing in a village community setting. And for those of you, just to make it clear, the Community Plan was developed by the people of Glen Ellen and the surrounding Sonoma Valley. It was submitted to the DGS, as I said, last Friday. It came about due to extreme frustration with the County's planning process, where, while there were many community meetings and opportunity for input, they were generally largely ignored and both the MAC and the -- one of the PATs has filed complaints

about that. So the community got together to develop a plan on its own. Some key issues of it are that it maintains local community control over the land for now and actually for the next hundred years. It's a truly community-developed plan, and I'd like to point out, this is a really democratic government action. It was

C192-1

done by the people for the benefit of the people, so thank you very much. I appreciate the opportunity.

DEPUTY DIRECTOR ORR: Great comment. After John will be Arthur Dawson.

JOHN STALCUP: Hey there. John Stalcup, Glen Ellen resident for 24 years. I have over two dozen comments that I'll be submitting on the Plan. I've read it. I just want to address one thing here, and that is the impact of egress in a wildfire.

C192-2

The Plan says there's a fire report that says everything's fine, essentially, and everything isn't fine. There's no analysis, as the last person noted, and there isn't any analysis on most of the critical significant impacts of this plan, which, again, I've been here for a couple decades. I've seen a lot of things go through. I've never seen such a paucity of analyses as this.

And I realize that there are a lot of interests out there that want to develop this into a megalopolis, and it just doesn't fit the -- we call it Valley -- that we live in, not just Glen Ellen, but Kenwood/Oakmont/ Sonoma. It's going to impact all of us, but particularly, as I say, with fire, because we barely made it out with our lives the last time. And to say that there's no significant impact, I -- I just don't

know where -- whence this comes. That's it. Thank you.

DEPUTY DIRECTOR ORR: Thank you, John.

After Arthur, it will be Josette Brose-Eichar.

Hi, Arthur, you can go ahead.

ARTHUR DAWSON: Okay. Thanks. I serve as Chair of North Sonoma Valley Municipal Advisory Council, or the MAC for short, and we're in the process of drafting a response to the draft EIR, and this will represent extensive community input over several years, which is also summarized in a letter to the supervisors in January.

C192-3

Whatever number of units is approved, we request the Specific Plan be revised to incorporate a multiphased approach, and it includes a robust Mitigation Monitoring Program. No one knows how this is going to turn out, and there needs to be room to maneuver in our rapidly changing landscape. It appears that the DEIR fails to disclose the full extent of impacts that will result from this large-scale development outside an urban growth area. The Specific Plan represents one of the largest, if not the largest, development in the history of Sonoma Valley and is in conflict with County General Plan policies calling for city center growth. Our many concerns about this project are detailed in our letter.

I'd like to highlight that the DEIR itself states that the Historic Preservation Alternative is environmentally superior. That alternative calls for a cap of 450 housing units. The same number that has been endorsed by the MAC.

Scale is the most obvious mitigation for this project. A smaller project means a smaller impact. One specific concern I'd like to mention, the DEIR states that the Core Campus is not included in any fire severity zones. The map used in the DEIR doesn't show such zones in the local responsibility area where the Core Campus is. That map was drawn by the state fire marshal

and doesn't include that data for the LRA. In fact, the state's draft map shows moderate and high fire severity zones within the Core Campus. Please re-examine this data, and also please add a third scenario for the possibility of a wildfire coming down from Sonoma Mountain. Thank you.

C192-3

DEPUTY DIRECTOR ORR: Thank you, Arthur.

After Josette, it will be Sonya Karabel.

JOSETTE BROSE-EICHAR: Josette Brose-Eichar, Boyes Hot Springs. I would like to thank Commissioner Carr for his realistic assessment and questions that he had up-front.

C192-4

I'm going to focus on just a few things since

time is short. The hotel is one of the biggest problems. Vehicle miles traveled are not dealt with properly. It is pushed off to the future. Not only is gas travel not dealt with realistically, but the reality's that these will be low-paying jobs and employees will be traveling from outside the Sonoma Valley. Really, hotels should not be in the Specific Plan to begin with.

Then we have the connector road to Highway 12. Nowhere is it addressed the impact this road will have on the wildlife corridor. It will be a complete disruption in how animals move today. Plus, it will be virtually useless during what we now -- what we now have: Unpredictable wildfires.

Assumptions made in the draft EIR are not reality.

Water. I see no analysis of what water we have today from our various water districts and no acknowledgment of climate change and a decreasing supply of groundwater. No specifics are offered on water recycling. Should that not be in the EIR? And why is the most ecologically sound plan not being considered? As an EIR is an environmental impact report, not -- why not go

for the least environmental impact? And last, why are there no real numbers, aka, economic feasibility to explain pushing these housing units, which will most likely be unneeded market rate homes. The EIR uses outdated thinking and conclusions as if this was a new subdivision in Walnut Creek and not a massive development in the middle of a rural area. The impacts are not defined and push to the future when they will not be dealt with adequately. Thank you so much. C192-4

DEPUTY DIRECTOR ORR: Thank you, Josette.

After Sonya will be Orlando O'Shea.

SONYA KARABEL: Hi. My name is Sonya Karabel, and I'm with UNITE HERE Local 2, which is the hotel workers union for Sonoma County. I am commenting not really on the EIR but on the Draft Specific Plan, but since it seems that there's not going to be any future opportunity to comment on the Draft Specific Plan, I wanted to get that in now. C192-5

And I just wanted to raise the -- you know, the Sonoma County, especially Sonoma Valley, has a really, really big problem with inequality and with development that furthers that inequality, and in order for this development to be something that actually moves that forward and helps to address those problems, there should be community benefits at the Sonoma Developmental Center, making sure that there's strong affordable housing, that there's -- that the jobs that are provided

are good jobs, including, you know, if there are hotel jobs, that there's environmental protections, that there's wildlife -- wildlife corridors and that there -- that disability justice is integrated into the Plan.

And that the best way to do that, you know, for -- to ensure those community benefits is to put that into whatever the ultimate development agreement

C192-5

that happens is and actually get whoever that developer is to make legally binding commitments to community priorities, and so that's something that we want to see be integrated into the Specific Plan and -- and ensuring that, you know, when we do know more about what this development actually -- you know, what a developer is proposing, that that developer, you know, commits to doing something that really benefits the entire -- the entire community and the residents. So thank you.

DEPUTY DIRECTOR ORR: Thank you, Sonya.

Next up is Orlando, followed by Bryce Jones.

C192-6

ORLANDO O'SHEA: Hi there. I think what I want to address is both the Specific Plan and the EIR. I may be one of the few people in here now who actually had a loved one at the SDC site in the Northern STAR Unit. That is my son, who, since the closure of the SDC STAR Unit has endured horrible abuse in the community, which has been verified heartily by Community Care Licensing,

and he's currently being warehoused in his third stay at Northern STAR now in Vacaville, as a result of the close of the SDC.

So I want to make really clear, you are aware that state legislation mandates that priority needs to be given to the housing needs of individuals with developmental disability when planning. There's not nearly enough talk about that mandate, which you are legally mandated to do.

Along with many other families and advocacy organizations, I'm asking you to prioritize this population. Specifically we're asking for five enhanced behavioral support homes on the site, which would also be very good from an EIR perspective.

This issue is really of utmost importance, as this population is falling

through the cracks with the closure of Sonoma Developmental Center, and they are being subjected to ongoing harm due to the closure. So I'm asking everyone to honor the legacy of SDC, and I'm asking everyone involved in the process to carefully consider your legal obligations and to uphold your legal mandate to prioritize this population. Thank you. C192-6

DEPUTY DIRECTOR ORR: Thank you, Orlando.

After Bryce, it will be Steve Birdlebough.

Hi Bryce, can you hear me?

BRYCE JONES: I can hear you.

Thank you very much for the opportunity to speak today. My name is Bryce Jones. I live in Sonoma County for the past eight years and wanted to speak to the impacts of this project. Granted, a thousand units sounds like a lot of housing, but it's a drop in the bucket for what we need in terms of housing in Sonoma County. This project, as I can tell, preserves a huge amount of wilderness and open space, provides access to recreational opportunities, which is going to be great for multiple age groups, and as far as I can tell, you know, this project has been thoroughly discussed in the public. I've participated in some of the other comment sessions and would really like to applaud Permit Sonoma's Staff's work on this project. This is an incredibly attractive place to live from -- from my point of view, from somebody with a six-year-old daughter, you know, it seems like a great place to go for a walk. It's nice density so you can walk to different businesses that will potentially be there. There's a mixture of homes, and I think Staff has really done a phenomenal job, along with the consultants, on crafting something that takes into concern, you know, the -- the wild environment, but as well the needs of creating housing C192-7

C192-7

opportunities for

people and families in the county, and I would definitely like to recommend the planning commissioners support the project. And I really, you know, just think it's great. Thank you very much.

DEPUTY DIRECTOR ORR: Thank you, Bryce.

After Steve, it will be Teri Shore.

C192-8

STEVE BIRDLEBOUGH: Thank you. Steve Birdlebough with The Transportation and Land Use Coalition, and I -- I think that the Plan that was drawn up was based on information that was years old. The negotiations with the state assume that, because there were more than 4,000 people on this site years ago, that you could have a development here that would involve a lot more driving than was involved in the previous occupancy.

And the Air Resources Board is moving in the direction of reducing vehicle miles traveled. Sonoma County has a goal of reaching carbon neutrality by 2030. The state is looking at 2045. Our own goal would involve a six percent per year reduction in vehicle miles traveled. The state plan calls for about a one percent per year reduction. Both of those are very important to -- to honor, and I think this project just doesn't meet that goal.

Highway 12 is pretty much at capacity now.

Adding another 1,000 housing units in this particular location is not a good idea. Caltrans has told us that they don't want to have an additional road from this area over to Highway 12, so there's a lot that really hasn't been looked at and needs to be looked at in this situation. Thank you.

DEPUTY DIRECTOR ORR: Thank you, Steve.

After Teri, it will be Tracy Salcedo.

TERI SHORE: Good afternoon. My name is Teri Shore, environmentalist. I live in Sonoma Valley.

C192-9

First, I would support Greg Carr's comments about the Planning Commissioners to follow his lead. And regarding the planning, with all due respect to the urban planners, if this plan for the historic campus was in an existing city or town, I would probably support it, but unfortunately, it's in the middle of an ag and rural -- agricultural valley, and it really constitutes sprawl as proposed.

I believe that the CEQA is inadequate, and the self-mitigating plan does not fully mitigate the environmental impacts by a long shot.

I'll be providing more detailed comments, as will other folks, but I just wanted to focus on the open space at this time. And I'm very concerned that the Specific Plan in the EIR give few details about the

preserved open space and how it will be protected and their re-introduction or introduction of commercial agriculture. Under the land use plan, I don't think any of these items were anticipated and preserved open space, which are in Table 4.3 of the Specific Plan, which includes wine tasting rooms, wholesale nurseries, timber conversions, indoor crop cultivation, farm stands, farm retail sales, animal keeping, agricultural processing, agricultural crop production and cultivation. None of those are appropriate for preserved open space, and none of those were studied in the EIR, so that is one major failure, and we need to clarify the open space unprotected from commercial agriculture. Thank you very much.

DEPUTY DIRECTOR ORR: Okay. After Tracy it will be Meg Beeler.

C192-10

TRACY SALCEDO: Hi, I'm Tracy Salcedo, and I live in Glen Ellen -- am I? Yeah.

Okay. And I just have a couple of comments. I'll be making other comments in a letter, but I'm talking right now from -- I'm multitasking from the library at Dunbar Elementary School in Glen Ellen, and it occurs to me that one of the things I haven't seen in either the EIR or the Specific Plan is discussion about the schoolkids that will be part of the new community that is being planned.

C192-10

If you add about a thousand homes at 2.5 people per home, assuming that the half person is a child and not someone who's been lopped off at the hips, that means that up to 500 of the new residents of SDC will be school-aged. Since there's no school planned for the property, that means all those kids will need transportation buses and/or private vehicles to get to or from school. While vehicle miles traveled will be minimized by use of electric vehicles, that doesn't offset the traffic impacts that will be felt Valley-wide.

So I would like to see the DEIR analyze replacing possibly the hotel with a school property, so that kids could maybe walk to school, and/or replacing the proposed conference center or, you know, something that would really benefit the community that way.

And just a final comment about cumulative impacts, which is kind of what I was talking about, and the analysis of fire danger. I'd to see the report analyze the cumulative impacts of shunting all of the proposed people onto Highway 12 in the event of wildfire blowing out of the Mayacamas and onto Arnold Drive, in the event of wildfire blowing off of Sonoma Mountain. And the reason is basically because you're taking so many more people and you're throwing them onto either one of those two-lane highways, and no matter which direction they go, they're going to end

C192-11

up in a bottleneck, either in Sonoma or heading into Santa Rosa. So those are my comments. Thank you.

C192-11

DEPUTY DIRECTOR ORR: Thank you, Tracy.

After Meg Beeler, it will be Bonnie Brown.

MEG BEELER: Good afternoon, Commissioners. I'm Meg Beeler, the Chair of Sonoma Mountain Preservation. Like many in the audience, SMP believes that the DEIR needs significant modifications. We'd like it to be used as a tool for systematic implementation as required by the state. We'd like your help with this.

C192-12

The proposed new road from Arnold Drive to Highway 12 is one example. The road will create substantive adverse effects on the wildlife corridor, on the open space and on the protected wetlands that support documented endangered species. The road will be in the direct path of the 2017 fires, yet sending residents fleeing into Diablo winds is not even mentioned in the DEIR.

Quote, "best practices" in the DEIR did not address the cumulative effects of such a road. The approach of quote, "We'll do needed studies later," unquote, gives developers no clear direction up front and does not guarantee wetlands and species protection or mitigation policy.

Riparian zone protection is another. The DEI -- DEIR ignores studies that say that creek setbacks should be up to 325 feet. Instead, it proposes only a 50-foot setback next to Sonoma Creek and none next to Mill Creek. Adding 2400 people around these creeks, without addressing the cumulative effects of the environmental degradation is not best practice. It is unacceptable. The community's offered many specific suggestions for best practices and mitigation. It's 3500 pages, as you've noticed, yet these have largely

remained unaddressed or ignored. We're counting on you to offer better direction to Permit Sonoma. Thank you.

C192-12

DEPUTY DIRECTOR ORR: Thank you Meg.

After Bonnie Brown, it will be Rick Coates.

BONNIE BROWN: Hi. Good morning. Good afternoon. I'm Bonnie Brown, chair of the SDC Campus Project. We have a proposal out for two years for adaptively reusing some of the residential buildings on the east side of the build -- of the campus for single-resident occupancy for the disabled and people of lower income. They are good -- they are in good condition, as by all reports should have been done. They have some toxics that need to be removed.

C192-13

According to the Plan, Specific Plan, and you can see all the maps and in the DEIR, all of the buildings on the east side of Arnold Drive are planned to be demolished and all new construction. And one of the really big impacts of that, which has never been addressed, is the -- there are only two unavoidable impacts that have been designated in the DEIR and one that needs to be included, and we have asked for it to be quantified, is greenhouse gas emissions when you tear down that many buildings and then source all of the new materials for all new construction. And it has -- I haven't found it anywhere in the DEIR when we asked for that to be addressed.

Also, involving the connector road through the open space, that would go right through the wetlands, in the middle of the great east side of the open space. It would be right where the groundwater recharge would be happening, wildlife, and then the road runoff. And actually the state agencies have said there would be a lot of greenhouse emissions.

C192-14

We have Madrone Road three blocks south of the entrance to SDC campus, and it is a wide road of three lanes most of the way. If people try to take that

C192-14

as an access during wildfires, they wouldn't be able to get onto Arnold Drive or Highway 12. They'd be totally impacted. There's not a use for this road, and it's really a bad idea. I hope you'll speak to that. Thank you.

DEPUTY DIRECTOR ORR: Thank you, Bonnie. So Sharon Church, I think I accidentally put you ahead of Rick Coates. Are you ready to speak?

SHARON CHURCH: Sure.

DEPUTY DIRECTOR ORR: Okay.

C192-15

SHARON CHURCH: Thank you. I'm Sharon Church. I'm a resident of Glen Ellen, and I have submitted some written comments already, but I would like to say, I appreciate Greg Carr's concern about the inadequate time on the schedule. It really feels like this horrendous plan is being shoved down our throats and that people haven't been listening and just, you know, minimally including a few little points here and there because we're going to ramrod through the maximum.

Well, economically feasible doesn't mean eco -- doesn't mean maximum building for maximum profit, ignore everything else, and that's exactly what seems to be happening here. So please, please, take the time, listen to the comments. Let's make some adjustments. The community wants to have something there that will

work and we can be proud of, that provides the legacy of care and housing for the developmentally disabled: Affordable housing. We don't need hotels, conference centers, expensive homes. Let's get real here about what we do

need and recognize where you're building it: In the path of severe fires. Knowing loosies [phonetic] were the affordable housing when that does come to -- to pass, because if you really believe in affordable housing, you're not going to just say, "Hey, developer, you can pay me off with a few bucks and we've done our job." That just doesn't work anywhere. So at any rate, the community's participated. We really want to feel like we're being heard, and we'd like to partner in this, but so far it doesn't feel like that's what's been happening. Thank you.

C192-15

DEPUTY DIRECTOR ORR: Thank you, Sharon. So next would be Rick Coates, followed by Bob Holloway.

RICK COATES: Yes. Can you hear me? DEPUTY DIRECTOR ORR: Yes, we can, Rick.

RICK COATES: Yeah. First, I want to mention that I represent EcoRing, which is a nonprofit that promotes ecotourism and green travel.

C192-16

I want to endorse what Commissioner Carr said. I think that he's spot on. One of my big concerns is that I feel that the excessive development here will actually harm tourism; that it will diminish the attractiveness of the site and will increase the traffic to where people will not want to visit. And there's a great deal of economic activity that accrues from the tourism in the area, so it's -- it's a problem in that regard, and I think it needs to be addressed.

I'm very concerned, too, about the cavalier attitude towards VMT and the greenhouse gas generation that it represents. VMTs have to go down, and this is going in the wrong direction. And the EIR that they're presenting suggests that it's not mitigatable. Well, that's because the plan they chose isn't mitigatable. They need to revise the Plan, and it can be

C192-16

mitigated in one way by reducing the amount of development.
At any rate, so also I'm concerned about the fact that there's not a consideration for bicycle transport to Sonoma and to -- and to Santa Rosa from Eldridge, so there doesn't seem to be alternative transportation available. Thank you.

DEPUTY DIRECTOR ORR: Thank you, Rick.
After Bob, it will be Derek Knowles.

C192-17

BOB HOLLOWAY: Hi. This is Bob Holloway. I'm a resident of the nearby Agua Caliente neighborhood, and I want to thank you for the opportunity to comment here.

I'd like to submit my strong support for the Historic Preservation Alternative that's outlined in the draft EIR. As you know, the County's preferred alternative, which is the Specific Plan, it does provide some very thoughtful preservation guidelines in the form of its goals and policies in the Cultural, Historic, and Tribal Cultural Resource, Chapter 3.5.33, but a loss of 28 percent of the contributing historic resources, combined with this new dense infill construction of, like, 30-foot to 40-foot high additional infill building and the alteration and reconstruction of the remaining contributing structures within this national and state register eligible historic district is simply too great a loss of the historic fabric to retain the district's historic feeling and character. This would cause a property to lose its eligibility for listing in the national and the California registers and as a California historic landmark. These impacts are described in the draft DEIR as significant because they cause a substantial adverse change to the historic district as defined by the -- the district sense of place, and it would not honor the legacy of the

developmental center's former uses and Staff. The historic story can best be told as -- with as much of the original character as possible, even with repurposed original buildings.

C192-17

So 1,000 units of housing is way too impactful, and I'd urge you to look at the Historic Preservation Alternative outlined in the DEIR as the preferred alternative. Thank you.

DEPUTY DIRECTOR ORR: Thank you, Bob.

After Derek will be Claire A.

C192-18

DEREK KNOWLES: Hi there. I'll keep these brief to squeeze more people in. But I'm 33 years old and have lived in Sonoma Valley for about ten years now and just want to offer a perspective from my generation, a generation that's come of age during wildfires and heatwaves and COVID and what seems like ceaseless development.

As I consider my future in this county, you know, in light of a housing affordability and climate crisis, the SDC planning process has been a revealing, if not frustrating, microcosm of the gulf between what this county says it values and what its actions suggest.

I've attended many of these public comments and followed the evolution of this project closely and in community of people who live in the area, and I think it's obvious to anyone who's paying half -- halfway decent attention to this plan means to me the DEIR is friendly for developers and not the community. If the

latter was actually granted the respect and attention it deserves, these units would prioritize affordable housing and minimize environmental impact entirely and really meet the moment of a world that's rapidly changing every day and hurdling us into an unlivable planet. And this plan obviously

doesn't do that.

C192-18

I urge the Commission to listen to the overwhelming community consensus and echo the sentiment, as well of Commissioner Carr to allow more time for this process to be intelligently and democratically completed, and thank you everyone for their time.

DEPUTY DIRECTOR ORR: Thank you, Derek.

After Claire, it will be John McCaull.

C192-19

CLAIRE A.: Hello, this is Claire Amkraut. I'm a resident of Boyes Springs, and my comment is related to page 561, where it says open space is available within the Core Campus. It would be less than in the Proposed Plan due to lower densities in existing building in the location of buildings within areas reclaimed as open space in the Proposed Plan, and I'm talking here specifically about the Historic Alternative.

What analysis is this based on? And I want to point out that the community's alternative, which was presented to DGS on September 9th, has more open space

than the Proposed Plan and the buildings do not interfere with open space.

I also want to point out that the lower number of housing units in the Community's Plan presents many options for mitigation of the issues that are pointed out in the EIR.

Continuing on, on page 562, Paragraph 2, it refers to the lower financial feasibility of the Historical Alternative, and what evidence do you base this on? The Community's Plan shows more financial feasibility based on a compact, smaller scale layout rather than the sprawling layout in the Preferred Plan.

I also am going to close by saying that I support Commissioner Carr's

comments and also Bob Holloway, who is another supporter of the county looking at the Historic Alternative. Thank you for the opportunity to comment. C192-19

DEPUTY DIRECTOR ORR: Thank you, Claire.

After John, it will be Jim Price.

JOHN McCAULL: Good afternoon, Commissioners. My name is John McCaull. I'm the Land Acquisition Director for Sonoma Land Trust. With more than four decades of experience in Sonoma Valley, the Land Trust is working to ensure that the irreplaceable wildlife corridor values of the SDC Campus and adjacent C192-20

open space remain viable options for wildlife movement and health. Since we started working on SDC more than ten years ago, our conservations goals have remained the same, get the 750-plus open space acres of SDC transferred into park ownership and ensure the permeability of the SDC Campus for wildlife movement.

We're also on record as supporting significant affordable housing development at SDC that is compatible with the property's natural values and resource constraints.

I want to just -- we're going to submit detailed comments on the Specific Plan and EIR. I want to use the biological analysis today as an example of the problems with the concept of a self-mitigating EIR. The draft EIR's C192-21 analysis and discussion of potential biological impacts is extremely limited and is insufficient to determine whether the Plan's potential impacts will be significant. The EIR fails to discuss how proposed new roads and significant increases in traffic and human activity on the site may affect wildlife movement or cause other significant impacts, and as one speaker

mentioned, the EIR will permit uses in the preserved open space that conflict with open space preservation goals.

C192-21

The problem is that the lack of analysis of biological impacts and other impacts prevents the EIR from identifying significance levels. You can't identify impacts. You can't develop mitigation measures. So we have a lot more to say on this, but I just want to flag that this self-mitigating EIR framework is really where we need to start to understand the problems moving forward. Thank you very much.

DEPUTY DIRECTOR ORR: Thank you, John.

And then just as a check-in for our members of the public, we've got ten hands -- about ten hands still up, so if you're wishing to speak, please get your hand up.

So after Jim, it will be Larry Davis.

JIM PRICE: Thank you for the opportunity to talk to you today. First of all, I want to state my -- well, first of all, my name is Jim Price. I live in the Springs. I've been here since 2008, and a homeowner.

C192-22

My -- I want to state strong support, first of all, for the Glen Ellen Historical Society and their work in presenting a -- the -- what I would be calling the Hundred Year Proposal, and my comments are -- are based on, you know, the support for the Historical Alternative, which, when you look at how the -- the Permit Sonoma has characterized the historical alternative, it appears to be written as a put-down to the downgrade and the HAN boost the Preferred Plan with comments pared -- prepared by the same authors as proposed by the Plan. It's not appropriate in an ERA process for, you know, the -- you know, for the people who are -- who are offering a Preferred Plan to be stating their biases within the context of the EIR,

which appears to be the case here.

Specifically on page 562, Paragraph 2, the lower potential for well-designed active gathering places, what is that based on? What is the empirical data on which that analysis is based on? The Community Plan, which has been proposed by the -- on behalf of the community by the Glen Ellen Historical Society, provides more open space for activity gathering. C192-22

On page 562, Paragraph 2, quote, the area available for habitat and movement would be lower than the Proposed Plan. Based on what analysis? What is the empirical data in which the -- the authors are basing that on? The Community Plan shows increase in open space for wildlife habitat and movement over the Preferred Plan. Thank you for the opportunity to comment.

DEPUTY DIRECTOR ORR: Thank you, Jim.

Next will be Larry Davis, followed by

Gina Cuclis.

LARRY DAVIS: Thank you. As I mentioned, my concern is that we're not C192-23 paying attention to democratic participation of the public, first, but more importantly, we have a rogue Planning Department that apparently is running the Board of Supervisors and apparently is in negotiation with the state in ways that none of the public is participating in, and I think we need to take another look and an analysis of our whole planning condition and what is going on here in terms of allowing public comments to be heard but not acted on.

It's clear that we need to now reconsider everything, and of course, that's one of the things is we might consider how did the Planning Department choose this planning consultant, and why is it that the planning consultant and the planning department are so far away from what the public has been

telling them for the last five or ten years? Something is way out of whack here, and I don't know quite who to go to other than, you know, a grand jury or a law case or take it to the public through some kind of a -- it says here in the planning laws that we can actually bring things like this, the changes in the planning -- the General Plan and changes in zoning can actually be put up to a public vote.

C192-23

So I'm not quite sure what our -- our mechanisms of change of this kind of a disastrous proposal can be, but I don't want anymore excuses from the Planning Department about how they've tried to talk to the public and listen to the public and that this represents the public's interest, because that's not true, as many of the other facts and fictions that they put into their plans are not true, so I'm very concerned that we have some kind of evaluation of the planning process that's gone on, because it's low confidence.

DEPUTY DIRECTOR ORR: Thank you, Larry.

After Gina will be Deborah "Knit-a-saka?" "Knit-saka"? GINA CUCLIS: Hello, I'm Gina Cuclis, and I'm glad I got to follow Larry Davis, because Larry is expressing what I, and I know a lot of people, feel about the frustration, feeling like the community has not been heard and listened to. I live in Boyes Hot Springs. I've lived in Sonoma Valley 36 years. It's where I raised my twin daughters, who are now 29.

C192-24

And the next thing I want to address is what was said earlier at Staff about middle-income housing. I happened to express that issue before. I've been to so many of these meetings in the last few years, I can't remember where and how many times I've said it, but this plan, the discussion in the EIR, doesn't address -- properly address middle-income

housing.

My experience over the 36 years in Sonoma Valley, and that includes being on the City of Sonoma's Planning Commission many years ago, private developers, they don't come to Sonoma Valley to build middle-income housing. We say 25 -- the Plan says 25 percent affordable, which, by the way, is way too low percentage, but the other 750, the develop -- a private developer is going to want to build as expensive housing as you can get, and that's McMansions. So this is not meeting a community need. C192-24

And I just also want to the say thank you for Greg Carr. You can tell who the one Sonoma Valley resident is on the Planning Commission, and what he had to say about the planning process in moving forward is excellent, so thank you.

DEPUTY DIRECTOR ORR: Thank you, Gina.

After Deborah will be Kathy Pons.

DEBORAH NITASAKA: Hi, my name is Deborah Nitasaka. Can you hear me?

DEPUTY DIRECTOR ORR: Yes, we can. C192-25

DEBORAH NITASAKA: I submitted a letter last November, and it seems to have been filed in the

"Who Cares" bin as none of my thinking is reflected in anything coming out of Permit Sonoma, so I will revise that letter to reflect how the draft EIR's impact on it speaks to that.

I've lived in Glen Ellen for 30 years. I'm an affordable housing advocate. I'm going to read a statement here. "SDC's built campus includes construction areas, a fire department, police and horticulture carve-outs, all areas that should be reinstated, this time as classrooms." I see no earnest attempt by the County to locate such a resource, but they are

C192-25

out there. My dream for a technical or trades campus would provide desperately needed professional training for California's young adults wanting to work with their hands and minds. Building trades, applied science programs, are just some of the ways in which this wonderful campus might educate people for the jobs of today and tomorrow, while also providing the means to maintain the special place to serve the special needs of those with special needs, the essential needs of those with special needs.

This model would include surrounding cottage neighborhoods, housing requiring minimal traveled miles, as it would be largely for students, staff and

educators, along with special needs housing designed to accommodate the developmentally disabled, those with other disabilities and physical challenges, etc. All affordable housing, all with appropriate supportive services to be coordinate and provided, where possible, by students and staff, to be developed on the outskirts of the main campus. Thank you.

DEPUTY DIRECTOR ORR: Thank you, Deborah.

After Kathy Pons, it will be Jim B.

C192-26

KATHY PONS: Good afternoon. My name is Kathy Pons. I'm looking at the goals of this project and -- and I'm finding it hard to find anything that is -- is regarding the legacy of care. I think that -- that because SDC was a hospital for developmental -- developmentally disabled people, that it just kind of follows that maybe some of that should be carried on and some of the buildings could be actually utilized for that.

I think there needs to be -- I -- I support the historical alternative because of the opportunity to be able to reuse some of those buildings for

that kind of housing, for housing with dis -- with -- for people with disabilities in particular. I think it's -- it should carry a higher priority than being economically feasible, which sounds like -- I mean, there's a common

C192-26

sense there, but -- but what -- if the developers are going to give priority to have to do what they want, just because it -- it's more economically feasible for them, I think we need to rethink that and have some discrepancy or some other perks for them if needed and get what the community is asking for in that area.

So I support Commissioner Carr's comments on the time schedule, and I hope that that will, you know, go forward and soon. Thank you.

DEPUTY DIRECTOR ORR: Thank you, Kathy.

Next is Jim B., followed by Larry Hanson.

C192-27

JIM B.: Jim B., speaking as an Oakmont resident. This is more a visceral comment. I've enjoyed everything that everyone has said so far about the development. And I think -- I support Commissioner Carr as well, and I hope the other commissioners listen carefully to what he was saying.

But I'll just -- this is just feelings, and I remember both being in line on Pythian for the Glass Fire to get out that direction, and then also the Oakmont Drive for the earlier Nuns Fire trying to get out. Both of them were very frightening situations for all of us here in Oakmont. And I heard someone say that the state of California has no intention of changing Highway 12. Well, that's great that you have a plan for

leaving Elnoka and going out to Highway 12. What happens after you get out to Highway 12, though? It was frightening.

I think the commissioners actually have people's lives in their hands right

now in the decisions that they're making, and I support the person who brought up perhaps having a grand jury look at this and moving it out of these people's hands. Thank you.

C192-27

DEPUTY DIRECTOR ORR: Thank you, Jim.

After Larry, it will be Vicki Hill.

LARRY HANSON: Yes. Can you hear me okay? DEPUTY DIRECTOR ORR: Yeah. Go ahead, Larry.

C192-28

LARRY HANSON: Oh, great. Thank you. Thank you for the opportunity. Yeah, Larry Hanson, and I'm President of the Board of Forest Unlimited. We've been working to protect forest and forest watersheds in Sonoma County for over 25 years, and so I have a keen interest in the open space and the protection of the watersheds, protection of the forest and the woodlands there, for the watershed value for climate change mitigation and for wild -- wildfire, wildlife habitat I should say, and the wildlife corridors. However, the protection for this has not really been spelled out, and, therefore, is inadequate.

In addition to that, the setbacks for the riparian zones do not actually protect the riparian areas, and are, therefore, inadequate in the Plan.

The development plan should be based on the most ecological plan in this day and age that we are faced with, with wildfires and drought impacts and climate change, etc., and I don't think that's happening -- that's not the Proposed Plan. Housing should be city centered and not in a rural -- not rural centered, and there is insufficient analysis of the ingress and egress for wildfire impacts. And the alternative analysis is inadequate and needs realistic additions to it.

I tried to cover as many -- as much as I can. The great comments that I've heard from everybody, I agree with. And Commissioner Carr we agree with. Thank you.

C192-28

DEPUTY DIRECTOR ORR: Thank you, Larry.

Next up is Vicki Hill, followed by Norman Gilroy.

VICKI HILL: Hi there. I'm Vicki Hill. I'm a land use planner and CEQA specialist.

C192-29

The process has failed to produce a reasonable plan. We all agree we need housing, but trying to force a high-density development into a site outside of an urban growth area makes no sense. The site is not in a transit corridor, nor is it next to an urban area. The state legislation does not mandate maximizing economic return, especially at the total expense of responsible land use planning.

And how can it possibly be claimed that it will be a self-contained community? As a land use planner, I wholeheartedly agree with Commissioners Carr and Koenigshofer and their concerns. I urge you to stop the train to avoid a train wreck. Don't wait for the final EIR to implement changes. Stop now, downsize the Plan, listen to the public, incorporate much needed phasing requirements and performance standards and then finalize the EIR. It's the only rational way.

The EIR assumes plan policies will mitigate impacts, but the feasibility of these policies is unknown, such as increasing transit. And many policies are unenforceable, so the EIR grossly underestimates the impacts. It's clearly biased towards the Proposed Plan.

The EIR identifies the Historic Preservation Alternative as being environmentally superior but then dismisses its advantages and incorrectly

claims that the impacts of the Plan and alternatives are comparable. Some mitigating components, such as widening creek corridors, were arbitrarily excluded from the Historic Preservation Alternative, making it look worse than it

C192-29

is.

The Proposed Plan contradicts the County Transit Growth and Land Use Policies and is inconsistent with its own guiding principles to truly balance uses and resources. I urge you to stop and take a look, and if you want to look at history, look at the Eldridge For All website. It has a lot of history about community input. Thank you.

DEPUTY DIRECTOR ORR: Thank you, Vicki.

Next up is Norman Gilroy, followed by Kate Eagles.

C192-30

NORMAN GILROY: Norman Gilroy. Thank you. It seems to me we're sitting here listening to the same debate that happened in San Jose and Silicon Valley 30 years ago. You know the results of that. They lost it piece by piece. And we are in the beginning of doing that, in fact maybe we're in the middle of doing that, in Sonoma County.

We need to think carefully about our future. It's not for nothing that the community proposal is called the Hundred Year Plan. We need to be thinking in those terms, and I believe that we are not in this plan.

I'm concerned that the language of the Plan, and in particular the language of the Historic Alternative, are biased to -- to the proposed -- to

essentially put a hit on the Proposed Plan or at least support the Proposed Plan, I'm sorry. It talks about the Historical Alternative being less superior in environmental features, energy use, etc. lacking community vibrancy, etc., etc., all of which are unsupported claims. All of which, by

the way, in the community's proposal, have been covered and are actually just the opposite. How do we get that kind of information into the process and take the bias out of the way the -- the analysis has been made? Overall the Historic Preservation Alternative is the environmentally superior alternative and reading from the Plan. We agree and we urge the Planning Commission to adopt it as the preferred alternative under the EIR. I thank you for the opportunity to -- to testify. I support the comments of Commissioners Carr and Koenigshofer. I think they're right on. I think we should do something about that now. Thank you.

C192-30

DEPUTY DIRECTOR ORR: Thank you, Norman. So next up will be Kate Eagles, and then our last public speaker is going to be Roger Peters.

KATE EAGLES: Thank you for this opportunity to speak, and I think my comments were made a few speakers back, so I won't take too long on this, but I just wanted to say that I think it's very clear that increasing the supply of affordable and workforce housing is broadly supported by the Sonoma Valley community. I live just south of the SDC site, very easy walking distance, and I personally really want to see a vibrant community there, but not at any cost to the environment and the health and safety of Sonoma Valley residents.

C192-31

And I think our general understanding was that the DEIR should really help the community better understand the scale of the environmental impacts of the Specific Plan, how they would be mitigated, what options were considered, and why these options were dismissed. And I don't think we're there yet, frankly, and I think part of that was just touched on, I think because a lot of the language is "should language" rather than "shall language," so it's not, you know, necessarily as impactful. There are terms

used such as "if feasible" or "assumed" are used repeatedly, so I think the analysis -- there's some acknowledgement of some uncertainty in the impacts and the mitigation measures as well. C192-31

So I really suggest that -- that as was just mentioned, we look at some way to phase the project, to look at mitigation check-ins or compliance or something along those lines to really better understand what we're doing and what we're getting into as we move through this process. Thank you.

DEPUTY DIRECTOR ORR: Thank you, Kate.

And then it looks like still our last public speaker is going to be Roger Peters. C192-32

ROGER PETERS: Thank you. Just a few comments. In reviewing this draft EIR, it seemed to me there are a lot of conclusions stated, summaries stated, but not necessarily any supporting information in our studies. I always look for what the study underlying the conclusion in and it was lacking in a number of areas, and I'll cover just four of those.

First, with respect to hazardous materials and hazardous waste, there was a phase 2 environmental analysis that recommended further study in quite a few areas that are summarized in a chart on page 464 of the appendix. Those apparently weren't done.

Secondly, there's a reference to a W-Trans operational traffic study. If you look in the appendix, that's a one-page study of trip generation. There's no study. I think you want -- may want to look at the Sonoma Valley traffic study that was done in connection with the winery events as something that could be good.

Third, as to vehicle miles traveled, I didn't see a study. Again, there's

C192-32

no link to what the study

is, so you can't read through the assumptions, so what assumptions were used for household employment, total service segments of vehicle miles traveled where the -- where's the nearest affordable market, where's the nearest medical center, and so on. So that needs to be detailed.

And then fourth, as far as cumulative impacts, that essentially said that all the regional models capture cumulative impacts, and, therefore, we don't need to do a cumulative impact analysis.

I urge you to -- urge you, Planning Commission, to ask for further studies that support the summaries and the recommendations because currently the underlying studies have not been provided or have not been done or both.

Thanks.

DEPUTY DIRECTOR ORR: Thank you, Roger.

So Chair Reed, that looks to be the end of public comment.

CHAIRMAN REED: Okay. That's great. I would suggest that we take a ten-minute break and come back and get some comments from the commissioners. Does that sound good? DEPUTY DIRECTOR ORR: Okay. So we'll put up a slide saying that we'll be back at 3:05? CHAIRMAN REED: Yeah.

DEPUTY DIRECTOR ORR: Okay. Thank you.

(Recess taken.) CHAIRMAN REED: Scott, I realized I neglected to close the public comment at the end of the comment. I see we have one more hand. Should we entertain, or did I effectively close public --

DEPUTY DIRECTOR ORR: I don't recall you officially closing public comment, so I think it would be prudent to take this last one and then officially close public comment.

CHAIRMAN REED: Great.

DEPUTY DIRECTOR ORR: So Nick Brown, you'll be our last public speaker. Let me share my little clock again. All right, Nick, you should be able to unmute yourself.

NICK BROWN: Thank you, Commissioners. And thank you, Brian for your presentation. C192-33

Brian mentions that the PAT has supported a product Permit Sonoma has come up with. The PAT does not support this product. In fact, over a year ago, 12 of the 14 PAT members wrote a letter to Permit Sonoma saying this process is going in the wrong direction and is largely broken.

As the commissioner asks, is this a done deal? This product, with all of its self-mitigating effects in

the draft EIR, this quote-unquote "preferred alternative," appears to have been baked in from the start despite the community's clear preferences for other alternatives now coalescing around the Historic Alternative and as well as the Sonoma Valley Community Plan submitted to the Department of General Services last Friday.

This Historic Alternative is clearly the superior alternative, not only environmentally, as is the concern in the draft EIR, but it also largely mitigates community concerns over emergency evacuation and traffic impacts in general, two factors Permit Sonoma identifies as problematic in the Historic Plan, are economic viability and slightly less open space in that plan. Well, the open space -- the housing in that plan was spread out deliberately. It can be easily brought in. There will be way more open space as it's easily brought in and adjusted.

The economic viability, builder groups have been looking at the campus and have identified that a profit can be turned at 600, 450 and 385 units,

depending on the group looking at it. Other groups that are supportive of this appropriately scaled alternative of 450 units are the North Sonoma Valley MAC, the Sonoma Valley Citizens Advisory Council, the Sonoma City Council, the Landmarks Commission and frankly the Board of Supervisors at their meeting in January. C192-33

As Commissioner Carr wonders, I believe the whole Sonoma Valley community is supportive of doing the right thing and is committed -- and the community has clearly shown its commitment to participate in as many hearings as needed to get this right. We are with you. We can get this right. Thank you again.

DEPUTY DIRECTOR ORR: Thank you, Nick.

CHAIRMAN REED: Okay. With that, let's close the public hearing and bring it back to the commissioners. And just to remind here, we're not taking any action today, so we're offering our own comments on the draft EIR.

And Commissioner Koenigshofer, do you want to comment? COMMISSIONER KOENIGSHOFER: Would you also remind those listening that, while the public hearing is closed, the period for public comment is still open until --

CHAIRMAN REED: Yes. Until September 26th, if I recall.

MR. OH: Correct, 5:00 p.m.

CHAIRMAN REED: Well, I think that we heard a lot of comments from the public, somewhat critical of --

of the Plan, and we have some initial, you know, thoughts from Commissioner Carr.

I'll just -- you know, I want to thank Staff for putting the Plan together and just acknowledge that when I looked at the Plan and read through the guiding principles and, you know, actually thought, wow, this is really

ambitious and -- and a thoughtful plan, it was a deep dive to go back through the draft EIR and really kind of dig in and see how, you know, those guiding principles were laid out and how they were evaluated.

But I think that there's -- a reason we're here today is to hear comments and help move that plan together, but I -- I certainly don't think that we're throwing that plan out. That plan is, I think, a thoughtful approach to how you might develop the Sonoma Development Center and -- and I'd like to hear from other commissioners just how we might beef up the -- the analysis and see how best to move this forward.

Commissioner Carr.

COMMISSIONER COMMENTS

COMMISSIONER CARR: Thanks. Thanks, Mr. Chairman.

You know, I'm -- I'm not ready to talk about the Plan at all. I think that's for later. And I do,

you know, anticipate a lengthy hearing process for the Plan. I think people are going to be -- there's going to be a lot more speaking going on than there -- than there was today.

I read through the several hundred pages of comments on the NOP that were provided by the Staff, along with the EIR materials, and -- and my first reaction is that the idea that the Staff is going to be able to prepare responses to all the comments that are going to ultimately come in on this EIR is going to be -- you're talking about hundreds of comments and hundreds of pages, and I, for one, would request that we be given at least 30 days from the publication date of the final EIR until the first hearing. I think that's a complete -- that's a reasonable request for -- to give us time to read and absorb all that information.

And -- and then I think that we should be looking at some sort of a field trip or site visit. I've asked for this now for several times over the last year. I think it would be very beneficial to the commissioners to be able to take a couple of ganders of this site from different perspectives to get a feel. I don't know. I've been on the site in the past and have a fairly good idea about what it looks like, but I don't know to what extent other commissioners have had a

chance to look.

And I would like to see maybe a bus ride. Maybe we can all meet in Santa Rosa and take a bus ride down. Typically you've got to deal with the Brown Act issues on that, so you usually have a member of the press that goes along with us. And then maybe we have some stops scheduled where we can get out and have the Staff and consulting team give us a presentation on what's going on where. I just think that would be extremely valuable to do to see how this fits into the context of that area.

As far as the schedule goes, I -- I feel like I would be misleading people to think that this is going to be anything less than six to eight months to go through this process, to make changes in the Plan, to have the Plan redrafted to reflect our changes and then to whatever degree a EIR is still applicable, that obviously Counsel and Staff would have to look at that. If -- if there's a way to shorten that six- to eight-month period, I'm happy to do it if it means meeting more frequently. But I also understand that several of the commissioners work, and so I -- you know, I'm -- my time's probably a little freer, but if we wanted to meet, like, once a week or every couple of weeks or something on a regular basis to go through the

Plan and accept or -- or whatever's in there or change it, I do think

there are many valuable and very forward-thinking policies in this plan. I think a lot of it, I agree with the chairman, is very, very good and forward-thinking, but I also think there are some things that need changing in the Plan, and I don't know whether those things would -- would impact the EIR, how they would impact the EIR, if at all.

But I feel like we need to go through this and -- and -- in at least a sensible-take-a-deep-breath way. I understand the implications of that, but I'm hoping that -- that that can be -- that can be accommodated.

Second sort of thing I wanted to bring up on the schedule, and this I'm not sure there's an answer to, but I'll throw it out there. There's a -- the state has had an RFP out for transfer of this property, and they've been seeking bids from landowner, developer, other interested parties to take on responsibility for this property. I don't know the details of that, and I don't know that any of us do. My understanding is that there were a couple of -- three proposals that were submitted just recently that DHS -- I'm sorry, DGS -- is going forward, and I'm -- I'm wondering if the Staff would have any -- could enlighten us a little bit about how that transfer proposal process fits in with the

County's consideration of the EIR and the -- and the Plan. Is there anything that you can shed light on for us on how those interact, because obviously one -- one could lead to the other and vice versa.

MR. OH: Certainly. So through the Chair. The Department -- the State Department General Services solicited bids up through last Friday. We, as the County, do not play a role in the disposition process, and so there's two tracts. There's the local county planning process. The schedule was identified, you know, at the start of the onset of the three-year process,

and this is where the two tracts were going to meet. The County-led planning, a Specific Plan document, certification of an EIR, that sets the course for a future project sponsor to follow, essentially, and so I -- you know, it remains to be seen. You know, there's still a number of months as part of their schedule, but the idea was the scheduling is timed in a way that with the County wrapping up its local planning process, that sets it up for the future property owner to start work next year.

COMMISSIONER CARR: So it's a little bit uncertain how that might unfold since we're not -- we're not part of that -- MR. OH: Correct.

COMMISSIONER CARR: -- process.

So I have one other question I want to ask. Maybe this is a question for Counsel and Staff as well before I try to seek some input from my fellow commissioners. A Specific Plan is an extremely valuable tool for planning, especially planning for a site like this, and a Specific Plan EIR really can work to streamline some of the projects. Brian's presented this many times, and anybody that's been involved in a specific planning process knows this well. And lately the legislation has come down the pipe that if a housing project is proposed that is consistent with a Specific Plan, that it can go forward with no additional CEQA review.

The concern I have with respect to this EIR and this process is that there are some conditions under which that CEQA exemption would not apply, and one of them is if a Specific Plan EIR does not offer enough detailed assessment of the impacts of a project that it is not exempt under -- even if it's a housing project. I think I'm reading that correctly for counsel, but I'm very concerned that if we don't get a EIR that meets that criterion, that we really are not using a Specific Plan the way it should be used. We're going

to be going through CEQA review on -- on all these subsequent projects. Am I reading that provision of the Resources Code properly, Jennifer? MS. KLEIN: I think I know the one you're talking about, and I think it really -- you know, it depends. The intent here is to have streamlined review. That doesn't mean no review. So there would be the opportunity to supplement if needed, and that's -- that's what we would do. It's hard with a, you know, hypothetical not knowing where or what the housing is.

COMMISSIONER CARR: Yeah. Well, obviously, it would have to be -- it would depend on reviewing those criteria and making sure. I guess that I would really hate to try to advocate for affordable housing on this site, which I would like to do, and be able to -- and have people think that they're going to be able to avoid CEQA going forward with their projects, unless we have an EIR that's adequate. That's my biggest concern is the level of detail in the EIR. It may be appropriate for the level of detail in the Plan, but if we're not going to give the housing projects the benefit of the doubt on a streamline process, I feel like we're not really -- we're not really doing the job that we could. So anyway, I just was curious.

If other commissioners want to weigh in. I have -- I have about six or seven things I want to request as far as Staff work before we start the hearings, and I can go through those, but I -- those are just requests on my part. I was wondering if the commissioners had any -- any feedback on the schedule stuff.

CHAIRMAN REED: Commissioner Koenigshofer.

COMMISSIONER KOENIGSHOFER: To begin with, I want to ask a question, just a follow-up on the question that Greg just posed to Counsel referencing in his

question a residential project component.

I need to understand the Specific Plan, the EIR, and what potential scrutiny or additional environmental review is there for whatever's proposed by whomever buys the property. Is -- is the issue of the EIR on the Specific Plan specific to residential development proposal components? How does it relate to the -- the job development portion of it, the commercial -- how does it relate to a hotel project? Could you just give us an overview of what exactly would we be -- because I look at this, as far as I understand it, we're -- you know, we're -- we're going to approve this Specific Plan that has the environmental work done on it, and that looks like that might be approving the entire project that might come in.

MS. KLEIN: Yeah, it's very difficult to answer these hypotheticals because we don't have any specific project, and we don't know whether it fits into a CEQA exemption. We don't know if it would fit within the level of analysis that's already been done in this EIR, where it can be relied on, for instance, in the Core area where there's more analysis being done and at a programmatic level for the remaining open space area, so -- And then secondarily, consistency with the Plan. It just -- it depends what the detail is and what the project is, so I really -- I can't answer the question.

COMMISSIONER KOENIGSHOFER: Let -- let me try with more specificity. If the Plan says that there's a specific footprint on the ground, and the Plan anticipates a 120-room hotel at that specific location, is that sufficient compliance or accord with the Plan that that component would not require additional environmental review? MS. KLEIN: I don't know. I would have to research that and come back.

COMMISSIONER CARR: I'll weigh in on that. I don't -- I understand that it's hypothetical and it -- the reliance on a clear answer, but my understanding from reading the EIR is that hotel would be subject to subsequent review, and it would be for review for compliance with the Plan, but it would also review the individual impacts of that particular hotel, and those impacts would be addressed through -- either through a subsequent Neg Dec or a recertification of the EIR or some combination of that -- of those two.

The issue becomes -- for housing projects under the state law, it's a little bit different, and there are some exemptions in the Public Resources Code for housing projects, and those are the ones where I think the issue of -- and I think Jennifer was really good about not being sure about this, because where -- if it -- if an EIR is not sufficiently detailed under a Specific Plan EIR, then that exemption may not be utilized, and that's all I'm saying is I -- I'm hoping that we can end up with a Specific Plan EIR that is detailed enough to give those housing projects that exemption. I don't know that -- if we'll get there or not, but that's my hope.

COMMISSIONER KOENIGSHOFER: If I -- if I may through the Chair. Understanding this point is critical to me to understanding whether or not the Plan itself is fine as is, because, you know, whether it comes up all the time, whether or not there's any further review or is this it? And I, in reading the Plan, reading that -- that flex area and the references to potential density bonuses and so forth, it just is not clear to me exactly what the Plan says is okay and was -- is the consideration of that sufficient in the EIR so that -- so that we don't mistakenly think we're clearing a path and we're not, or we mistakenly

think that some components would be subject to further review, even if it's just for compliance with -- or compatibility -- with the -- with the scope of the EIR. So I -- I need to understand that scope of question there somewhere along the line.

DEPUTY DIRECTOR ORR: I'll jump in for a moment. So I think the most important thing to remember that if something isn't considered under this EIR -- something needs to be considered as part of this EIR to get that streamlining that relies on this EIR later to some extent. It -- it could be a use that we haven't considered existing today, or it could be, you know, new regulations that come down in a few years that didn't exist at this time so it wasn't considered in the evaluation. So there's various levels of streamlining, but, you know, another important factor is whether something is listed as, you know, a permitted use that you don't need a permit for, or if it's listed as a conditional use permit.

You know, just because something may have, you know, streamlined CEQA but requires a use permit, it would still -- you know, there's still a discretionary process where the project is analyzed, not just for, you know, coverage under the EIR, but coverage under the General Plan, the zoning ordinance and -- and the like.

So if the concern is this plan is your only bite at all of the apples, you know, I think it's important to, you know, consider which ones, you know, maybe are listed as requires a conditional use permit or which ones that aren't and look at it that way rather than just assuming that anything approved under this EIR will never be looked at again.

I don't know if that gets to your question, Commissioner Koenigshofer, but I hope it helps a little bit.

COMMISSIONER KOENIGSHOFER: I think that you summarized the point of my question. In terms of -- and when I listen to the comments of the public, it seems to come through pretty clear, too, that there's un -- people are uncertain about just exactly what does each component, where does it fall in terms of the criteria list that you just outlined? And I think, unless I'm alone on this, that question set with some examples about what might be proposed as per the Specific Plan,

what would just by operation of the zoning ordinance, for example, be subject to further review.

CHAIRMAN REED: Scott, is that something that you think you can document? It seems like the Plan suggests and supports the idea that subsequent project level development needs -- needs more scrutiny, needs more review, and it allows for that. But it's not specific to the site or the project or anything else. Is there a way to define where that's likely to occur?

MR. OH: So through the Chair. Where that's most likely to occur, I sort of liken this to you have a list of ingredients, and the program-level EIR takes that list, evaluates those impacts, and then there's enough sort of flexibility and assumption that when -- if and when either a project that is the entire campus or likely components of a -- the larger project gets in front of Permit Sonoma, there's an application submitted, they have this set of ingredients to consider. But ultimately they are going to have to submit some level of environmental analysis and Staff will have to determine and go through, you know, just what they do with any other projects.

So and -- and so when we say it's streamlined, that's what we're referencing is there's sort of this list and set that the program EIR allows, but the

unknown here is the fact that there isn't a project, right? We aren't a

project sponsor that is out here proposing a very specific project which would, I think, have a little bit more definition and maybe put a little more assurance to the community, but that's just -- that's not where we're at in this process.

CHAIRMAN REED: It seems like my experience with specific plans is that there's -- that's the benefit. You know, you kind of are aspirational at this point, and when you get down to the project level, you need to follow all those guidelines and you are held to account for those, and that seems to be spelled out in the Plan.

MR. OH: I think so, yes.

CHAIRMAN REED: Commissioner Ocana, do you have any thoughts?

COMMISSIONER OCANA: You know, I think I'm -- I hear Commissioner Carr's concerns, and I hear the public's concerns about the ability to include comments. What I'm most concerned about is the County's -- I'm worried that if we don't meet the deadline, this is going to cause a bigger consequence, and so I'm -- that's what my big concern is. If we carry on with additional hearings, where does that leave the County as far as being able to -- to create a plan that is really

guided by us? Maybe Brian could speak to that.

MR. OH: Sure. I think that's the 60-plus-million-dollar question. You know, we've been meeting regularly with the state and our counterparts throughout this process. You know, there has -- you know, we're still -- both the County and the State are working off of the same timeline up until this point. We talk a little bit about what may happen with the selection of no project, but all we can go off of is we have a three-year agreement with the state. They have funding to keep the warm handoff afloat this year. I

-- I can't sort of hypothesize what happens, you know, in the next year or two, and then the question about time.

And I understand Commissioner Carr mentioning the six months, and I would sort of -- I would respond to that. I mean, if we can get a better sense of Staff on what the Commission feels they need to see in that X number window in order for them to make a decision as a decision maker, that would give us that clarity so that we can go back and prepare, so rather than say, you know, it's going to take six months minimum, I would want to hear what is it that you would need to see in those six months, and we will work, as Staff, very diligently to get back in front of the Commission.

COMMISSIONER OCANA: So if I could follow up on that. It appears to me that the most important thing right now is meeting the state's deadline, because we could potentially not be offered another opportunity, though we are right now, correct? And when does that deadline expire, on December 31st or on the fiscal year of 2023? MR. OH: December 31st.

COMMISSIONER OCANA: So essentially, laymen's terms, if we don't provide the Specific Plan to the state by December 31st, we could essentially lose our opportunity to guide this project entirely; is that correct? MR. OH: That's likely.

COMMISSIONER OCANA: So I think that my contribution right now is I would really like to see the Commission discuss whether or not we're willing to meet that timeline. We've got -- it's September 15th. I don't know how many special hearings we can have before then to make a decision, but, you know, as a body, are we willing to risk not meeting that deadline? That's what my question is. I'm not sure I'm willing to make that risk, but I do

understand that there are a lot of outstanding questions.

CHAIRMAN REED: Commissioner Koenigshofer.

COMMISSIONER KOENIGSHOFER: Thank you for asking that question, Commissioner Ocana, because I wanted to be reminded of what the actual deadline date is. And I also need to really understand what is the timeline that the Department of General Services on considering the proposals or the offers that have been made to the state to acquire the property. I assume when we're talking about that, we're talking about the 180-acre Core area, because the disposition of the 750 acres or so is firmly set to go to either State or County Parks.

So I know this is a multilayered question. So if -- if the Board of Supervisors had this -- the EIR -- final EIR and final Plan on its agenda for February 5th, we assume that the state would come in and shut it down. And then most importantly, just so I understand it, if the County of Sonoma missed the three-year deadline, and then whatever participation is before us now is shut down, does that mean that the -- whoever the state sells the property to, the County doesn't have any land use regulatory role over that 180 acres? And if so, who does, the general services agency or the legislature or what would happen if that were to occur? MR. OH: Through the Chair. So great question. We have existing land use designation and so should we

not go through that process, that remains the same, and so this is zoned public facilities. That said, the state should -- they have a couple options of either selling or doing other things. They could run a ground lease, and in which case the State would supersede local County regulations. There's no indication of that at this point, but any future developer would

have to work through and go through the entitlement process with Sonoma County.

CHAIRMAN REED: Maybe just to chime in here. I mean, I agree with Commissioner Ocana. I think that it's urgent that we meet that -- that deadline. And you know, in reading through the documentation in the Plan, it was a -- kind of a deep dig in a short amount of time to try to -- to catch up with the -- the envisions of the Plan, so for me, it may be helpful to have at least one meeting where we could have a presentation on the Plan and hear from the consultant team and -- and kind of reinforce, you know, the principles and goals that are in the Plan and try to get a better sense of, you know, how those came to fruition and -- and hear about the -- the benefits of what that brings to this potential community.

Commissioner Carr.

COMMISSIONER CARR: Thanks, Mr. Chairman.

Yeah, I've, you know, gone back and forth on this. The risk, I guess, is if we take longer than December to -- to do this plan that, you know, some, you know, state action is going to, you know, overwhelm us and we're going to regret it. Of course there's a risk of that. I just think the risk is extremely low, and the argument for that is that we -- the County is pursing a plan, and we've been diligently pursuing that plan. We were -- we've been held off substantially with the early public meetings and the outreach because of the pandemic. The -- you know, the Staff has, you know, gotten on the motorcycle and pushed hard to bring this thing around, but the idea that you're going to interrupt the planning process at the most critical moment in planning to -- to meet an arbitrary deadline to me is -- is irresponsible.

And you've heard the -- you've heard the comments of the public. They're -- we would be effectively recommending a plan to the Board of Supervisors that nobody in the community likes, and even though it has some good features in it, and -- and I just think that it's our job to go through this thing and do it right. And let's try to do it -- let's try to expedite it, and if the state is -- starts rattling its

cages, you know, the Board of Supervisors will be on the phone and going, "Come on you guys." But I -- you know, I think the Board can tell us if we're amiss in this. You know, our job is to recommend a good plan I think.

CHAIRMAN REED: Commissioner Ocana before we get to Commissioner Koenigshofer.

COMMISSIONER OCANA: Thank you. My -- my concern here, though, Commissioner Carr, is whether or not this is actually an arbitrary deadline. It sounds like to me it is actually a deadline, and that there are, you know, unforeseen consequences of what could happen with County involvement should we not meet that deadline.

So, I mean, if it is arbitrary, then it's really not a deadline, and so I'm wondering, as far as -- I don't know if Ms. Klein could contribute or if Brian has some more -- MS. KLEIN: Here -- here's my suggestion. It is a deadline, and I think the better course for your Commission, if you are feeling conflicted about the timeline not being what you are used to in a complex planning project, that -- that you find a way to give the Board the power to decide whether the agreement is going to be breached or not. And that by nonaction you

don't cause that to happen.

COMMISSIONER OCANA: I -- I agree with that for.

MS. KLEIN: And there are a variety of ways that motion could be made when the time comes, but that is not before your Commission today. Today is, again, comments on the draft EIR and only on the draft. I realize there's a lot of marrying the Plan concept and what's -- what the environmental review of it is, and it's really hard to separate those when the -- the Plan is -- you know, is inspiring a lot of really strong feelings.

But I strongly advise your Commission to -- to consider, you know, that it's really the Board that should be making that kind of a call, and if it wants to extend the planning process and send it back, let it do that, but I think it -- it would be very awkward to just simply sort of send Staff back at this level for more and more work when it has tried so diligently to fulfill the obligations that the Board directed to it.

CHAIRMAN REED: That's great. Thank -- thank you for that summary. Commissioner Koenigshofer.

COMMISSIONER KOENIGSHOFER: Yeah, I'm -- I don't -- I'm not advocating that we throw out the

deadline or that we play chicken with the state over what might follow procedurally if the County doesn't meet the deadline.

At the same time, I'm trying to figure out how to fit into the time between today and the deadline getting answers to the questions regarding the DEIR and what it's analyzing so that -- you know, so that I can understand whether the EIR that's before us is adequate to the task.

So, you know, I -- I like Commissioner Reed's question or suggestion regarding having an interim meeting to get information on the -- on the Plan itself, and I would think at that juncture, if we could also get some more

information or a better understanding of the legal procedural questions that some of us have asked about how certain components of the -- of a project that's consistent with the Plan would or wouldn't trigger additional review. I -- those questions are important to me in evaluating the DEIR, and I believe those questions are unresolved in a very substantial part of the public based on the comments.

So I wonder if, mindful of the deadline and trying to maintain adherence to that timeline, we couldn't pursue something along the lines of Commissioner Reed's suggestion.

DEPUTY DIRECTOR ORR: Chair Reed, you are muted, but it sounded like you maybe said "Commissioner McCaffery." CHAIRMAN REED: I did, Scott. Did you have something to say, Commission McCaffery?

COMMISSIONER McCAFFERY: Yes. So in -- in looking at the Plan, and I've -- you know, I've gone over the EIR and the -- the -- both the Draft Specific Plan and the draft EIR, and, you know, it's pretty extensive. I think most of the concerns are around, you know, traffic and evac, water, historic preservation and wildfire, and I'd really like to have a meeting to discuss those things.

I mean, I think that everything's been addressed, but just to -- just to make that really clear, I think that'd be -- that'd be nice.

You know, the state kind of asked the County to -- to come up with the Plan, and, you know, the first thing they said was prioritize housing, especially affordable housing and housing for individuals with developmental disabilities, and then to the permitted protection of the open space, and I think that's been addressed. And involve the community, and I think that has happened.

And then they talk about reducing uncertainty,

increasing land values, expediting marketing and maximizing the interest of potential purchasers, and I think that that part kind of comes into conflict with the other things, and I think that's the -- the real thing we need to have a discussion about is the -- is the development intensity. And when you have a project that demands a lot of affordable housing, it needs some way to subsidize that, and so that lends itself to more intense development in order to get that done, and I think that's in conflict with what the community is talking about, and that's kind of the rub. That's the thing we really need to -- to dive into, in addition to the details about, you know, are people going to be safe, are they going to have the resources they need, and things like that.

So I think -- I think it would be good if we -- if we cued up a meeting to talk about that in more detail before are send it to the Board, so with all -- and I know we've -- we've been talking in this deliberation more about the process and things, and, you know, I would like to talk about the specifics, so I think that -- that we should do that.

CHAIRMAN REED: Great. Thank you for those thoughts.

So Scott, is that something we can do? DEPUTY DIRECTOR ORR: Yeah. I -- I was just waiting for the opportunity to float something out there.

So coincidentally, September is a month where we have five Thursdays. Traditionally on the fifth Thursday we have what's called a Planning Agency Meeting, which tends to be, you know, all ten commissioners -- or we have nine appointed commissioners right now -- would be invited to a public informational meeting that is usually used for, you know, as kind of

awareness and education and larger issues without a decision being made. So I -- I've heard interest in a field trip. We've got a fifth Thursday, so just thought I'd gauge the idea of, you know, having a meeting on site on September 29th to, you know -- you know, learn a little bit more about the property, you know, hear from, you know, more from the people working on the Plan. It would be open to the public. So maybe that would be a good -- good starting point.

CHAIRMAN REED: That sounds really good to me. I see thumbs up. Is that something we need a motion for? DEPUTY DIRECTOR ORR: I don't think we need a

motion for it. Just as -- you know, as Staff who -- we would have to cancel the 29th meeting if we didn't have something, so from what I'm hearing is there's a desire from the Commission to program that planning agency day, and so, you know, we'll work on getting the -- the notice out. In the past, we have, you know, done the practice of a bus and a member of the press. Honestly, it may feel like pandemic's totally over, but I would recommend that everybody that's interested meet on the site just for -- because that's still part of life at the moment. So we can maybe get into those details and work that out as -- as part of the public notice, but that would be my recommendation.

COMMISSIONER CARR: Thank you. That would be wonderful.

CHAIRMAN REED: Commissioner Koenigshofer.

COMMISSIONER KOENIGSHOFER: And I agree with that. I think that's a wonderful idea, and I'm wondering, does the fact of us taking a site visit still allow -- is there a mechanism for us to also have the discussion that was just alluded to and hopefully presentation of some additional insight

regarding procedure and further review for individual components of a future project worked into that day's get-together?

DEPUTY DIRECTOR ORR: So it definitely could, but whether it, as a stand-alone, would be enough to, you know, kind of meet the need expressed by a number of the commissioners, that's debatable. So I think we'd have to look into some of the logistics and availability of, you know, the on-site resources, and if we weren't able to kind of accommodate that, you know, informational presentation on -- focusing on the Plan, it would probably look at, you know, another meeting in October prior to the 27th for that kind of informational presentation that was mentioned.

COMMISSIONER KOENIGSHOFER: I may -- to that point, I'm looking at a confidential draft of the potential future schedule.

DEPUTY DIRECTOR ORR: So -- COMMISSIONER KOENIGSHOFER: October 6th.

DEPUTY DIRECTOR ORR: -- maybe just focus on the calendar days of the week, since it's a confidential draft of a calendar.

COMMISSIONER KOENIGSHOFER: Yeah, right. Well, the next time that the Planning Commission would meet would be October 6.

DEPUTY DIRECTOR ORR: That is correct.

COMMISSIONER KOENIGSHOFER: There may or may not be items already scheduled for that. I have no way

of knowing.

DEPUTY DIRECTOR ORR: So regardless of if anything is scheduled, you know, Staff acknowledges that this is a significant community priority and will do everything we can to make room for it.

COMMISSIONER KOENIGSHOFER: It might be really timely if we took the field

trip and then at the next meeting opportunity we actually had the discussion about the Plan and the -- and the triggering criteria for further review.

COMMISSIONER CARR: Through the Chair. Is it possible that we could start the public hearing on the Plan before we receive the final EIR?

DEPUTY DIRECTOR ORR: I probably would want to push that over to Counsel.

COMMISSIONER CARR: It's not always a good idea, but if it -- it might speed things up in the long run, because I -- you know, I fear that the final EIR is going to be voluminous.

MR. OH: So through the -- apologies. The "through the Chair" part threw me off. I thought it was being directed to Chair Reed.

I think just the letter of the law states the decision cannot happen no sooner than ten days of post release of the final, and so I think, to the degree that

it would be helpful to start deliberations on a draft that -- or a final -- you know, something that hasn't been published, I think that's just the tricky territory to consider.

COMMISSIONER KOENIGSHOFER: Mr. Chairman, to that point, would it be feasible to have a workshop on the Plan itself? Not a public hearing, but a workshop that would not, then, be a problem relative to the date situation just answered by Staff? CHAIRMAN REED: Is that to me? The workshop -- DEPUTY DIRECTOR ORR: It -- it would be less problematic than, you know, starting the public hearing in advance of -- starting the public hearing with the intent of making a decision in advance of the materials being ready, so -- COMMISSIONER CARR: I'm not talking about making a decision. I'm saying just start the public -- just open the public hearing and begin that process, and as long as we don't

decide, you know, make our project decision in time, I frankly think it's going to be impossible for us to -- MS. KLEIN: Yeah.

COMMISSIONER CARR: -- make a decision that soon, but hey.

MS. KLEIN: Through the Chair. I think you're really talking, Commissioner Carr, about really conceptual conversations, because you won't have the materials in front of you, so I think it would be a workshop followed by a hearing when they're published.

COMMISSIONER CARR: Okay.

COMMISSIONER KOENIGSHOFER: I think that would satisfy our effort, though, what we're trying to accomplish.

CHAIRMAN REED: Is -- is that something we could combine into a site visit that might be hosted by a consultant that could -- you know, I would assume that most of the energy and thought is on the Core area of the Plan that we could maybe get a room and maybe look at some of the historic structures and get a better sense of how they've been evaluated and, you know, how the different plan alternatives effect. Is that asking too much for that one day? DEPUTY DIRECTOR ORR: I don't think that's something that we can confirm right here, but we can, you know, look into the options. At the very least, we'll, you know, work to coordinate them, a field trip for that day for any commissioners and members of the public who are interested, but I wouldn't want to promise more than that at the moment, until we confer with our state partners who manage the property.

COMMISSIONER KOENIGSHOFER: To or through the Chair. To that point, that would be fishing on one level, but I think, in terms of the public's access to that presentation and our discussion of the workshop, it wouldn't work very well. I think there's probably more people interested that would be

able to attend by Zoom than would practically be coming to the site for that discussion, with respect.

CHAIRMAN REED: Yeah, that's a good point. I hadn't anticipated the Zoom thing. Yeah.

COMMISSIONER CARR: And -- and to the Chair. Just one other thing, just as a caution, there are many issues with respect to the adequacy of this plan and the open space area. It just -- for lack of a better way to say it. It it's not as open spaced as it's presented, so we do need to cover all of those bases when we get to the workshop.

CHAIRMAN REED: Yes. Yes, agreed. You know, I was just trying to -- while we were on site thinking that might be an interesting way to sort of get some thoughts. All right.

DEPUTY DIRECTOR ORR: The -- the general summary of what Staff will be working on is coordinating a planning agency meeting for September 29th, open to

the public, and all ten commissioners. And then also look into adding an early October workshop date to the Planning Commission, so --

CHAIRMAN REED: That sounds great.

Commissioner Carr.

COMMISSIONER CARR: Yeah, so I -- several things I have in mind that I'd like to consider as part of the Plan, and I didn't want to wait until, you know, we're into the planning deliberation process, but I think they may involve some work -- additional work on the part of the Staff, and, you know, I don't know whether any of these things are possible or desirable or anything but I -- in case they did involve some work, I wanted to try to expedite things by mentioning them now.

I would like to have a way to designate affordable housing sites that would preserve those housing sites for 100 percent affordable housing projects. I know there were some issues around whether HCD accepts those in the housing element. I know there are people who believe that that may not be legal, and people who -- and maybe very well that it's done through a series of incentives, but I'm concerned about the market rate projects eating up land that we need for our affordable housing, and I would remind everybody that the REMO [phonetic] for Sonoma County is 58 percent of

the units need to be affordable to below-market housing.

Second thing I'd like to see is the traffic analysis that looked at LOS for the County, and they looked at LOS because the General Plan has requirements for LOS on the area roadways. The traffic analysis that was done looked at the current condition and also the future Specific Plan with the connector to Highway 12. It did not look at the possibility of the future plan without the connector, and there's some language in that analysis that suggests that the -- that that has impacts on Glen Ellen that wouldn't occur with the connector. So I would like to have that study look at the option of a future plan plus -- future plan with the connector.

Third thing, I -- looking at some of the market rate housing possibilities. I'd like to know whether there is an option to limit house size. And I -- I know we did that in the cottage housing program a couple years ago. Those were all accessory units. I don't know if that's something we can do, but I would like to see whether that's possible given the desire for affordability, even among the market rate housing.

I'd like to have another word. I know this comes around a lot, but a lot of our debates is whether or not it's possible, using a Specific Plan, to

restrict housing to people who are working on site, or to at least get a preference in the selection process for folks who are working on the property.

I'd like to see a proposal for phasing that is a little more of a hard cap phasing than the one that's in the Plan currently. I notice that the financial plan is not firmed up early enough in the process for my liking. I would like to see the financing plan identified prior to any construction or entitlements on the property; otherwise, I feel that we're going to be having fair share of funds that could be contributing towards the infrastructure not be charged adequately to development as it occurs.

And the phasing I think should be specific to a certain number of units and a certain -- maybe jobs or square footage of commercial. And that shouldn't be hard enough for there to be, when the cap is reached, there's a report provided to the Commission for -- on what the situation is at that time with respect to various impacts.

And the last -- the last thing I'm wondering if it's possible. The groundwater sustainability plan for Sonoma Valley has prioritized looking for places along the creeks where we can divert, stream and recharge groundwater by streamside diversions. It's a really unique idea, and it's probably one that would ultimately mimic their creek side areas that were in existence prior to people started living here. And it may be that since Sonoma Creek wanders through this property, and there's some flat -- relatively flat areas, I'm just wondering if there's a -- if the geologic work that was done or the site work could identify any potential for part of that streamside recharge of groundwater. That's it.

CHAIRMAN REED: Great. Thank you for those. Any other commissioner comments? Yes, Commissioner Ocana.

COMMISSIONER OCANA: I wanted to comment on one of the public's comments regarding their -- it was someone who said their child had been a resident of the Sonoma Development Center, and their concern was whether or not the County could regulate how many units would go specifically to disabled persons. Is that something that County can do? I'd just like to answer that person's question.

I know we can -- we can mandate affordable housing, but can we mandate diversity in the housing? MS. KLEIN: We would have to look into it. I'm not aware of any particular law that would give preference to that, but it's not my area of specialty, so --

MR. OH: And then just through the Chair. On top of that, there is, you know, through that community dialogue, a policy in the Plan for at least five homes to be deed restricted for people with developmental disabilities, and so that, you know, sort of is in direct response to some of the advocacy around preserving housing for people with developmental disabilities.

COMMISSIONER OCANA: So those would essentially would be like board and cares or group homes? MR. OH: Well, it remains to be seen. I think we have a strong partner in the North Bay Regional Center, and so their -- they have the finger on the pulse of what is out there that -- that is lacking, and so, you know, we look to -- to them for partnership on what makes the most sense here.

COMMISSIONER OCANA: Great. Thank you very much. I think that's really important to make sure that that individual, but also everyone, realizes we

are putting emphasis on that very important topic.

My other question was about phasing. Is there -- I understand that we have indicated phasing is crucial, but do -- in the Specific Plan, are we going to be dictating to a developer how that phasing is going to look? Like, for example, if we -- you know, regardless

of the number of units that are approved, is the first phase going to be entirely affordable housing, or will there be a mix? When does the hotel get to be built? When do commercial buildings get to be built? Are we going to regulate that, or is that something the developer can decide on?

MR. OH: Through the Chair. So there is an entire chapter in the Plan focused on -- on sort of a proposed phasing. There are some very specific policies around ensuring that there's a balance that -- between residential and nonresidential to be built. What Commissioner Carr's alluding to or had suggested is some more stronger policy around that.

So, again, this is what the draft is intended to do is to elicit those responses and those discussions, and, you know, we'll take all that feedback and then produce the final.

COMMISSIONER OCANA: Thank you.

CHAIRMAN REED: All right. That looks like we have exhausted our commissioners. I think we've all been heard. Any -- any last comments before we close today's meeting? Commissioner Carr.

COMMISSIONER CARR: I just -- question for Counsel on querying the Board about whether or not, you

know, their -- how they feel about us going past, if we were to do that. What would be the timing of that, do you think? MR. OH: So through -- MS. KLEIN: Yeah.

MR. OH: I know it wasn't directed to me, but -- MS. KLEIN: I would ask Staff, yeah.

MR. OH: Okay. Sure.

MS. KLEIN: They have the deadline for the -- MR. OH: So the calendar gets identified at the start of the year, and so at this point, the Board date that we do have for the Sonoma Developmental Center Specific Plan is November 8th, and so that's the date that we're working towards, and so if there's any communication, I would imagine that's the landing spot.

COMMISSIONER CARR: So if the Commission felt like it needed more time, and that time might take us past December 31st, wouldn't we want to ask the Commission -- ask that of the Board before we go to the Board? I mean, my sense is, if we get into October, and it looks like we're -- we're -- you know, we need more time to do our job, wouldn't that be the -- the time frame to query the Board on the -- that question?

MS. KLEIN: I don't know if you're asking for my opinion, but I think just in terms of we're short on Board days. I mean, the Board days between now and the end of the year are already filling up. And what you're -- what you're suggesting would potentially necessitate two Board meetings because, if the Board agrees with you, sends it back, the Board's done for the time being.

If the Board doesn't agree with you, then it needs to set another meeting in order to -- and this is you know, to then take action on the package that's in front of us. So the same can be accomplished with one package. You finish your process. If you feel like you can approve, great. If you feel like you can't because you need more process, you need more information, you need more something, then that's really a denial with a recommendation to

extend the process, so that's -- so there's -- your suggestion would necessitate two meetings at the Board, or it can be consolidated into one.

COMMISSIONER CARR: But maybe we should ask that question now.

DEPUTY DIRECTOR ORR: I would say that we don't have the opportunity to ask that -- that now.

COMMISSIONER CARR: What do you mean?

DEPUTY DIRECTOR ORR: So it would have to come before the Board in open session, and we would need a recommendation from the Planning Commission, and just with the timing of how it works, it just would not be feasible for us to be able to get in front of the Board in advance of November 8.

COMMISSIONER OCANA: So Scott, are you saying that our only option is to try, and then go to the Board on November 8 and essentially say we haven't -- we're not -- we're refusing the recommendation or were -- we failed to provide that one? DEPUTY DIRECTOR ORR: That is correct. Similar to what Counsel Klein said, you know, there -- that -- there's two paths. It's either you try and you finish and you make a recommendation to the Board to adopt a plan, or you try and you don't get to a place where you can recommend an option, then you would recommend to deny, because you're not ready to recommend approve. So that would be -- COMMISSIONER OCANA: So you essentially have -- MR. OH: -- that avenue to communicate to the Board where the Commission fell.

COMMISSIONER OCANA: So I'm sorry to interrupt. So we essentially have until November 8th or -- and/or earlier to put it on the agenda?

DEPUTY DIRECTOR ORR: Correct.

And then just, you know, before we -- so just -- I know this is all

critically important, but we do need to be careful not going too far into discussing the plans, since we haven't really started the public hearing for that -- that plan yet. I know it's complicated.

CHAIRMAN REED: Okay. That sounds good.

Given that, Commissioner Koenigshofer, do you have a comment?

COMMISSIONER KOENIGSHOFER: Yeah, I believe that the Commission would be within its appointed authority, if the Commission at some point, perhaps today, decided to send a memo to the Board, alerting the Board to our schedule that we just discussed and decided and why that's happening, reinforcing our intention to do the best we can to meet the December 31st deadline, and also just making an observation that there would be a potential that we might slip a few weeks or a month. I think that commissions have authority to make that kind of communication. That would then be presented as a communication at the next meeting of the Board I would think. Is that -- am I off-base there, Counsel? MS. KLEIN: No. I mean, the Commission can send a communication to the Board of Supervisors.

Nothing would be agendized at the Board at that point for them to take action. It would just be a letter.

CHAIRMAN REED: And I'm -- you know, in the context of not reviewing this plan in detail, to -- to speculate that we're having trouble, that doesn't -- I'm not sure I agree with that at this point. I think we haven't heard, you know, the -- you know, I think having the workshop and having the site visit may reveal, you know, a lot more depth that we haven't really considered at this point and alleviate some of those concerns.

COMMISSIONER CARR: I don't think Eric is suggesting that we say we're

having trouble. I think he's suggesting that if we do need a few more meetings to, you know, to get to a plan that we can recommend approval on, that we just want to know what our -- what our options are for scheduling.

CHAIRMAN REED: I -- you know -- MS. KLEIN: What I think you can do is I think you can ask Staff to consult with the Clerk of the Board on potential meeting dates before a final date, and I think Scott is telling you it's probably very difficult, possibly, you know, to have a second date before the November 8 date, but I think that certainly you can ask him to explore that with the clerk.

But if you send a letter to the Board, the --

they won't be -- unless it's on their agenda as a formal Board item with action agendized, the Board won't be able to do anything with your Commission -- with your communication.

COMMISSIONER CARR: But you're saying -- you're saying if we send them a letter, they won't -- they won't put it on the agenda? COMMISSIONER KOENIGSHOFER: The following week.

MS. KLEIN: I mean, I think that's the -- that's the issue.

DEPUTY DIRECTOR ORR: And, you know, I know that, you know, as Staff, we're part of the County family, but I don't want to speak for another department and how they go through getting things on the agenda, so -- and also, I mean, I hear the desire, but also today was not noticed for us discussing a plan to recommend something to the Board, so we -- we've heard the concern -- COMMISSIONER CARR: We're not talking about -- we're not talking about the Plan. We're talking about a schedule to allow us to do some planning, and we want to make sure we're not stepping on the deadline issue.

DEPUTY DIRECTOR ORR: Right now we're talking about the potential for having

the Planning Commission make an action, make a recommending in a letter to the

Board for the Board to make a decision, and today's meeting was not noticed for that.

COMMISSIONER KOENIGSHOFER: Well, as a person who raised the question of -- and I said memo -- that was reporting what we had done today so that the Board understands what we're doing today with direct communication, I, you know, with all due respect, the Commission is within its authority and its assigned purpose to make such a communication. Not often done, but it isn't -- we're not proposing that the Board take any action. That's not -- you know, I didn't say, "We propose that the Board take an action." I said that we'd report to the Board our intention to meet the deadline and report to the Board in the -- in the communication that in order to try and meet the deadline, to adhere to the deadline, we're doing this. We scheduled it, we're going to go out and have a site visit. We scheduled it, we're going to have a subsequent meeting at a date to be determined, potentially the first or second week of October, where we would do a -- a workshop on the -- on the Plan, itself, all designed around putting us in a position to be more likely to be able to take final action in the context of the deadline. That's what I was proposing.

And it's -- it's a -- it's a way that then

that's just communication received. That's a standard component of the Board's weekly agenda. "Did we get any communication?" "Oh, yeah, we got room from the Planning Commission." "Oh, What did they say?" "Oh, here's what they said." That's what I was suggesting.

MS. KLEIN: Right now you -- there's no agendized item to send a letter or a

communication. There's no agendized action for anything other than providing comments on the draft EIR. So if you want to informally, without a vote, direct Staff to send a letter summarizing your discussion, you can do that.

COMMISSIONER KOENIGSHOFER: So hold on just a second. You're saying that in order for us to make a communication just stating neutral facts, we're not allowed to do that without having it on the agenda? MS. KLEIN: I just gave you a path in order to do that when it's not agendized.

CHAIRMAN REED: It seemed like -- MS. KLEIN: What I said -- what I said was you can ask Staff to submit a communication summarizing your discussion.

CHAIRMAN REED: Let's maybe, you know, see what

we can do here. You know, we're not taking any action today. That was -- that was clear. If we want to -- you know, this is a public hearing. You know, I don't know, Scott, if you can informally say, "Hey, you know, the Planning Commission, you know, per their comments, you know, today was struggling with the schedule. You know, you might want to watch the -- the last piece of the meeting to see what that's about." Can that be done, or -- or, you know, how informal can we make this comment to the Board to say, "Hey, you know, the Commissioners, you know, are feeling, you know, hesitant about the schedule"? DEPUTY DIRECTOR ORR: All -- all I can do is say that Staff will work to share the facts of the meeting today, to the extent that we can.

COMMISSIONER CARR: You know, I think -- I think there's a better way to get this on the Board agenda. I think I know how that is. But I thought it would be stronger coming from the Planning Commission, but that's all right.

CHAIRMAN REED: All right. Are there other comments from commissioners?

All right, well, thank you all for attending, and we will look forward to a site visit and -- and moving forward.

COMMISSIONER CARR: Thanks a lot, Chair. Thanks Staff.

CHAIRMAN REED: Thank you. Good night.

(The matter was adjourned at 4:21 p.m.) -oOo-

///

CERTIFICATE OF REPORTER I, MICHELLE BARBANTE, a Certified Shorthand Reporter, do hereby certify that the foregoing hearing was held at the time and place therein stated; and that the hearing was reported by a Certified Shorthand Reporter, and was thereafter transcribed under my direction into typewriting.

I FURTHER CERTIFY that I am not of counsel or attorney for either or any of the parties in the foregoing proceeding and caption named, or in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 19th day of September, 2022.

_____

MICHELLE BARBANTE, CSR #12601

This is page intentionally left blank.

Responses to Comments

As described above, this chapter includes responses to comments on environmental issues raised in the comment letters. Responses to written comments received during the public review are summarized in Table 2-3 below. The reference number and text of the comments are presented alongside the response for ease of reference. Where the same comment has been made more than once, a response may direct the reader to another numbered comment and response.

Responses focus on comments that raise important environmental issues or pertain to the adequacy of analysis in the Draft EIR or to other aspects pertinent to the potential effects of the Proposed Project on the environment pursuant to CEQA. Comments that address policy issues, opinions, or other topics beyond the purview of the Draft EIR or CEQA are noted as such for the public record. Where comments are on the merits of the Proposed Plan rather than on the Draft EIR, these are also noted in the responses.

Where appropriate, the information and/or revisions suggested in the comment letters have been incorporated into the Final EIR. Where such revisions are warranted in response to comments on the Draft EIR, deletions are shown in ~~strikethrough~~ and additions are shown underlined in red in the matrix of comments and responses.

Table 2-3: Responses to Comments Received on the Draft EIR

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
City of Sonoma	9/22/2022	A1-1	Thank you for the opportunity to comment on the Specific Plan and related Draft Environmental Impact Report for the Sonoma Developmental Center, both dated August 2022. On behalf of the City of Sonoma, we provide the following comments as you finalize the Specific Plan document and Final Environmental Impact report (FEIR): 1. The City of Sonoma continues to support a robust affordable housing plan for the project and a supportive non-housing development program. The non-residential component of the project should include institutional, research and development, office, and other creative uses focused on sustainability and climate solutions-focused enterprises, non-profit organizations, and businesses. Small-commercial uses-such as restaurants, cafes, and small retail uses-to support neighborhood needs and walkable lifestyles are also supported by the City.	Thank you for your comment letter. The comment is noted; however, it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
City of Sonoma	9/22/2022	A1-2	2. The City of Sonoma supports visitor and community-serving uses such as meeting and event facilities (conference center, etc.,) but does not support a hotel use or Hospitality Overlay Zone as this type of use does not provide living wage jobs and increases the Valley's dependance on low wage workers who have little potential for finding housing which in turn exacerbates traffic impacts. The City of Sonoma supports economic generators in the project that provide a substantially better base for employment and that can generate follow-on businesses locally and throughout the state (i.e., provide quality jobs and serve the people of Sonoma Valley and California).	The comment is noted. Please see MR-6 regarding transportation impacts from non-residential land uses.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
City of Sonoma	9/22/2022	A1-3	3. The City of Sonoma supports public, and community uses, such as a museum honoring the legacy of the site and Sonoma's Native People, community center or gathering and recreational spaces, emergency command center, fire station, educational uses, and social support services. As such, the City supports the environn1entally superior alternative analyzed in the DEIR - the "Historic Preservation Alternative". This should be the project approved in the Specific Plan by the Board of Supervisors as it achieves a "higher level of historic preservation with a focus on adaptively reusing existing buildings to the maximum extent while achieving the goals for co-locating housing and employment and limiting development to within the current footprint of the SDC facility (Core Campus)". Further, the Historic Preservation Alternative incorporates existing sustainable features of the Proposed Plan and does not include a new connection to Highway 12. Adoption of the Historic Preservation Alternative "could result in a slightly lower VMT per capita than the Proposed Plan, thereby modestly reducing the significant VMT impact. Without the new roadway and associated lane miles, there would be no potential for induced travel and VMT associated with increases in roadway capacity. As a result, the significant impact associated with induced VMT would be eliminated. The Historic Preservation Alternative would lessen VMT impacts by eliminating the potential for induced travel and may also modestly reduce the projected residential VMT per capita".	The comment is noted. As stated on page 569 of the DEIR, it is true that the Historic Preservation Alternative would eliminate the potential for induced travel and may also modestly reduce the projected residential VMT per capita. While beneficial, these reductions in VMT and VMT per capita would be insufficient to avoid a significant and unavoidable VMT impact. Thus, similar to the Proposed Plan, the Historic Preservation Alternative would also result in significant and unavoidable and cumulatively considerable VMT impacts. Please see MR-6 for more information regarding whether fewer housing or jobs would result in better VMT outcomes. In addition, please see MR-8 for more information on the Historic Preservation Alternative and how that is an infeasible Alternative to meet State legislature requirements to prioritize affordable housing at the site.
City of Sonoma	9/22/2022	A1-4	4. Based on the requirements of CEQA, the analysis of transportation impacts in the DEIR is limited to the analysis of Vehicle Miles Travelled (VMT) in and around the project site (which is in and of itself a "Significant and Unavoidable impact" based on the Proposed Project). Level	The comment is noted. Please see MR-6 regarding the use of VMT rather than LOS for CEQA analysis. The Proposed Plan would still adhere to objectives CT-4.1 and CT-4.2 of the Sonoma County General Plan which pertain to vehicle level of service (LOS) standards. While

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			of Service (LOS) is no longer the test to analyze traffic impacts. The City of Sonoma still does not know and understand the traffic impacts upon our community regardless of the development plan chosen by the Board of Supervisors. This is because there is no "street segment" or "intersection" analysis for the City to review in the DEIR (for the reasons previously explained) as there was in the "Alternatives Report", dated November, 2021. And even with such analysis provided in the Alternatives Report, the nearest segment analysis to the City limits along Highway 12 was from Boyes Boulevard to Verano Avenue, which currently operates at LOS E and will worsen to LOS F with any project developed at the SDC. The Alternatives Report states the following on page 64: "The segment of SR 12 between Boyes Boulevard and Verano Avenue, however, currently operates poorly in the LOS E range and would be expected to fall to the LOS F range with all three alternatives. This roadway segment passes through the Springs communities, serving as their main street, and has high levels of pedestrian and bicycle activity as well as vehicular movements to and from side streets. Neither Caltrans nor the County of Sonoma intend to widen the corridor to increase auto capacity and are instead focusing efforts on shifting more auto travel to non-auto modes including walking, biking, and transit." We request the Specific Plan call for other measures to reduce traffic to and from SDC- like shuttle and like developing Arnold Drive with bike lanes, walking paths etc.	most of the intersections are projected to meet the County's LOS D standard under future conditions with buildout of the SDC Specific Plan, modifications would be necessary to achieve acceptable operation to meet the County's LOS D standard at Arnold Drive/Harney Street and SR 12/New SDC Connector Road. The Proposed Plan incorporates several policies that reduce traffic to and from SDC, see policies 3-41 through 3-44.
City of Sonoma	9/22/2022	A1-5	The County Board of Supervisors must understand that under any development scenario chosen for the SDC, the City of Sonoma will be impacted. But to what extent we do not know. The City respectfully requests that the Board of Supervisors approve the environmentally superior	The comment is noted; however, it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			alternative and eliminate the hotel overlay zone component as presently constituted.	
Sonoma Valley Fire District	9/27/2022	A2-1	Thank you for the opportunity to comment on the Sonoma Developmental Center (SDC) Specific Plan and Draft Environmental Impact Report (EIR). The SDC site is located in the heart of the Sonoma Valley region of southern Sonoma County, about six miles north of the City of Sonoma and about 15 miles south of Santa Rosa, between the unincorporated communities of Glen Ellen and Eldridge. The Specific Plan was developed to guide development of the SDC Core Campus and preserve open space and natural resources on the SDC property. The Proposed Plan establishes ten districts within the Core Campus subarea—Historic Core, Core North Residential, Maker Place, Core South Residential, Fire House Commons, Creek West, Eldridge North, Agrihood, and Utilities— each of which is envisioned to have a distinct character and intermix of uses and products. The Proposed Plan is anticipated to result in a total buildout of approximately 2,400 residents, 1,000 housing units, and 940 jobs,1 which would all be an increase from the current conditions of the SDC facility, closed in 2018 and largely vacant with some remaining uses.	Thank you for your comment letter. The comment is noted; it is not related to the adequacy of the DEIR; thus, no further response is required.
Sonoma Valley Fire District	9/27/2022	A2-2	The Sonoma Valley Fire District (SVFD) provides all-hazards fire, rescue, and paramedic level emergency medical services to the communities of Agua Caliente, Boyes Hot Springs, City of Sonoma, Diamond-A, El Verano, Fetters Hot Springs, Glen Ellen, Mayacamas, Temelec, Seven Flags, and Kenwood (under a contract for services). The SVFD is governed by a seven-member Board of Directors, elected at-large by their constituents, and each	The comment is noted; it is not related to the adequacy of the DEIR; thus, no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			serving a four-year term. The Fire Chief oversees the District's general operations under the Board of Directors' policy direction. The SVFD serves an area of approximately 114 square miles with a resident population of roughly 52,000. The District includes extensive wildland-urban interface (WUI) areas, large single-family homes, multi-family residential complexes, several hotels, ten schools, a hospital, and a historic downtown Plaza. SVFD also provides ambulance service to an additional 100 square miles, and an additional approximately 5,000 residents, as well as a significant number of visitors in the greater Sonoma Valley. SVFD is a combination agency that maintains five career-staffed fire stations, three volunteer stations, an administrative office, and a maintenance facility. SVFD has 60 full-time personnel and over 50 volunteer personnel. SVFD's daily staffing includes four paramedic engines, two advanced life support ambulances, and a Battalion Chief. In addition, this staffing is enhanced through the cadre of dedicated volunteer firefighters and an assortment of specialized equipment, including a ladder truck, seven wildland engines, two rescue trucks, three water tenders, and three additional engines. It is important to note that the SVFD also provides staffing for one shift for the Eldridge Fire Department at the existing SDC Fire Station as part of a contract for services agreement with the State of California Department of General Services. This staffing agreement and services have been in place since 2019. The SVFD serves its Community from the below Fire Stations:	

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*

• Station 1 at 630 2nd St West, Sonoma
• Station 2 at 877 Center St, El Verano [Serves the lower portion of Highway 12, and the Verano and Donald St areas of the Plan Area]
• Station 3 at 1 West Aqua Caliente Rd, Agua Caliente [Located at the north border of the Plan Area and serves most of the Highway 12 corridor]
• Station 4 on Prospect Rd, Diamond A Ranch (Volunteer only)
• Station 5 at 13445 Arnold Dr., Glen Ellen
• Station 6 at 9045 Sonoma Highway, Kenwood
• Station 8 at 3252 Trinity Rd, Glen Ellen, CA 95442 (Volunteer only)
• Station 9 4601 Cavedale Rd, Glen Ellen, CA 95442 (Volunteer only)

SVFD is an independent Special District, organized and operating as defined under the Fire Protection District Law of 1987, California Health and Safety Code section 13800 et seq.

SVFD has been actively engaged in the Sonoma Developmental Center's future for over 5 years. This began in 2017 and continued with SVFD Fire Chief Steve Akre being an active participant in the SDC Coalition meetings beginning in 2018 that were held by Supervisor Gorin and included many SDC stakeholders. These efforts continued with both the Fire Chief and Elected Board members attending the first Eldridge Vision Workshop in June of 2019. SVFD has emphasized through the workshop and ongoing communications, the need for the SVFD to adequately serve the proposed project and the funding necessary to provide these services.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			The SVFD (Chief Akre) has met multiple times with Brian Oh and Director Wick and conducted on-site meetings to review and discuss fire and EMS services and facilities. Chief Akre has additionally attended the subsequent Visioning Workshop and has been an active member of the Planning Advisory Team (PAT). Through these meetings, and work, the SVFD has kept in regular communication with County Staff regarding the progress on the release of both the Specific Plan and the Draft EIR. Most recently, at the request of the Planning Department, the SVFD participated with the Department of Emergency Management (DEM) to develop two wildfire evacuation scenarios. The models utilized the enhanced alert and warning systems and new evacuation zones. The models also relied on the increased evacuation experience of County residents, the DEM, and the SVFD. We believe that these scenarios provide valuable and realistic assessments of how evacuations would be operationalized in 2022 and beyond. The scenarios were provided to the Planning Department and then to the consultants for traffic flow analysis and impacts. SVFD Fire Marshal, Trevor Smith has reviewed both the specific plan and the Draft EIR. Fire Marshal Smith has attended all public meetings associated with the plan and the Draft EIR. Our Fire Prevention Office including both Fire Marshal Smith and Prevention Captain, Gary Johnson have been involved with the development of Glen Ellen Fire Safe Councils and are active participants in other community groups including the Glen Ellen Forum.	

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Sonoma Valley Fire District	9/27/2022	A2-3	Comments on the Specific Plan Draft Sonoma Valley Fire District's Comments on Wildfire and other Hazards: The SVFD agrees with the Goal (2-F) and Policies (2-54.a, b, c, and d), with the following changes. 2-54.a: The Sonoma Valley Fire District (SVFD) requests that language in the Specific Plan be amended to require the developer shall be required to prepare or fund the preparation of an Emergency Preparedness and Evacuation plan the complies with Sonoma County Evacuation Plans and the Sonoma Valley Fire District's procedures and identifies emergency access/egress routes and procedures. 2-54.b: The SVFD is not aware of any local, state or US Federal Standards in place for an on-site shelter-in-place facility. While this may be a worthwhile goal, there is nothing currently in place to guide this or evaluate its efficacy. In general, evacuating people from a hazardous situation is the first priority and best option to ensure life safety. Sheltering-in-place is typically a strategy choice when there is a hazard, such as smoke, but one that is not a life-threatening hazard, such as a rapidly growing wildfire. Sonoma Valley Fire District's Comments on Mobility and Access: The SVFD agrees with the above Goal (3-B) and Policy (3-5), as updated below. The SVFD is committed to ensuring the safety and timely evacuation of the community, and access for emergency vehicles, while balancing the protection of the wildlife corridor. We believe that this Goal and Policy needs more study and definition to accomplish the above objectives. Sonoma Valley Fire District's Comments on Public	The comment is noted; however, it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Facilities: The SVFD agrees with the above Introduction, Goal (6-A) and Policies (6-1), with the following changes. Introduction: The SDC campus has historically been served by Eldridge Fire Department, a State agency that has coordinated with the Sonoma Valley Fire District for staffing and mutual aid. With the transition of the Planning Area away from State operations, the existing Fire District (Sonoma Valley Fire District) would require the construction of a new fire station at SDC (and the funding for the new station) to serve the residents of the Planning Area and the surrounding community. A new emergency operations center for Sonoma County could likewise be located at SDC, to serve the wider region in case of emergency. Policy 6-1: Expand the Sonoma Valley Fire District to fully provide fire and EMS services to the SDC and identify a location for the construction of a new fire station (to SVFD standards and specifications) within the Core Campus. This includes providing the funding for this new facility, equipment, and ongoing services. Ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes. The Sonoma Valley Fire District has the following comments on Implementation and Financing: • The specific funding sources need to be identified for ongoing fire protection and EMS services, including the construction of the fire station, and purchasing of equipment, must be included in implementation and financing. • The SVFD agrees that the new Fire Station needs to be built within the first five years after adoption and prior to	

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			any occupation of new development. • The SVFD must be included in the coordination with local infrastructure agencies for future uses of water infrastructure located within preserved public parkland and open space. This is in order to ensure adequate water for fire suppression. • The Design and construction oversight of the new fire station shall be the SVFD's in coordination with County Planning staff. The costs and funding sources for the design and construction need to be clearly identified. • The plan elements listed in Table 7-1 are assumed to be the responsibility of Sonoma County, and should be stated more clearly. This responsibility and the best estimated costs should be included in the Plan. • The Specific Plan states that "it is assumed that vertical construction costs of community facilities and utility buildings will be the responsibility of public agencies". This needs to be explicitly and consistently stated which agency is financially responsible and how and when the funding is allocated. • The SVFD requests that an MOU or other formal agreement be utilized for financing responsibilities.	
Sonoma Valley Fire District	9/27/2022	A2-4	The Sonoma Valley Fire District's Comments on the SDC Specific Plan Draft EIR Below are the SVFD comments on the Draft EIR, organized by section below: Project Description: The SVFD requests that the construction of a new Fire Station be specifically included in the Project Description.	This comment is noted. The following edit has been made: DEIR p. 68: "It also aims to improve multi-modal access from the SDC to Highway 12 (State Route 12 or SR 12) by exploring the feasibility of constructing an additional east-west emergency access connection from the site. Implementation of the Proposed Plan will also expand the existing Sonoma County fire district to serve SDC, and identify a location for the fire district to construct a new fire station within the Core Campus."

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				This is a minor correction made to clarify and does not affect the findings of the DEIR.
Sonoma Valley Fire District	9/27/2022	A2-5	Hazardous Materials: In the Review of Documents and Records, under the final heading of Emergency Management and Response, the Sonoma Valley Fire District requests that this section be corrected to accurately reflect that it is the Sonoma Valley Fire District and not the “Sonoma County Fire District” that provides services to the greater Sonoma Valley, including the SDC Project Area and surrounding areas.	This comment is noted. The following edit has been made: DEIR p. 257: "Sonoma ~~County~~ Valley Fire District (SCFD) provides fire and emergency response services to the county." This is a minor correction made to clarify and does not affect the findings of the DEIR.
Sonoma Valley Fire District	9/27/2022	A2-6	Impact 3.8-7: Implementation of the Proposed Plan would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires (Less than Significant) SVFD’s Comments: Fire and Resources Assessment Program under the FRAP, the Planning Area is located in the Sonoma Creek watershed and includes areas of high to very high Fire Hazard Severity Zones west of Highway 12, areas of high fire hazard severity in the hills, and areas of moderate fire hazards severity zones in the vicinity of Suttonfield Lake and Fern Lake (Figure 3.16-2). The Core Campus is not included in any of these FHSZs. The figure also shows the extent of the 2017 Nuns Fire as well as Wildland Urban Interface (WUI) zones within the Core Campus and the northern and southern portions of the Planning Area. Based on the impacts and threats demonstrated by the 2017 Nuns fire; the evacuation of nearly 50% of the County for the 2019 Kincade fire; and the imminent threat from the 2020 Glass fire, SVFD suggests wildland fire remains a	This comment is noted. The comment states that without adequate mitigation, Impact 3.8-7 would be significant and unavoidable and would require findings and overriding considerations. While it is true that the Planning Area is located in areas of high to very high Fire Hazard Severity Zones, the Core Campus is not included in any of these FHSZs. Further, the Proposed Plan includes a plethora of policies and Standard Conditions of Approval to adequately mitigate potentially significant impacts to a less than significant level. Such measures, as described under the Wildfire Impact Analysis starting on page 551 of the DEIR, require the Proposed Plan to construct and maintain a managed landscape buffer to aid in fire defense; enhance creek buffers; remove surface and aerial fuels; implement fuel management methods (such as fuel separation, defensible space with continuous tree canopy, and irrigated agriculture); plant fire resilient landscaping; include a five-foot buffer of defensible space around all developments; prohibit wooden fencing; require all new construction and retrofitting of existing

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			significant risk and therefore this impact should be potentially significant and mitigation measures should be included to reduce impacts to the degree feasible. Without adequate mitigation, this impact would be significant and unavoidable and would require findings and overriding considerations. While new development and construction will conform to current building and development standards, there will be no additional protection made to the structures to make them safer in a wildfire environment. If the development was within the SRA andlocated in any of the FHSZ's, additional protection and construction standards would apply making these structures less prone to ignition in the face of wildfire and would lessen the risk of these structures igniting and causing further spread of a wildfire event. California is in the process of updating these FHSZ boundaries and it is anticipated that the updates will be made public in early Fall of 2022. The SVFD recommends the incorporation of a mitigation measure requiring that all new construction in the Specific Plan area meet elevated fire protection and construction standards. The SVFD recommends that all new construction including the retrofitting of existing structures utilize construction methods intended to mitigate wildfire exposure shall comply with the wildfire protection building construction requirements contained in the California Building Standards Code, including but not limited to the following: California Building Code, Chapter 7A, California Residential Code, Section R337, California Referenced Standards Code, Chapter 12-7A. In addition to the modifications to the construction standards the SVFD	buildings use Class A fire-rated roofing materials, fire-resistant siding, and dual-paned tempered glass windows; prohibit the storage of flammable materials under decks or porches; prune branches of trees; cover all building vent openings with wire mesh screens to prevent infiltration from embers of sparks; and ensure that all property owners are informed and educated about wildfire resiliency requirements at the site at the time of purchase. Further, Policy 6-21 would require all new and existing utility lines be buried underground to mitigate additional wildfire risk. Further, the comment recommends mitigation measures that require adherence to wildfire protection building construction requirements contained in the California Building Standards Code and require Fire Protection Plans in compliance with the Sonoma County Fire Code Section 13-59.5. Since these are state and local regulations, the Proposed Plan will be required to comply with all such regulations and standards contained within the California Building Code and the Sonoma County Code. Therefore, with adherence to State, regional, and local regulations as well as proposed policies and Standard Conditions of Approval, Impact 3.8-7 would be less than significant. Given that this impact is less than significant, and the Core Campus is not located in any FHSZ, development under the Proposed Plan would not need to comply with high fire area building standards as mentioned in the comment.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			recommends requiring Fire Protection Plans in compliance with the Sonoma County Fire Code Section 13-59.5 for all development located within the SDC Specific Plan area The SVFD will consider establishing locally designated FHSZs or WUI zones depending upon the outcome of the State's update of FHSZ boundaries and determinations.	
Sonoma Valley Fire District	9/27/2022	A2-7	Land Use: Impact 3.10-2 – Development under the Proposed Plan would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating and environmental effect. SVFD"s Comments: This impact is incorrectly identified as being less than significant. The proposed project would conflict with Sonoma County General Plan GOAL LU-4 which states "Maintain adequate public services in both rural and Urban Service Areas to accommodate projected growth. Authorize additional development only when it is clear that a funding plan or mechanism is in place to provide needed services in a timely manner." SVFD concurs with and supports this goal; however, there is no currently clear funding plan or mechanism in order to SVFD to ensure that sustainable, adequate fire and emergency medical services can be provided for the future growth. The District's onetime impact fee (based on estimates of the SDC development) will not be adequate to fund the necessary one-time facility and equipment needs. However, it will help to support ongoing infrastructure needs, but the impact fees will not provide the steady revenue stream needed to ensure adequate staffing levels for ongoing fire and emergency medical services	This comment is noted. However, impact 3.10-2 is less than significant because, as described on page 321 of the DEIR, the Proposed Plan is consistent with the General Plan's goals for the Planning Area and includes provisions to update the General Plan and Zoning Ordinance consistent with State law in order to ensure consistency. Funding mechanisms mentioned in this comment pertain to the Specific Plan and are not analyzed under CEQA. Therefore, this comment is not related to the adequacy of the DEIR and no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			operations. Accordingly, an additional sustainable funding plan or mechanism must be established to provide the full range of necessary fire and emergency medical services in a timely manner. SVFD recommends inclusion of the following mitigation measure: Mitigation Measure 3.9-2: The County shall enter into service agreement with SVFD that provides the sustainable funding plan to augment the existing impact fees to provide for required facility and equipment needs, as well as to fund staffing levels for ongoing fire and emergency medical services operations. See comments under Policy PS-3m below.	
Sonoma Valley Fire District	9/27/2022	A2-8	Public Services and Recreation: The SVFD notes several conflicts with the following objectives and policies. Policy PF-2a, Policy PF-2g, Policy PF-2x, and Policy PF-2b: This policy should be changed to include "Districts" in addition to Cities. As discussed above, the SDC Specific Plan does not provide a coordinated plan or funding mechanism regarding the provision of ongoing fire and emergency medical services for the additional growth and demand. The project does not comply with this policy and a mitigation measure should be included to include in lieu fees for future development to ensure adequate services are provided as subsequent development is implemented under the Specific Plan. In 2021, the County of Sonoma approved an impact fee for SVFD, but the infrastructure inventory and consequent impacts were estimates only and will need to be updated to reflect the evolving and expanding project scope and impacts. Additionally, these impact fees fund	This comment is noted. However, policy amendments and funding mechanisms mentioned in this comment pertain to the Specific Plan and are not analyzed under CEQA. Therefore, this comment is not related to the adequacy of the DEIR and no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			infrastructure only and do not provide funding for staffing and operational costs essential for sustainable increased fire and emergency medical services required because of the SDC Specific Plan. Therefore, the Proposed Project conflicts with the above policies and this impact is potentially significant and requires mitigation. Implementation of recommended Mitigation Measure 3.9-2 would reduce this impact to less than significant. Policy PF-2m: Policy PF-2m needs to be amended to specify the Sonoma Valley Fire District as the lead fire agency and include who is responsible for both the preparation and cost of the Fire Services Master Plan. Policy PF-2n: The Sonoma Valley Fire District strongly supports this policy with the following change: that “comparable uses” be changed to “comparable service areas within the SVFD”. Policy PS-3m: SVFD recommends the addition of two mitigation measures to ensure that this policy is met. As a means to develop a sustainable funding plan to augment the existing impact fees to support staffing levels for ongoing fire and emergency medical services operations, SVFD recommends that the EIR be amended to require the County of Sonoma to revise and expand its existing service agreement with SVFD to ensure adequate services. Additionally, another recommended mitigation measure is to require that the SVFD impact fee study rates be reevaluated and updated in light of more certainty in the scope and breadth of the SDC Specific Plan development impacts and infrastructure needs. This updating process may also identify additional exactions and mitigations	

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			based on a particular project (or portions of projects); which then can impose additional specific mitigations beyond the generic impact fees.	
Sonoma Valley Fire District	9/27/2022	A2-9	3.13.2.1 Physical Setting: The Sonoma Valley Fire District requests the following updated description be used in place of the current DEIR's description. The SDC property is served by the Eldridge Fire Department, which operates out of the station located directly on the main campus. The Eldridge Fire Department is a State agency that coordinates with the County as an all-risk department, responding to all emergencies within the SDC property. Due to uncertainty whether the department would continue operation after closure of the developmental center, the fire department lost many of its staff members and is currently understaffed. However, the Eldridge Fire Department was extended to continue full operation and currently covers two of three shifts, supplemented by staff from the neighboring fire district Sonoma Valley Fire District (SVFD) for the remaining shift, following a 2/4 schedule (two days on, four days off). The Eldridge Fire Department maintains a two-minute getaway service standard from the time they receive a service call, which are responded to through a mobile data transmitter (MDT) system. Equipment operated by the department includes a Type 1 fire engine and a Type 3 brush rig. An ambulance is also available through partnership with SVFD, but it is not used for service calls. The Eldridge FD does not have an ISO (Insurance Services Office) rating but runs under SVFD's Class 2 rating standard. The Eldridge Fire Department continues to operate independently, and it is anticipated that future services will	This comment is noted. The following edit has been made: On pages 387-389 of the DEIR, the text under the Fire Protection header in the Physical Setting section is removed and replaced with the following text: "The SDC property is served by the Eldridge Fire Department, which operates out of the station located directly on the main campus. The Eldridge Fire Department is a State agency that coordinates with the County as an all-risk department, responding to all emergencies within the SDC property. Due to uncertainty whether the department would continue operation after closure of the developmental center, the fire department lost many of its staff members and is currently understaffed. However, the Eldridge Fire Department was extended to continue full operation and currently covers two of three shifts, supplemented by staff from the neighboring fire district Sonoma Valley Fire District (SVFD) for the remaining shift, following a 2/4 schedule (two days on, four days off). The Eldridge Fire Department maintains a two-minute getaway service standard from the time they receive a service call, which are responded to through a mobile data transmitter (MDT) system. Equipment operated by the department includes a Type 1 fire engine and a Type 3 brush rig. An ambulance is also available through partnership with SVFD, but it is not used for service calls. The Eldridge FD does not have an ISO (Insurance Services Office) rating but runs under SVFD's Class 2

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			still be provided by the Sonoma Valley Fire District, as the entire SDC Planning Area is within the boundaries of the SVFD. The Sonoma County Local Agency Formation Commission (LAFCO) approved this boundary change first in 1996 and then affirmed by LAFCO when the Sonoma Valley Fire District was formed in 2020. The Sonoma County Fire Prevention Division is responsible for programs, procedures, and projects for preventing outbreak of fires and to regulate storage, handling, and processing of hazardous materials in the county. Sonoma County has 25 fire departments that cover the 44 public fire districts in the county, with additional support from Cooperative Fire Protection Agreements with the State Department of Forestry and Fire Prevention (CAL FIRE). The Sonoma Valley Fire District (SVFD) provides all-hazards fire, rescue, and paramedic level emergency medical services to the communities of Agua Caliente, Boyes Hot Springs, City of Sonoma, Diamond-A, El Verano, Fetters Hot Springs, Glen Ellen, Mayacamas, Temelec, Seven Flags, and Kenwood (under a contract for services). The SVFD is governed by a seven-member Board of Directors, elected at-large by their constituents, and each serving a four-year term. The Fire Chief oversees the District's general operations under the Board of Directors' policy direction. The SVFD serves an area of approximately 114 square miles with a resident population of roughly 52,000. The District includes extensive wildland-urban interface (WUI) areas, large single-family homes, multi-family residential complexes, several hotels, ten schools, a hospital, and a historic downtown Plaza. SVFD also provides ambulance service to an additional 100	rating standard. The Eldridge Fire Department continues to operate independently, and it is anticipated that future services will still be provided by the Sonoma Valley Fire District, as the entire SDC Planning Area is within the boundaries of the SVFD. The Sonoma County Local Agency Formation Commission (LAFCO) approved this boundary change first in 1996 and then affirmed by LAFCO when the Sonoma Valley Fire District was formed in 2020. The Sonoma County Fire Prevention Division is responsible for programs, procedures, and projects for preventing outbreak of fires and to regulate storage, handling, and processing of hazardous materials in the county. Sonoma County has 25 fire departments that cover the 44 public fire districts in the county, with additional support from Cooperative Fire Protection Agreements with the State Department of Forestry and Fire Prevention (CAL FIRE). The Sonoma Valley Fire District (SVFD) provides all-hazards fire, rescue, and paramedic level emergency medical services to the communities of Agua Caliente, Boyes Hot Springs, City of Sonoma, Diamond-A, El Verano, Fetters Hot Springs, Glen Ellen, Mayacamas, Temelec, Seven Flags, and Kenwood (under a contract for services). The SVFD is governed by a seven-member Board of Directors, elected at-large by their constituents, and each serving a four-year term. The Fire Chief oversees the District's general operations under the Board of Directors' policy direction. The SVFD serves an area of approximately 114 square miles with a resident population of roughly 52,000. The District includes

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			square miles, and an additional approximately 5,000 residents, as well as a significant number of visitors in the greater Sonoma Valley. SVFD is a combination agency that maintains five career-staffed fire stations, three volunteer stations, an administrative office, and a maintenance facility. SVFD has 60 full-time personnel and over 50 volunteer personnel. SVFD's daily staffing includes four paramedic engines, two advanced life support ambulances, and a Battalion Chief. In addition, this staffing is enhanced through the cadre of dedicated volunteer firefighters and an assortment of specialized equipment, including a ladder truck, seven wildland engines, two rescue trucks, three water tenders, and three additional engines. The SVFD maintains standards of response coverage benchmarks of six minutes until the first unit arrives on the scene for urban areas, seven minutes for suburban areas, and 12 minutes for rural areas, with a goal of meeting these standards for 90 percent of all calls for service. Based on the 2017 Annual Report, which represents the most recent data available, there were approximately 5,300 calls for service, most of which were for emergency medical services (68 percent). The District has achieved a one minute and 56 second average improvement in response times. Another nearby fire station is the seasonally staffed CAL FIRE Glen Ellen Station located within the Sonoma Valley Regional Park. With five SVFD stations in addition to the Eldridge FD within four miles of the SDC site, fire service is well-established in the area. Table 3.13-1 lists fire department stations anticipated to serve the Planning Area.	extensive wildland-urban interface (WUI) areas, large single-family homes, multi-family residential complexes, several hotels, ten schools, a hospital, and a historic downtown Plaza. SVFD also provides ambulance service to an additional 100 square miles, and an additional approximately 5,000 residents, as well as a significant number of visitors in the greater Sonoma Valley. SVFD is a combination agency that maintains five career-staffed fire stations, three volunteer stations, an administrative office, and a maintenance facility. SVFD has 60 full-time personnel and over 50 volunteer personnel. SVFD's daily staffing includes four paramedic engines, two advanced life support ambulances, and a Battalion Chief. In addition, this staffing is enhanced through the cadre of dedicated volunteer firefighters and an assortment of specialized equipment, including a ladder truck, seven wildland engines, two rescue trucks, three water tenders, and three additional engines. The SVFD maintains standards of response coverage benchmarks of six minutes until the first unit arrives on the scene for urban areas, seven minutes for suburban areas, and 12 minutes for rural areas, with a goal of meeting these standards for 90 percent of all calls for service. Based on the 2017 Annual Report, which represents the most recent data available, there were approximately 5,300 calls for service, most of which were for emergency medical services (68 percent). The District has achieved a one minute and 56 second average improvement in response times. Another nearby fire station is the seasonally staffed CAL FIRE Glen Ellen Station located within the Sonoma Valley Regional Park. With five SVFD stations in addition to the Eldridge FD within four miles of the SDC

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				site, fire service is well-established in the area. Table 3.13-1 lists fire department stations anticipated to serve the Planning Area." This is a minor correction made to clarify and does not affect the findings of the DEIR.
Sonoma Valley Fire District	9/27/2022	A2-10	Table 3.13-1 Fire Department Stations Serving the Planning Area This table should be amended to replace "SVFRA" with "SVFD" and to add Fire Station 6 9045 Sonoma Highway, Kenwood. 1 Type 1 Fire Engine.	This comment is noted. The following text edit has been made: DEIR p. 380, Table 3.13-1: "~~SVFRA~~ SVFD Fire Station 1; ~~SVFRA~~ SVFD Fire Station 2; ~~SVFRA~~ SVFD Fire Station 3; ~~SVFRA~~ SVFD Fire Station 5; SVFD Fire Station 6, 9045 Sonoma Highway, Kenwood, Type 1 Fire Engine." This is a minor correction made to clarify and does not affect the findings of the DEIR.
Sonoma Valley Fire District	9/27/2022	A2-11	13.3.3 Relevant Policies and Implementing Actions: The Sonoma Valley Fire District's comments on the below Goal and Policy: Goal 6-A Community Facilities: Provide high-quality community facilities and spaces to serve new residents of the SDC site and the greater Sonoma Valley. Policy 6-1 Expand an existing Sonoma County fire district to serve SDC, and identify a location for the fire district to construct a new fire station within the Core Campus. Ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes.	This comment is noted; however, it is not related to the adequacy of the DEIR and no further response is required.
Sonoma Valley Fire District	9/27/2022	A2-12	Sonoma Valley Fire District's Comments on Public Facilities: The SVFD agrees with the above Introduction, Goal (6-A)	This comment is noted. However, policy amendments mentioned in this comment pertain to the Specific Plan and are not analyzed under CEQA. Therefore, this

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			and Policies (6-1), with the following changes. Introduction: The SDC campus has historically been served by Eldridge Fire Department, a State agency that has coordinated with the Sonoma Valley Fire District for staffing and mutual aid. With the transition of the Planning Area away from State operations, the existing Fire District (Sonoma Valley Fire District) would require the construction of a new fire station at SDC (and the funding for such) to serve the residents of the Planning Area and the surrounding community. A new emergency operations center for Sonoma County could likewise be located at SDC, to serve the wider region in case of emergency. Policy 6-1: Expand the Sonoma Valley Fire District to fully provide fire and EMS services to the SDC and identify a location for the construction of a new fire station (to SVFD standards and specifications) within the Core Campus. This includes providing the funding for this new facility, equipment, and ongoing services. Ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes.	comment is not related to the adequacy of the DEIR and no further response is required.
Sonoma Valley Fire District	9/27/2022	A2-13	3.13.3.4 Impacts: Impact 3.13-1: This impact is not less than significant and the impact category should be amended to be Less than Significant with Mitigation. SVFD concurs with and supports this goal; however, there is currently no clear funding plan or mechanism in order to SVFD to ensure that sustainable, adequate fire and EMS can be provided for the future growth. The SVFD does not have capacity either in funding or operations to provide the necessary and appropriate fire and EMS services to the SDC Planning area. Current new construction costs for Fire Stations are $1,000 per square	This comment is noted. However, impact 3.13 -1 is less than significant because, as described on page 401 of the DEIR, any new developments of fire protection facilities to serve the Planning Area would be located and constructed on existing urban and built-up land within the Core Campus (proposed Policy 6-1). Environmental impacts related to construction emissions, vehicle miles traveled (VMT), and biological resources associated with construction of the proposed new fire station or SR 12 connector are accounted for in technical modeling provided in other chapters of this EIR. Further, construction of a new fire station would be subject to separate project-level CEQA review at the time the

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			foot. A mitigation measure is required to provide a funding mechanism for the new fire station design and construction.	design is proposed in order to identify any potential project-specific impacts and identify any mitigation as may be appropriate. Funding mechanisms mentioned in this comment pertain to the Specific Plan and are not analyzed under CEQA. Therefore, this comment is not related to the adequacy of the DEIR and no further response is required.
Sonoma Valley Fire District	9/27/2022	A2-14	Fire Protection: The SVFD requests the following updated description be used in place of the existing description. The Eldridge Fire Department continues full operations that service the Planning Area, supplemented by staff from the neighboring fire district, SVFD. The increased local projected buildout population, employment, and housing units generated by the Proposed Plan would likely result in a subsequent increase in fire and emergency medical service calls to the Planning Area compared to existing conditions. Standards of response coverage benchmarks, as defined in the SVFD Standards of Response Coverage report, include six minutes until the first unit arrives on the scene for urban areas, seven minutes for suburban areas, and 12 minutes for rural areas, with a goal of meeting these standards for 90 percent of all calls for service. In order to maintain standards of response coverage benchmarks as a result of buildout under the Proposed Plan, services will be provided by the Sonoma Valley Fire District (SVFD) from the new fire station to be built in the SDC Planning Area as well as from the SVFD's 5 other staffed fire stations. Further, the Proposed Plan will expand the existing SVFD to fully provide fire and EMS services to the SDC Planning Area and identify a location for the construction of a new fire station (to SVFD standards and specifications) within the Core Campus in order to meet the needs of the	This comment is noted. The following edit has been made: DEIR p. 400-401: "The Eldridge Fire Department continues full operations that service the Planning Area, supplemented by staff from the neighboring fire protection district, ~~SVFRA~~ SVFD. The increased local projected buildout population, employment, and housing units generated by the Proposed Plan would likely result in a subsequent increase in fire and emergency medical service calls to the Planning Area compared to existing conditions. Standards of response coverage benchmarks, as defined in the ~~SVFRA~~ SVFD Standards of Response Coverage report, include six minutes until the first unit arrives on the scene for urban areas, seven minutes for suburban areas, and 12 minutes for rural areas, with a goal of meeting these standards for 90 percent of all calls for service. In order to maintain standards of response coverage benchmarks as a result of buildout under the Proposed Plan, ~~it is anticipated that services will still be provided in coordination with neighboring Sonoma County fire districts including SVFRA, Mayacamas Volunteer Fire Department, and Kenwood Fire Protection District.~~ services will be provided by the Sonoma Valley Fire District (SVFD) from the new fire station to be built

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			population under buildout (proposed Policy 6-1). This includes the Plan providing the funding for this new facility, equipment, and ongoing services. The new location of the fire station will be within the Core Campus to ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes. The Proposed Plan will also explore the feasibility of providing an additional east-west connection from the Core Campus to SR 12 to further improve emergency access (proposed Policy 3-5). Construction of a new fire station could result in subsequent environmental impacts; the specific impacts of which are not known at this time. However, any new developments of fire protection facilities to serve the Planning Area would be located and constructed on existing urban and built-up land within the Core Campus (proposed Policy 6-1). Environmental impacts related to construction emissions, vehicle miles traveled (VMT), and biological resources associated with construction of the proposed new fire station or SR 12 connector are accounted for in technical modeling provided in other chapters of this EIR. Further, proposed policies 5.2-30 and 5.2-31 also ensure that new developments use reclaimed and salvaged materials and incorporate green building measures to mitigate environmental impacts. Because there is not sufficient information as to location or timing for a new fire station, analysis of potential impacts would be speculative at this time. Further, construction of a new fire station would be subject to separate project-level CEQA review at the time the design is proposed in order to identify any potential project-specific impacts and identify any mitigation as may be appropriate. As such, compliance with existing regulations as well as proposed policies would	in the SDC Planning Area as well as from the SVFD's 5 other staffed fire stations. ~~Further, the Proposed Plan will expand the existing Sonoma County fire district to serve the Planning Area and identify a location for the fire district to construct a new fire station within the Core Campus in order to meet the needs of the population under buildout (proposed Policy 6-1).~~ Further, the Proposed Plan will expand the existing SVFD to fully provide fire and EMS services to the SDC Planning Area and identify a location for the construction of a new fire station (to SVFD standards and specifications) within the Core Campus in order to meet the needs of the population under buildout (proposed Policy 6-1). This includes the Plan providing the funding for this new facility, equipment, and ongoing services. The new location of the fire station will be within the Core Campus to ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes. The Proposed Plan will also explore the feasibility of providing an additional east-west connection from the Core Campus to SR 12 to further improve emergency access (proposed Policy 3-5). This is a minor correction made to clarify and does not affect the findings of the DEIR.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			reduce impacts to a less-than significant level related to the provisions of fire protection facilities.	
Sonoma Valley Fire District	9/27/2022	A2-15	3.14.4.3 Relevant Policies and Implementation Actions Goal 3-B: Regional connections: Develop and support greater connectivity between SDC and the surrounding areas, including through a direct connection to Highway 12. Policy 3-5: Reuse existing street network to the greatest extent feasible. Improve multi-modal access from the SDC to SR 12 by exploring the feasibility of providing an additional east-west emergency access connection from the site that includes high quality pedestrian and bicycle facilities.	This comment is noted; however, it is not related to the adequacy of the DEIR and no further response is required.
Sonoma Valley Fire District	9/27/2022	A2-16	Impact 3.14-4: Implementation of the Proposed Plan would not result in inadequate emergency access (Less than Significant) As mentioned in the Specific Plan comments under Transportation, the SVFD is committed to ensuring the safety and timely evacuation of the community, and access for emergency vehicles, while balancing the protection of the wildlife corridor. We believe that this Goal and Policy needs more study and definition to accomplish the above objectives.	The comment is noted. Please see MR-4 regarding inadequacy or disagreement with wildfire evacuation analysis and MR-7 regarding impacts on wildlife movement. Further, the Proposed Plan and wildlife corridor will not significantly impair an emergency response or evacuation plan; see Impact 3.16-1.
Sonoma Valley Fire District	9/27/2022	A2-17	Utilities and Service Systems: 3.15.4.3 Relevant Policies and Implementing Actions Public Facilities, Services and Infrastructure Goal 6-A and Policy 6-1: Please see the SVFD's comments on these in the previous sections 6.1 of the Specific Plan and 3.13.3 of the DEIR. Goal 6-26: Ensure the SDC site's water rights are retained for uses within the core campus and for habitat preservation, ecological services, groundwater recharge in the open space area, and to increase the reliability of the regional water supply	The comment is noted. As stated on page 480 of the DEIR, development projects pursuant to the Proposed Plan would be required to install new water mains within the street network to serve fire and domestic water needs. See also MR-5 regarding the DEIR water supply analysis. Based on the findings of the WSA and implementation of proposed policies and Standard Conditions of Approval, the District will have sufficient water supplies available to serve development pursuant to the Proposed Plan

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Goal 6-27: Maintain water supply and filtration at the site and ensure adequate flexibility and supply to serve regional needs in case of an emergency. SVFD relies on the Valley of the Moon Water District for water supplies for fire suppression. SVFD supports the comments and/or recommendations from the VOMWD regarding Goals 6-26 and 6-27 in order to ensure adequate fire suppression water volume and distribution, including fire hydrants.	during normal, dry, and multiple dry years. As such, impacts would be less than significant.
Sonoma Valley Fire District	9/27/2022	A2-18	Wildfire: 16.1.3.3 Relevant Policies and Implementing Actions Sonoma Valley Fire District's Comments on Wildfire: The SVFD agrees with the Goal (2-F) and Policies 2-54.(a, b, c, and d) 6-1, and 6-27, with the following changes. 2-54.a: The Sonoma Valley Fire District (SVFD) requests that the developer shall be required to prepare or fund the preparation of an Emergency Preparedness and Evacuation plan the complies with Sonoma County Evacuation Plans and the Sonoma Valley Fire District's procedures and identifies emergency access/egress routes and procedures.	This comment is noted. However, policy amendments mentioned in this comment pertain to the Specific Plan and are not analyzed under CEQA. Therefore, this comment is not related to the adequacy of the DEIR and no further response is required.
Sonoma Valley Fire District	9/27/2022	A2-19	2-54.b: The SVFD is not aware of any local, state or US Federal Standards in place for an on-site shelter-in-place facility. While this may be a worthwhile goal, there is nothing currently in place to guide this or evaluate its efficacy. In general, evacuating people from a hazardous situation is the first priority and best option to ensure life safety. Sheltering-in-place is typically a strategy choice when there is a hazard, such as smoke, but one that is not a life-threatening hazard, such as a rapidly growing wildfire.	This comment is noted. However, policy amendments mentioned in this comment pertain to the Specific Plan and are not analyzed under CEQA. Therefore, this comment is not related to the adequacy of the DEIR and no further response is required.
Sonoma Valley Fire District	9/27/2022	A2-20	Policy 6-1: Expand the Sonoma Valley Fire District to fully provide fire and EMS services to the SDC and identify a location for the construction of a new fire station (to SVFD standards and specifications) within the Core Campus. This	This comment is noted. However, policy amendments mentioned in this comment pertain to the Specific Plan and are not analyzed under CEQA. Therefore, this

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			includes providing the funding for this new facility, equipment, and ongoing services. Ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes.	comment is not related to the adequacy of the DEIR and no further response is required.
Sonoma Valley Fire District	9/27/2022	A2-21	6-27: SVFD relies on the Valley of the Moon Water District for water supplies for fire suppression. SVFD supports the comments and/or recommendations from the VOMWD regarding Goals 6-26 and 6-27 in order to ensure adequate fire suppression water volume and distribution, including fire hydrants.	The comment is noted. See response to comment A2-17.
Sonoma Valley Fire District	9/27/2022	A2-22	Impact 3.16-1: Implementation of the Project has the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Less than Significant). SVFD's Comments: New development is subject to planning, building, public works, and fire review to evaluate the construction and design to ensure compliance. The most recent codes and regulations will be used as a measure to ensure that the new developments are safely designed and constructed and concerns of access, water supply, fire suppression and detection systems, and safe construction will be ensured. This new development and its overall safety would be affected by the ability of the street network to provide adequate ingress and egress during emergency evacuation and the associated mitigation response forces. Mitigation measures should be included to address this impact, including additional wildfire cameras and a communication system to facilitate evacuations. Additionally, as described in Section 3.13: Public Services and Recreation, it is anticipated that fire protection and EMS services will be provided by the SVFD, in order to maintain standards of response coverage benchmarks under	The comment is noted. Please see MR-4 regarding adequacy of the evacuation analysis. Further, all new development will be subject to State, regional, and local plans and regulations, including California Fire and Building Codes, the Sonoma County Multijurisdictional Hazard Mitigation Plan, the Sonoma County Emergency Operations Plan, the Sonoma County General Plan, and Sonoma County Code. As stated on page 512 of the DEIR, the County's Emergency Operations Plan establishes the emergency management organization for emergency response, establishes operational concepts associated with emergency management, and provides a flexible platform for planning emergency response in the county. Development facilitated by the Proposed Plan would be constructed in accordance with federal, state, regional, and local requirements, which are intended to ensure the safety of county residents and structures to the extent feasible. Compliance with these standard regulations would be consistent with the County's Emergency Operations Plan. Thus, implementation of the Proposed Plan would not impair an emergency response or emergency evacuation plan and impacts would be less than significant; no further mitigation is

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			the Proposed Plan. The Proposed Plan will also expand the Sonoma Valley Fire District to fully provide fire and EMS services to the SDC and identify a location for the construction of a new fire station (to SVFD standards and specifications) within the Core Campus in order to meet the needs of the population under buildout (proposed Policy 6-1). This includes providing the funding for this new facility, equipment, and ongoing services. The new location of the fire station will be within the Core Campus to ensure easy and proximate emergency access to Arnold Drive. Therefore, the implementation and operation of the Proposed Plan would not substantially impair of emergency response procedures. Furthermore, the Proposed Plan will result in new infrastructure and piping that will ensure that adequate water capacity and pressures are maintained to help with firefighting. Most recently, at the request of the Planning Department, the SVFD participated with the Department of Emergency Management (DEM) to develop two wildfire evacuation scenarios. The models utilized the enhanced alert and warning systems and new evacuation zones. The models also relied on the increased evacuation experience of County residents, the DEM, and the SVFD. We believe that these scenarios provide valuable and realistic assessments of how evacuations would be operationalized in 2022 and beyond. The scenarios were provided to the Planning Department and then to the consultants for traffic flow analysis and impacts.	needed. Funding mechanisms also mentioned in this comment pertain to the Specific Plan and are not analyzed under CEQA. Therefore, this comment is not related to the adequacy of the DEIR and no further response is required.
Sonoma Valley Fire District	9/27/2022	A2-23	Cumulative Setting and Impact Analysis The SVFD's number one concern is for the safety of our Community's residents, visitors, and fire suppression personnel. The Fire Marshal's office has been active in the review of the SDC Specific Plan including a review of the	The comment is noted. As noted in the DEIR, new development will be subject to State, regional, and local plans and regulations, including California Fire and Building Codes, the Sonoma County Multijurisdictional Hazard Mitigation Plan, the Sonoma County Emergency

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Draft Environmental Impact Report. We have listened to and integrated into these comments the policy direction of the elected SVFD Board of Directors, public comments made to SVFD, and public comment meetings. Development within the SVFD service area is welcomed especially when we can enhance opportunities for residents and businesses while ensuring safety for all. SVFD, in coordination and collaboration with other Sonoma County entities to include but not limited to; Planning Department, Building Department, Fire Prevention Division of Sonoma County, Department of Emergency Management, Law Enforcement, Public Works etc. will review construction projects to ensure compliance with regulations designed to ensure safety. These regulations, including the California Fire Code, are designed to safeguard public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structure, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. In spite of the reviews and compliance with legal standards to ensure safety, the fact remains that the SDC Specific Plan will increase the total amount of residents, employees, and visitors to our community. This overall increase in population, structures, and vehicles will create impacts to our street networks, the ability to ingress and egress in emergencies, and increase the total number of calls for fire and emergency medical services to which SVFD must respond. There are cumulative impacts to the fire service, such as wildland fires that are potentially significant and require additional study and recommended mitigation measures to ensure the safety of the community as a whole.	Operations Plan, the Sonoma County General Plan, and Sonoma County Code. Consistency with such plans and regulations would not cause cumulative impacts. Further, Page 604 of the DEIR states that Evacuation traffic added by the Proposed Plan would not result in substantial changes in evacuation times, increasing along evaluated routes on average by less than 15 seconds and one percent. The largest increase in travel times to areas beyond the evacuation areas would be up to 1.2 minutes and by up to five percent. The Proposed Plan would reduce some travel times from the Madrone/Proposed Plan area by up to three percent due to the planned additional connection to SR 12. The estimated changes in travel times caused by the Proposed Plan would not require changes in current evacuation routes or plans. Thus, implementation of the Proposed Plan would not impair an emergency response or emergency evacuation plan there would be no cumulatively considerable impact. Further, while the projected population and employment growth in the Planning Area would increase the number of people potentially exposed to impacts from wildfire, the Proposed Plan would not induce substantial unplanned population growth in the Planning Area. The Proposed Plan also includes fire-protection features such as a managed landscape buffer the east, widened riparian corridors, and fire-resilient construction. Therefore, as described in Section 3.16: Wildfire, the Proposed Plan would reduce wildfire impacts locally, and compliance with local and state regulations pertaining to wildfire would help reduce impacts regionally, the Proposed

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				Plan's contribution to wildfire risks is not considered cumulatively considerable.
Sonoma Valley Fire District	9/27/2022	A2-24	Alternatives: The SVFD's recommended mitigation measures apply to all of the growth alternatives.	The comment is noted. All proposed policies and mitigation measures apply to the Alternatives unless otherwise noted.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-1	Regarding: Sonoma Developmental Center (SDC) Specific Plan (SP) & Program DraftEIR (EIR) Comments 2 Sept 18, 2022 County's evidentiary record is anecdotal @best. Sonoma Valley represents a national treasure, as described as, "The Valley of the Moon". Sonoma is the Native Indigenous American name for the valley. When White settlers asked what Sonoma meant, Natives pointed to the trace of the Moon setting and rising behind the eastern ridgetops during certain times of the year, the White's interpretation was that "Sonoma" meant 'the valley that the Moon touches' ("The Valley of the Moon"). My Anthropology studies and linguistic avocation has taught me to hear the phonetic sounds (the basic phonemes), particularly for significant language words, words that have cultural, spiritual, or international usage, such as words which are adopted into a language from another. The basis of this study is Multi-critical analysis as opposed to diacritical analysis. Typically there will be very little understanding of the actual meaning of an adopted word. Then, if it retains a high referential standing, it indicates it's an adopted word, not merely a forgotten word. Typical adopted words with high Referential standing and forgotten meanings are: Alleluia, precious, and Amen.	Thank you for your comment letter. The DEIR details the environmental setting which describes current and historical conditions for each of the impact categories pursuant to CEQA. The comment is noted; however, it is not related to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-2	In this case we have Sonoma: what are the phonemes for "Sonoma", they are "Tsu" (not Tso) & "Noma"; so in this case our supposition is correct, because these are two very important international words. "Tsu" or "Tzu" represents the name given by the Chinese to one of their greatest Philosophers, "LaoTzu" the founder of Taoism (from UCI Anthropology studies "Chinese, Taoism & Confucianism", 1983), "LaoTzu" was originally named "LoTzu", meaning "Man-Master" (Philosopher) and when he was older it was changed to "LaoTzu", meaning "Old-Man-Master" (or Great Philosopher): Therefore "Tzu" means "Master". "Noma" is the Aramaic word for 'name' establishing the identity and essence of a thing and thereby giving man control over the substance, and in the Greek "Nomo" means "law or control", again, in Western parlance the essence is unknowable but the manifestation is controllable by the 'name': so control and name are the same thing, therefore "Noma" means "name" (from participation in Antiochian and Greek culture, which develops from a multi-critical analysis as opposed to diacritical).	The comment is noted; however, it is not related to the adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-3	"Sonoma" therefore means "The Master's Name", and in a Spiritual sense, it means the highest name above all names. "The Master's Holy Name", in an Eastern Spiritual sense describing God's, the Creator's, or Great Spirit's control over the location by the Moon's contact with the Earth, not Man's control over God by invocation of the Name. This we hear many times from Joseph Campbell, man's search for control vs man's search for God. Also, in another form of Transcendence, both "Tsu" and "Noma" mean "control", so they are like conjoined twins, in a simple manifestation of the "Rosetta Stone". Looked at separately, we call this a	The comment is noted; however, it is not related to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			"Translation", but conjoining them is a form of transcendence in the physical plane of existence. The name "Sonoma" appears to be used as a descriptive tool, by connecting physical transcendence (translation of place) with the location of a Spiritual Transcendence (in reference to the verticality of the Moon's touching the Earth), it again mirrors the "Rosetta Stone" representing two kinds of Transcendence, with the Earthly "T" crossing the Spiritual vertical demarcation.	
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-4	More than the mere analysis of the word and its application to the space, is the significance of "Sonoma" in the cross-cultural linguistic representation of deification using ancient language references from across the sea, and linked only by many thousands of years. There is no other place name which connects so perfectly the unity of man, the Name itself transcends both the ages and the seas, thus we have the essence of a World Heritage Cultural Site. Like many other UNESCO World Heritage Sites, which are in disrepair and in danger of destruction, Sonoma's "Valley of the Moon" is suffering an existential threat from the Proposed Project Alternative. Located at near the exact geographic center of Sonoma Valley, 10 miles from it's head along Hwy 12, and 12 miles from it's outlet at Skagg's Island. And transected by a vital Wildlife Corridor connecting 2 Mountain Parks: Sugarloaf/Hood and Jack London Parks; no discussion or analysis has been given to the significance of this World Heritage Cultural Site, or the impacts or any mitigation from the significantly new, taller, and dense construction within the Program Draft EIR-SP Project analysis (cursory discussion was given to light pollution, but none to the physicality of the presence of tall, dense, populous village construction in the	The comment is noted. Pursuant to CEQA, the DEIR provides an analysis of the Proposed Plan's impacts on cultural, historic, and tribal cultural resources starting on page 282. Further, the site is not a UNESCO World Heritage Site.

Submitter	Date	Comment Code	Individual Comment	Response
			midst of an Historic Treasure, McDonalds centered in Teotihuacan).	
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-5	The significance of this Spiritual location was not lost on those who created the Sonoma Developmental Center for a healing center for their developmentally disabled children. We should hope that at this more enlightened time, and consistent with CEQA, the Historical Preservation Act, and the 50th Anniversary of the World Heritage Convention (Sept 17, 2022), we should be prepared to preserve both the content and the context, as much as is physically possible, for this National Treasure, "The Valley of the Moon". Under the UNESCO World Heritage Convention, which the United States was signatory (though withdrawn from 2018), we should "strengthen Credibility of the World Heritage List, ensure Conservation of World Heritage properties, promote Capacity-building measures, increase public awareness, involvement and support for World Heritage, and enhance the role of Communities in implementation of the World Heritage Convention". What has been done here appears to be the opposite, a complete neglect of not only Native American cultural values, but World Heritage Convention values.	The comment is noted. Pursuant to CEQA, the DEIR provides an analysis of the Proposed Plan's impacts on cultural, historic, and tribal cultural resources starting on page 282.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-6	Analysis of EIR Historical Asset discussion: The Program Draft EIR is silent on the above discussion, while reporting Environmental Impact Report - County Summary "5.3 Significant and Unavoidable Impacts: According to CEQA Guidelines 15126.2(b), an EIR must discuss any significant environmental impacts that cannot be avoided under full implementation of the proposed program...However the Proposed Plan aims to be self-mitigating. Thus, all proposed policies aim to address environmental impacts (to the, sic) to the greatest extent feasible and no mitigation measures are required. The	The comment is noted. The Draft EIR adequately analyzes potential cultural and tribal cultural resources impacts based upon a comprehensive records search conducted at the NWIC, located at Sonoma State University. The records search included a review of all recorded historic and prehistoric cultural resources within the Planning Area. In addition, the California State Historic Property Data File (HRI), which includes the NRHP, California Historical Landmarks, and California Points of Historical Interest was examined. The analysis also included a search of the NAHC Sacred Lands File,

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			analysis in Chapter 3 determined that the Proposed Plan would result in significant impacts to the cultural/historic resources and transportation (home-based work trip vehicle miles traveled per capita) that, even with implementation of mitigation measures, would remain significant and unavoidable". This language neglects real analysis of the Null Hypothesis Project, and only considers the Proposed Plan impacts which it states (along with all other alternatives) have similar impacts [without discernment as to avoidable, mitigatable, or unmitigatable], which is entirely untrue in the Null Hypothesis case.	tribal outreach, review of Sonoma County documents, State regulations, and Proposed Plan goals and policies. While the impact of the Proposed Plan is considered significant because it would cause a substantial adverse change to the historical district, proposed policies and the Standard Conditions of Approval would help reduce these impacts to the maximum extent practicable. These includes retention, rehabilitation, and adaptive reuse of buildings, structures, and landscape features in the Core Campus area that contribute to the SSHHD (policies 4-20 through 4-31), as well as considering the preservation of contributing resources that are located in the hog and poultry area east of the Core Campus and the SDC water and sewage system to the west and north (Goals 2-I and 2-J and policy 4-32). However, there are no additional mitigation measures available to avoid impacts entirely. Please see MR-1 for more information regarding the self-mitigating Specific Plan. As stated in CEQA Guidelines, Section 15093(a), if the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered “acceptable.” Therefore, given that State law stipulates that the SDC Specific Plan prioritize housing at the site per Government Code Section 14670.10.5, the environmental impacts of implementation of the Specific Plan on historic resources may be acceptable for policymakers. CEQA also requires that EIRs identify the Environmentally Superior Alternative, and discuss the facts that support that selection (See PRC Section 21081.5; CEQA Guidelines

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				Sections 15091, 15126.6(e)(2)). The Lead Agency is not, however, obligated to select the Environmentally Superior Alternative for implementation if it would not accomplish the basic project objectives and/or is infeasible (see State CEQA Guidelines Section 15126.6(a), (c) & (f)). Please see MR-8 for more information on why the Historic Preservation Alternative would not accomplish project objectives as required by the State legislature.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-7	Continuing; "5.3.1 Cultural, Historic, and Tribal Resources: new construction under the Proposed Plan has the potential to disconnect the remaining contributing resources in the Core Campus from those in the Community Separator and Regional Parks lands to the east and west, disrupting the SSHHD's overall integrity to the point that it would no longer be eligible for listing in the National Register of Historic Places, CRHR, or as a California Historic Landmark. This impact, in addition to demolition of the aforementioned resources would result in a substantial adverse change to the significance of the historic district such that the significance of the historic district would be materially impaired pursuant to Section 15064.5. Implementation of goals 2-I and 2-J and policies 4-20 through 4-32 as well as Standard Conditions of Approval (LU1 through LU6) would partially compensate for the impact associated with the demolition of historically contributing resources and physical alteration of the historic district to the maximum extent practicable; however, because these measures would not be enough to avoid or reduce the impact completely, the Proposed Plan's impact would remain significant and unavoidable". No mention is made of the Tribal Resources, because no	The comment is noted. See response to comment B1-6. Tribal Cultural Resource impacts are analyzed under Impact 3.5-5 on page 299. The Historical Resources Inventory and Evaluation Report (HRIER) cited in the DEIR determined that a cultural landscape does not exist in the Planning Area. In addition to consultation with tribes required by State law, and in accordance with PRC Section 21083.2 and CEQA Guidelines Section 15064.5(f), which recognize that historical or unique archaeological resources may be accidentally discovered during project construction, Standard Conditions of Approval policy GEO-4 requires developers to halt all work if cultural resources are encountered during excavation or construction of a project, and to retain a qualified archaeologist to evaluate and make recommendations for conservation and mitigation, Policy GEO-5 requires developers to create an inadvertent discovery plan to be implemented if cultural resources are encountered during excavation or construction of a project, and Policy GEO-6 requires developers to conduct cultural resource awareness training prior to project-related ground disturbance. At the program level, the impact of implementation of the Proposed Plan on tribal

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			artifacts remain or they could be recovered in a project excavation, but this does not address the transcendent value of the space and place name as a World Heritage Cultural Site, which can be subsumed in the potential Project construct, where we have heard discussed 2-3Msf of Commercial Construction.	cultural resources would therefore be less than significant under CEQA with implementation of existing State regulations as well as policies and actions within the Proposed Plan.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-8	Again, the Program Draft EIR's considerations of the impacts, mitigations, and alternatives appear limited to the Proposed Plan Project Alternative, and do not address the Alternatives, nor the Null Hypothesis Project, continuing a foregone conclusion (see 2-3Msf of Commercial Construction discussed above, is that unmitigatable?). Please see the following analysis of project conceptual iteration for planning and design. Please see pg4 p3 San Mateo Gardens, re "substantial evidence in the record, is a predominantly factual question...for the agency...drawing on its particular expertise"; here we are bringing your attention to the word “expertise”. Friends of the College of San Mateo Gardens v. San Mateo County Community College District https://law.justia.com/cases/california/court-of-appeal/2017/a135892.html	The comment is noted. The DEIR does provide an environmental impact analysis for each Alternative starting on page 536. The remainder of the comment does not relate to the adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-9	We want to accept the presumption of legal operation, but we must also accept and correct the illegal condition when evidence is presented to the contrary. In a County system, Engineering is not conducted without Accounting. But if the Accounting fails such as for Northwestern Pacific Railroad, the sad evidence must be accepted, and correction immediately made or we suffer the loss of funding or function. No one was there to accept the Trucker's weighmaster's tickets when the washout deliveries were made in the upper NWP line, none could be found, none ever delivered, no NWP.	The comment is noted. However, it does not relate to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			The reason we approach the initial determination of a project this way, using California Supreme Court's remand for San Mateo Gardens, is, here we equate the Court EIR analysis process to the Engineering process, in that there are a sequence of iterative steps involved. This process is best exemplified from the CA Supreme Court's remand expressed in San Mateo Gardens, where a series of back-and-forth evaluations and propositions are made in analyzing a project (one such method is CPM,Critical Path Method), which is the same process we use in conceptual design or planning.	
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-10	A comparison is made by question; does the "initial concept" with its features fit the need and the existing space, then we may have to adjust the concept's features to the needs, or to the space? Conceptual planning designs forward & backward many times. This comparison is not to decry the effort expended or the information obtained through Planning education or product, but a marathon runner prepares for a marathon, not Law or Engineering. Preparation for a marathon may be great preparation for someone wanting to become a Lawyer, Doctor, or Engineer, but by itself does not make one a Lawyer, Doctor, or Engineer. Nor is an Urban Planner a qualified Civil Engineer, and therefore is unable to make professional judgments in respect to the Planning of "fixed works" identified in BPC 6731.	The comment is noted. However, it does not relate to the adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-11	[See Licensing BPC 6730-6730.2(a); 6731; 6734; 6735(a). See also Administrative Mandamus case, Morris v Harper (2001) 94 Cal.App.4th 52 . "After all, ""[i]t is the refusal or neglect to perform an act which is enjoined by the law as a present duty that serves as the very foundation for the [mandamus] proceeding.' " (Morris v. Harper, supra, at p. 60.)"]	The comment is noted. However, it does not relate to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			San Mateo Gardens; "Instead of resting on whether a project is new "in an abstract sense," the "decision to proceed under CEQA's subsequent review provisions must . . . necessarily rest on a determination—whether implicit or explicit—that the original environmental document retains some informational value." (Id. at p. 951.) Such an inquiry "is a predominantly factual question . . . for the agency to answer in the first instance, drawing on its particular expertise." (Id. at p. 953.)" From where does this "expertise" derive, Planners require no Science education?	
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-12	The EIR standard is, if/when there are significant environmental impacts, then a review of impacts and mitigations must obtain (other than stating overriding or unmitigatable conditions), and a "judicial review must reflect the exacting standard that an agency must apply". San Mateo (ibid) pg 8. What this is referring to is, that the evidence must be prepared to a very high standard, from the beginning, in order for it to be considered "substantial evidence in the record". Where is the "exacting Standard" & "expertise"? According to the National Society of Professional Engineers code of ethics, Professional Engineers may disagree without a single outcome obtained, but must remain decorous.	The comment is noted. However, it does not relate to the adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-13	["The Supreme Court in San Mateo Gardens provided guidance for how to apply the subsequent review provisions. It explained that whether "major revisions" will be required as a result of project changes "necessarily depends on the nature of the original environmental document," i.e., whether it was an EIR or a negative declaration. (San Mateo Gardens, supra, 1 Cal.5th at p. 958.) It further	The comment is noted. However, it does not relate to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			explained that the appropriate standard of review also depends on the nature of the original environmental document. Although an agency's determination of whether major revisions are required is reviewed for substantial evidence, "judicial review must reflect the exacting standard that an agency must apply when changes are made to a project that has been approved via a negative declaration," as opposed to the deferential standard that applies when the project was originally approved by an EIR. (Id. at p. 953; see Committee for Re-Evaluation of TLine Loop v. San Francisco Municipal Transportation Agency (2016) 6 Cal.App.5th 1237, 1247, 1251-1252 [applying San Mateo Gardens in case where project originally approved by EIR]; Latinos Unidos de Napa v. City of Napa (2013) 221 Cal.App.4th 192,"]	
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-14	In planning, we have said, the process is intensely exhaustive and iterative, and what is described as the Court EIR review process is also exhaustive and iterative. The Court ceding competency to the local agency is similar to the process of presenting a case to a Court of Competent Jurisdiction. A Court of Competent Jurisdiction is composed firstly of a trained lawyer, either by a Law School or by preparation and passing the Baby Bar. Then of course, the prospectant Judge must pass the National Bar Exam locally administered, next the Judge must practice law for a minimum of 10 years. At some point the Judge is appointed or runs for election, and finally, the Judge is selected to hear a case by the Chief Judge. The Court itself must also be of Competent Jurisdiction, meaning it is the proper venue, as established by our system of Jurisprudence. These are significant tests. If someone went to College and studied English or Political Science, they could learn a lot of laws, but they would not	The comment is noted. However, it does not relate to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			be presumed to know how to practice Law, And they did not go to Law School or pass the Baby Bar, and they have not prepared to be a Lawyer, let alone a Judge.	
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-15	Engineering is one of the most complex problems in supply & demand, as evidenced by the number of divorces in custom home remodeling and construction, and why Public Works requires Licensed Civil Engineers. Our critique is not meant to characterize the work of any Engineers having completed reports for the SDC EIR-SP, since we do not know what instructions they were given. But we contend that recommended demolition for over 1.2Msf without analysis of 400,000sf, and recommended demolition of ~75,000sf of Hospital Treatment Building rated at "not requiring any updates", represents an incomplete analysis at best, and certainly a neglect of the impacts on the resources being analyzed.	The comment is noted. Pursuant to CEQA, the DEIR does consider the environmental impacts related to construction and operation under the Proposed Plan at a programmatic level. Please see MR-3 for more information regarding the level of detail of analysis in the DEIR.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-16	As we spoke of backward-and-forward analysis in design, this is required in Planning as well, unless a truncated process is employed. It is far easier to make the facts fit the design, than to make the design fit the facts. If your timeline is short, it is far easier for you to establish the Project, and make the analysis fit the Project by not addressing impacts except in a standard way, such as, "(h)owever the Proposed Plan aims to be self-mitigating". "from Program Draft EIR 5.3 Significant and Unavoidable Impacts" Subsequent to the very specific State Law being passed to sell SDC, incorporating significant intent for community participation, many meetings were held with studied interest and good comments. Comments were sent to Permit Sonoma and the Planners involved in SDC's NOP of Program Draft EIR & SP, but these comments were not	The comment is noted. Please see MR-1 and MR-2 regarding the adequacy of a self-mitigating Plan and project timeline. The remainder of the comment relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			incorporated in the evaluation nor in the Proposed Alternative Project SP, nor were they forwarded to the Planning Commission, nor were they provided to other participants or commenters to the EIR & SP.	
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-17	This is not standard practice, and violates CEQA Code 15300(a)&(b)(1)-(3); "(a) Before granting any approval of a project subject to CEQA, every lead agency or responsible agency shall consider a final EIR or negative declaration or another document authorized by these guidelines…(b) Choosing the precise time for CEQA compliance involves a balancing of competing factors, EIR's and negative declarations should be prepared as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment." (b)(1) "With public projects, at the earliest feasible time, project sponsors shall incorporate environmental considerations into project conceptualization".	The comment is noted. The County's EIR process does not violate CEQA Code 15004(a)&(b)(1)-(3) regarding time of preparation. Before granting any approval of the Specific Plan, this Final EIR is produced for consideration by the Planning Commission and Board of Supervisors. Further, the DEIR has been developed to provide meaningful environmental considerations to the planning process. Please see Chapter 1, Table 1-1 of the FEIR to view edits and additions to the Proposed Plan in response to public comments since the publication of the DEIR.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-18	The timeframe window for "cumulative impacts" evaluation was limited to after Proposed Alternative Project completion, leaving out the demolition and construction of the entire project, let alone the life cycle embedded costs, GHG's and energy to be demolished as a consequence from the new construction. This time frame results in unsubstantiated conclusions for the Proposed Project Alternative in ES.3 Alternatives to the Proposed Plan, "As discussed in Impacts 3.6-2, the Proposed Plan would thus support and reflect the increasingly stringent State and local goals and regulations that seek to increase energy efficiency, reduce energy consumption, and prioritize renewable energy – reinforcing that the Proposed Plan would not result in cumulatively	The comment is noted. The County's EIR process does not violate CEQA Code 15004(a)&(b)(1)-(3) regarding time of preparation. Before granting any approval of the Specific Plan, this Final EIR is produced for consideration by the Planning Commission and Board of Supervisors. Further, the DEIR has been developed to provide meaningful environmental considerations to the planning process. Please see Chapter 1, Table 1-1 of the FEIR to view edits and additions to the Proposed Plan in response to public comments since the publication of the DEIR. Starting on page 584 of the DEIR, cumulative impacts consider the environmental impacts of the Proposed Plan as well as the likely effects of surrounding

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			considerable impact with respect to wasteful, inefficient, or unnecessary consumption of energy resources." They left out 161,000 tons of waste. 15300 (b)(3), "With private projects, the Lead Agency shall encourage the project proponent to incorporate environmental considerations into project conceptualization, design, and planning at the earliest feasible time." This truncated analysis appears to be the type that establishes priorities, goals, and objectives before the certification of the EIR is complete, therefore "limiting alternatives or mitigation measures".	regional growth. Please see also MR-1 regarding the adequacy of a self-mitigating Plan.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-19	This truncated analysis would violate CEQA Code 15300 (b)(2), "public agencies shall not undertake actions concerning the proposed public project that would have a significant adverse effect or limit the choice of alternatives or mitigation measures, before completion of CEQA compliance";"and for example, agencies shall not:(b)(2)(B)", "Otherwise take any action which gives impetus to a planned or foreseeable project in a manner that forecloses alternatives or mitigation measures that would ordinarily be part of CEQA review of that public project". Given that Permit Sonoma will only provide the public's comments to the Planning Commission upon final EIR Certification, and a series of comments have been made to the SDC Comprehensive Planning Manager which has not incorporated the public's comments into the Proposed Project Alternative, "at the earliest feasible time", they appear to have violated Sec's 15300(a)&(b)(1)-(3), inclusive.	The comment is noted. The County's EIR process does not violate CEQA Code 15004(a)&(b)(1)-(3) regarding time of preparation. Before granting any approval of the Specific Plan, this Final EIR is produced for consideration by the Planning Commission and Board of Supervisors. Further, the DEIR has been developed to provide meaningful environmental considerations to the planning process. Please see Chapter 1, Table 1-1 of the FEIR to view edits and additions to the Proposed Plan in response to public comments since the publication of the DEIR. Please see also MR-1 regarding the adequacy of a self-mitigating Plan. Further, as noted on page 45 of the DEIR, a NOP for the EIR on the Proposed Plan was submitted to the State Clearinghouse on February 9, 2022 and circulated among relevant State and local agencies, as well as to members of the public. Consistent with legal requirements and State guidance, the EIR Scoping Meeting was held on February 17, 2022 via Zoom to receive comments and suggestions on scope and content for the EIR; solicit input on potential impacts, mitigation measures, and alternatives to consider; and consult with

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				public agencies responsible for natural resources, other regulatory bodies, neighboring communities, Native American tribes, and members of the public. Comments on the NOP, along with input received during public workshops and meetings over the course of the SDC Specific Plan process, have helped to identify the major planning and environmental issues and concerns and establish the framework of this EIR. After the close of the public review period for the DEIR, County staff and CEQA consultants reviewed the comments, responded to the comments received, and determined whether any changes are required to the Draft EIR (see Chapter 3 of the FEIR). As described in Sec. 23A-25 of the County Code, the Lead Department shall present the Final EIR to the Planning Commission. The Planning Commission may make its recommendations to the Board of Supervisors regarding the EIR and the public project. The Board of Supervisors will then consider certification of the Final EIR. Subsequent to certification of the Final EIR, the Board of Supervisors may approve the Proposed Plan. If the Board of Supervisors approves the Proposed Plan, a Notice of Determination will be filed with the State Office of Planning and Research and the Clerk of the County of Sonoma.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-20	What we contend here is, that the proper "back-and-forth" process has not occurred, as within the planning process proper, within the design process proper, within the EIR process, as would be the same within the Court's evaluation of the EIR process itself, from San Mateo Gardens remand from the California State Supreme Court, which constitutes proper Authority to all jurisdictions within California. We also contend that "particular expertise" and "the	See response to comment B1-19. Pursuant to CEQA, the proper planning process and public involvement for the development of the DEIR has occurred, as outlined starting on page 45 of the DEIR. See Chapter 6 List of Preparers on page 611 of the DEIR. Multiple firms that specialize this work have completed the DEIR pursuant to CEQA requirements.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			exacting standard that an agency must apply" is not available to the review that the "judicial review must reflect", without a Licensed Civil Engineering in Responsible Charge of "Fixed Works" Planning, BPC 6731.	
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-21	Please consider adding this section on open space to the NSVMAC letter regarding SDC at your September 21, 2022 meeting, Agenda Item 8. It is important to go on record requesting more details in the DEIR and Specific Plan about the open space, as without it we will face more uncertainty as the SDC project progresses over the years and the players change. Please see below and attached suggested text.	The comment is noted. However, it does not relate to the adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-22	While we recognize that it is the intent of the County of Sonoma and the State of California to protect the open space lands around the historic campus at SDC, the DEIR and Specific Plan are inconsistent and inadequate regarding the description, protection and disposition of 755 acres of open space outside the core campus. Neither the DEIR or Specific Plan gives the exact boundaries (other than in one general overlay map in the Land Use Section of the Specific Plan) or give details on how or when open space lands will be protected, transferred, or managed; or analyze or mitigate the impacts to those lands from the development of the historic campus.	The comment is noted. The DEIR analyzes the impacts on open space throughout the Chapter 3 Environmental Analysis. There are no significant impacts regarding Agricultural and Forestry Resources, Biological Resources, and Public Services and Recreation. For example, under Impact 3.1-3 on page 105, the DEIR states that the proposed development would not differ substantially or detract from the existing visual quality and public views of the site by keeping with the overall scale and development height variation at the current SDC campus and by preserving the site's open space framework outside the Core Campus. Under Impact 3.2-4 on page 135, the DEIR states that the Proposed Plan will only develop in the previously developed Core Campus; all open space that surrounds the main campus will be preserved as such. The State of California enacted Government Code Section 14670.10.5 that outlines the State's goals and objectives for the SDC Specific Plan. The legislation acknowledges the importance of the

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				significant open space areas of the SDC site and requires permanent protection of the SDC site's open space and natural resources. Therefore, proposed Goal 2-A will implement the State's objective and preserve the open space surrounding the core campus in perpetuity, preventing further development in undeveloped areas and ensuring ongoing stewardship in partnership with neighboring State and regional parks and other institutions and organizations. Agricultural activities would only occur in the historic agricultural area on the east side of the site, but nowhere else. Policy 2-1 also will ensure that land shown in Figure 2.2-1 as Preserved Open Space is dedicated or maintained as permanent public open space, and the Managed Landscape/Fire Buffer is designed and maintained for that purpose. The owner/operator of the Preserved Open Space shall prepare an open space plan, to be approved by the County to manage the rich diversity of resources on site, including habitat, vegetation, wetlands, native species, and other critical resources, balanced with recreation and wildfire protection needs. As part of the open space plan development, conduct a formal aquatic resources delineation for habitat protection, and consider delineating a cohesive system of trails and pathways that balances recreation and wildlife conservation. Page 242 of the DEIR states that outside of the developed areas, the Proposed Plan establishes dedicated open space areas. Managed open space in these areas would preserve and, in some cases, enhance the quality of sensitive habitats such as wetlands, native grasslands and oak woodlands. As discussed under Impact 3.13-1, the Proposed Plan would preserve approximately 755 acres of open space within the 945-acre Planning Area, which is envisioned

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				as a recreational amenity with designated trails and water recreational opportunities that integrate with existing regional parks (proposed policies 2-1, 2-4, and 2-5).
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-23	These inadequacies need to be resolved in the DEIR and Specific Plan by adding clear descriptions of the open space lands with exact boundaries; likely mechanisms for transferring the lands and to what possible entities or types of entities; a timeline; and how the lands will be managed and under what authority. Environmental impacts and mitigations for impacts to the open space lands from development of the campus and ongoing operations must be provided. A major concern is that multiple new agricultural uses including tasting rooms and agricultural processing that have never occurred at SDC are proposed to be permitted in the "Preserved Open Space" in the Land Use Section of the Specific Plan. These as well as new conditional land uses in the open space including geothermal development, sports facilities, and parking facilities are never mentioned or analyzed in the DEIR. See Table 4.3 of the Specific Plan, attached. The DEIR needs to be revised to eliminate these sues and/or to analyze and mitigate environmental impacts on the open space and natural resource.	The comment is noted. See response to comment B1-22. See also MR-3 regarding the programmatic nature of the DEIR. As stated on page 406 of the DEIR, construction of proposed park and recreation facilities could result in subsequent environmental impacts; the specific impacts of which are not known at this time and any analysis would require speculation. However, any new developments of parks or recreation facilities necessary to serve the Planning Area would be located and constructed on existing urban and built-up land. Environmental impacts related to construction emissions, VMT, and biological resources associated with construction or expansion of the proposed facilities are accounted for in technical modeling provided in other chapters of this EIR. Further, proposed policies 5-59 and 5-60 also ensure that new developments use reclaimed and salvaged materials and incorporate green building measures to mitigate environmental impacts. Future recreational facilities will tier from this EIR to identify and mitigate site-specific impacts if and when design of those parks and recreation facilities is complete.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-24	Vague Goals and Policies contained the Specific Plan and DEIR do not suffice, such as "future developers at the site must work with the County to ensure proper management and stewardship" and "Work with Sonoma County to dedicate the preserved open space as regional parkland." Not resolving these issues is likely to create confusion and conflict later for all involved, as elected officials, agency staff and developers change over time.	The comment is noted. As noted on page 94 of the DEIR, proposed Goal 2-A would preserve the open space surrounding the core campus in public ownership in perpetuity, preventing further development in undeveloped areas and ensuring ongoing stewardship in partnership with neighboring State and regional parks and other institutions and organizations. Further Policy 2-1 would ensure that land shown In Figure 2.2-1 as

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Lastly, the DEIR and Specific Plan cannot rely on state statute to protect the open space lands [1] as that language is vague, only as "feasible" and in the "best interests of the state."	Preserved Open Space is dedicated or maintained as permanent public open space, and the Managed Landscape/Fire Buffer is designed and maintained for that purpose. The owner/operator of the Preserved Open Space shall prepare an open space plan, to be approved by the County to manage the rich diversity of resources on site, including habitat, vegetation, wetlands, native species, and other critical resources, balanced with recreation and wildfire protection needs. As part of the open space plan development, conduct a formal aquatic resources delineation for habitat protection, and consider delineating a cohesive system of trails and pathways that balances recreation and wildlife conservation.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-25	PRESERVED OPEN SPACE/PARKLANDS While we recognize that it is the intent of the County of Sonoma and the State of California to protect the open space lands around the historic campus at SDC, the DEIR and Specific Plan are inconsistent and inadequate regarding the description, protection and disposition of 755 acres of open space outside the core campus. Neither the DEIR or Specific Plan gives the exact boundaries (other than in one general overlay map in the Land Use Section of the Specific Plan) or give details on how or when open space lands will be protected, transferred, or managed; or analyze or mitigate the impacts to those lands from the development of the historic campus.	The comment is noted. See response to comment B1-22.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-26	These inadequacies need to be resolved in the DEIR and Specific Plan by adding clear descriptions of the open space lands with exact boundaries; likely mechanisms for transferring the lands and to what possible entities or types of entities; a timeline; and how the lands will be managed and under what authority. Environmental impacts and	The comment is noted. See response to comment B1-23.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			mitigations for impacts to the open space lands from development of the campus and ongoing operations must be provided. A major concern is that multiple new agricultural uses including tasting rooms and agricultural processing that have never occurred at SDC are proposed to be permitted in the "Preserved Open Space" in the Land Use Section of the Specific Plan. These as well as new conditional land uses in the open space including geothermal development, sports facilities, and parking facilities are never mentioned or analyzed in the DEIR. See Table 4.3 of the Specific Plan, attached. The DEIR needs to be revised to eliminate these sues and/or to analyze and mitigate environmental impacts on the open space and natural resource.	
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-27	Vague Goals and Policies contained the Specific Plan and DEIR do not suffice, such as "future developers at the site must work with the County to ensure proper management and stewardship" and "Work with Sonoma County to dedicate the preserved open space as regional parkland." Not resolving these issues is likely to create confusion and conflict later for all involved, as elected officials, agency staff and developers change over time. Lastly, the DEIR and Specific Plan cannot rely on state statute to protect the open space lands as that language is vague, only as "feasible" and in the "best interests of the state."	The comment is noted. See response to comment B1-24.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-28	I have attached the letter from Sonoma Mountain Preservation addressing the draft environmental impact report and preferred specific plan for the Sonoma Developmental Center. While I apologize for the redundancy, since I've already copied you on the original email with its cc list, I would like to make sure the letter is received by all members of the North Sonoma Valley Municipal Advisory Council, the Springs Advisory	The comment is noted. However, it does not relate to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Council, and the Sonoma Valley Citizens Advisory Commission. I appreciate your assistance with this request. Thank you for all you do.	
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-29	We appreciate this opportunity to comment on the draft environmental impact report (DEIR) and preferred Specific Plan for redevelopment of the Sonoma Developmental Center (SDC). While we acknowledge the conflicting directives laid out in the legislation authorizing the specific planning process for the property and recognize the difficulty of making meaningful connections with stakeholders in pandemic times, we must express our overall disappointment with the DEIR and Preferred Plan, which do not reflect community input as we've witnessed in public meetings and in letters over the years-long planning process. The scale of proposed redevelopment of the 180-acre core campus is fundamentally incompatible with the rural character of the surrounding community and the north Sonoma Valley, presents a clear danger to the safety of current and future residents of the Valley in the inevitable event of wildfire, and threatens the integrity of Sonoma Mountain's irreplaceable natural resources — habitats for keystone flora and fauna, the health of the Sonoma Valley Wildlife Corridor, water quality, air quality, recreational opportunities, and historic, tribal, and modern cultural values.	The comment is noted. As noted under Impact 3.1-3 on page 105 of the DEIR, new development under the Proposed Plan will occur primarily within the previously developed Core Campus area, excluding the SR 12 connector which will reuse the existing street network and avoid damage to scenic resources to the greatest extent feasible. Therefore, the proposed development would not differ substantially or detract from the existing visual quality and public views of the site by keeping with the overall scale and development height variation at the current SDC campus and by preserving the site's open space framework outside the Core Campus. Please also see MR-4 regarding the adequacy of the wildfire evacuation analysis. Please see also sections 3.3, 3.4, 3.5, and 3.13 regarding the impact analysis of Air Quality, Biological Resources, Public Services and Recreation, and Cultural, Historic, and Tribal Cultural Resources.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-30	The DEIR fails to adequately or clearly describe meaningful, enforceable mitigations for the environmental impacts of redevelopment at the scale proposed, as required by the California Environmental Quality Act (CEQA). It fails to clearly delineate cumulative impacts. It does not provide sufficient analysis to give decision-makers all the	The comment is noted. Pursuant to CEQA, the DEIR outlines all feasible proposed policies and Standard Conditions of Approval in order to help mitigate significant and potentially significant environmental impacts. Please see MR-1 and MR-9 regarding the adequacy of a self-mitigating Specific Plan. Further,

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			information they need to satisfactorily draw conclusions about the environmental consequences of the Preferred Plan. It is our hope that by addressing the questions that follow, applicable, effective, enforceable mitigations will be identified and instituted that materially decrease or eliminate those impacts.	cumulative impacts are analyzed starting on page 584 of the DEIR.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-31	General concerns/questions The DEIR indicates that, across the board, the environmental impacts of the Preferred Plan and the Historic Preservation Alternative (HPA), which is acknowledged as environmentally superior per CEQA, are "largely comparable." The DEIR also states that the HPA is less superior in terms of energy use, biological resources, and wildfire risk (ES.4.2). Given the significant differences in scale of the two alternatives — the HPA is half the size of the Preferred Plan — these conclusions defy logic. 1) Please explain how construction of 1,000 homes occupied by 2,500 people has the same environmental impact across virtually every category studied in the DEIR as does providing 450 homes occupied by 1,125 people (a 55% reduction)? Which studies support this finding? 2) Please explain how providing workspace for 900 people has the same environmental impact across virtually every category studied in the DEIR as does providing workspace for 600 people (a 33.3% reduction). Which studies support this finding? 3) Please explain how the HPA—which translates to less demolition through adaptive reuse of historic structures, less construction, fewer vehicle miles traveled, and fewer people on the property—uses more energy, has a greater impact on biological resources, and increases wildfire risk	The comment is noted. Please see MR-8 for more information on why the Historic Preservation Alternative is contrary to the goals of the legislation and project objectives which were crafted in response to the direction in the legislation. As noted in Table 4.5-1 on page 572 of the DEIR, the Historic Preservation Alternative would result in less than significant impacts regarding Energy, Climate Change, and GHG Emissions; Biological Resources; and Wildfire which is equivalent to the Proposed Plan. While these impacts are less than significant, indirect emissions associated with electricity consumption, waste and wastewater generation, and water use, would likely be more than those of the Proposed Plan because of the inefficiency of the existing buildings, and the difficulty in updating existing construction to match current standards for energy efficiency and GHG emissions. Under the Historic Preservation Alternative, creek corridors and the wildlife corridor will also not be expanded which would negatively impact wildlife movement compared to the Proposed Plan. Further, the lack of Highway 12 direct access may lead to slightly longer evacuation times compared to the Proposed Plan. Chapter 3 Environmental Analysis of the DEIR explains how the level of significance was reached for each of the significance thresholds under the Proposed Plan. Case

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			than the Preferred Plan, as stated in the DEIR (ES 4.2). Which studies support this finding?	law suggests that the discussion of alternatives need not be exhaustive. CEQA Section 15126.6(f) states that the alternatives in an EIR should be governed by a "rule of reason." Thus, Table 4.5-1 on page 572 of the DEIR compares the reasonable level of significance between the Proposed Plan and the Alternatives. It is noted that Alternatives resulting in less development, like the Historic Preservation Alternative, would result in impacts less than that of the Proposed Plan in many of the impact categories, such as Aesthetics, Air Quality, and Utilities and Service Systems. However, if the impact is already less than significant than the Proposed Plan, the DEIR does not need to quantitatively define how much less significant an Alternative's impact is compared to the Proposed Plan.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-32	Impacts specific to Sonoma Mountain The entire 945-acre SDC property, including the developed core campus, is located within one of the last rural regions on the Sonoma Valley floor, with the mostly undeveloped slopes of Sonoma Mountain forming the entire western boundary and serving as a viewshed/mountain backdrop; as an informal natural reserve/safe haven for native flora and fauna; and as an informal recreational resource for hikers, cyclists, and equestrians from throughout Sonoma County and beyond. Further, historic residential use of the SDC by individuals with developmental disabilities and their caregivers had minimal human-caused environmental impacts on the property's open spaces. Redevelopment at the scale in the Preferred Plan creates an urban footprint within this historically rural zone, significantly increasing human-caused environmental impacts on a number of areas identified under CEQA (i.e., Aesthetics [3.1]; Biological	The comment is noted. Under Impact 3.1-3 on page 104, the DEIR recognizes that the Planning Area is in a nonurbanized rural setting within Sonoma County. The Proposed Plan would change the nature of some land uses to include more dense and diverse types of land uses on the SDC campus including a vibrant mixed-use, pedestrian-scaled district, with a concentration of cultural, civic, retail, visitor, and other uses around the Central Green. Densities and intensities are organized to promote walkability and an active center, with the highest densities and intensities closest to the Central Green, while in some areas, especially toward the east and northeast, buildings would be removed with larger areas than present not having any development. Infill development or redevelopment could have differing visual characteristics than existing development, and by default, would alter the existing visual character of the

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Resources [3.4], and Public Services and Recreation [3.13], to name a few). To mitigate impacts of any redevelopment on the historic, minimal-impact, rural quality of the property, and to ensure the viewscape is preserved, we request that: 1) The DEIR include mitigation measures to compensate for the loss of the rural attributes of the property at its current baseline, or a baseline that dates back no further than 10 years. Please specify which measures in the current DEIR address these impacts, and which studies support them. 2) Please study, provide mitigation measures, and document how incorporating adaptive reuse of buildings into the HPA proposal, with its smaller human footprint, would impact environmental goals.	site and surroundings. New development will occur primarily within the previously developed Core Campus area, excluding the SR 12 connector which will reuse the existing street network and avoid damage to scenic resources to the greatest extent feasible. Therefore, the proposed development would not differ substantially or detract from the existing visual quality and public views of the site by keeping with the overall scale and development height variation at the current SDC campus and by preserving the site's open space framework outside the Core Campus. Thus, with adherence to existing and proposed policies and standards, development under the Proposed Plan would improve rather than substantially degrade the existing visual character of the site, and this impact would be less than significant. No mitigation is needed, see also MR-1. The environmental impact analysis of the Historic Preservation Alternative begins on page 561 of the DEIR.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-33	3) The SDC's open space currently sees frequent use by recreationalists from all over Sonoma County and beyond. That use increased markedly during the pandemic, despite restrictions on travel. The level of use has remained high as the pandemic has waned. The addition of 2,500 residents, 900 workers, visitors to the proposed hotel and conference center, and their friends and family, as outlined in the Preferred Plan, will add an exponential burden on the property's open space, much of which is on the skirts of Sonoma Mountain. Please analyze what that increase in recreational use means for aesthetics, biological resources, cultural, tribal, and historic resources, and water and air quality, and identify mitigations for those impacts.	The comment is noted. Please see the Public Services and Recreation Impact Analysis, starting on page 394 of the DEIR. According to the Sonoma County General Plan 2020, the County's regional parkland ratio is 20 acres of parkland per 1,000 residents. The County's community and neighborhood parkland ratio is 2.5 acres of parkland per 1,000 residents. Consistent with the Quimby Act (California Government Code Section 66477), the General Plan 2020 Policy PF-2g requires dedication of land or in-lieu fees as a means of funding park facilities. Policy PF-2c requires the use of the following standards for determination of park needs: 20 acres of regional parks per 1,000 residents countywide and five acres of

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				local and community parks per 1,000 residents in unincorporated areas. Although the Proposed Plan would result in a population increase of about 2,400, there are approximately 12 acres of parks and recreational facilities designed into the Proposed Plan. Moreover, 755 acres of the Planning Area will be retained as open space that will be publicly accessible and integrated into the regional parks system (proposed Policy 2-1). Open space preservation doesn't require new construction, so impacts are negligible, but other recreational facilities will require construction of new or physically altered facilities (proposed policies 2-1, 6-3, 6-4, 6-5, 6-6, and 6-7) and have a potentially significant environmental impact. The environmental impacts related to traffic, noise, and air quality and GHG emissions during construction and operation of the park facilities have been considered throughout this EIR (see Section 3.3: Air Quality, Section 3.6: Energy and Greenhouse Gas Emissions, Section 3.11: Noise, and Section 3.14: Transportation). Detailed design of the new park facilities has not yet been completed, so site-specific impacts cannot be evaluated at this time. However, construction of new parks would be subject to separate project-level CEQA review at the time the design and exact location is proposed in order to identify and mitigate any project-specific impacts as appropriate. As such, compliance with existing regulations would reduce impacts to a less-than-significant level related to the provisions of park facilities. Please see also MR-3 regarding the programmatic nature of the DEIR.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-34	4) Please analyze the cumulative impacts and potential degradation of floral and faunal habitats, groundwater supply, and riparian zones across the site, including the 750+ acres identified as open space, caused by the increased housing density, noise, construction, traffic, and demolition proposed under the Preferred Plan. Please provide analysis of the impacts of redevelopment on migratory fish species, such as coho salmon. Please also analyze whether these impacts would be mitigated by a smaller redevelopment such as the HPA.	The comment is noted. Cumulative environmental impacts are analyzed starting on page 584 of the DEIR. The environmental impact analysis of Alternatives is provided starting on page 536 of the DEIR. Impact 3.4-4 of the DEIR analyzes whether the Proposed Plan will have a significant impact on migratory fish species. Page 255 states that future development under the Proposed Plan would be subject to the requirements of Clean Water Act Section 404 and 401 permitting requirements, which would limit and/or mitigate impacts from projects that would discharge pollutants or dredged or fill materials into waters of the state, including wetlands. Future development would also be subject to the CDFW Lake and Streambed Alteration Program, which would require any project that could substantially divert or obstruct the flow of; substantially change or use any material from; or deposit debris into a river, stream, or lake to agree to measures that would protect existing fish or wildlife resources. Further, implementation of Standard Conditions of Approval BIO-12 would further reduce this impact to a less than significant level. BIO-12 implements measures to avoid impacts to California freshwater shrimp and listed salmonids that have potential to occur in the streams in the Project Area.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-35	The intent to preserve and protect the 750+ acres of open space surrounding the 180-acre core campus has been codified by the state in its enabling legislation and has been promised by the county in the Preferred Plan. However, neither the Preferred Plan and nor the DEIR delineate clear boundaries for the open space to be transferred, identify a mechanism of transfer, clearly identify the entities that a developer must work with to facilitate transfer, or explicitly require a developer to ensure that redevelopment of the	The comment is noted. However, it relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			core campus be done in such a way, and with sufficient buffers, as to protect the natural values of the open space. Please add specific, enforceable guidelines for the open space transfers, specifying acreages and minimum boundaries on both the east and west sides of Arnold Drive, and limiting allowed uses on these acreages to passive recreational uses such as hiking, mountain biking, horseback riding, photography, etc.	
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-36	6) Agricultural and commercial uses should not be permitted in open space intended to be parkland. Please clarify that uses such as those identified in Table 4.3 will not be permitted in open space identified for transfer to park agencies, and that mitigations for such uses on other open space parcels are identified and enforceable. Thank you for the time and effort you have put into developing the DEIR and preferred Specific Plan for the property. We look forward to receiving Permit Sonoma's responses to our concerns, and hope the final plan and EIR presented to the Planning Commission for comment and to the Board of Supervisors for approval reflect substantive changes that ensure the integrity of the natural values of Sonoma Mountain, and the communities that surround it, remain intact.	The comment is noted. According to proposed Goal 2-A, the Proposed Plan will preserve the open space surrounding the core campus in public ownership in perpetuity, preventing further development in undeveloped areas and ensuring ongoing stewardship in partnership with neighboring State and regional parks and other institutions and organizations. Agricultural activities would only occur in the historic agricultural area on the east side of the site, but nowhere else. Thus, development or agricultural uses will not occur in designated open space areas outside the Core Campus.
North Sonoma Valley Municipal Advisory Council	Wednesday, September 21, 2022	B1-37	An excellent start to this response. I have noted a few very small grammatical items; nothing substantive.	The comment is noted. However, it does not relate to the adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-1	APPENDIX to North Sonoma Valley Municipal Advisory Council Letter of 01/06/22. This appendix provides additional details in support of the concepts presented in the main body of the NSV MAC letter dated January 6, 2022. These details are a compilation of information provided in public comments	Thank you for your comment letter. The comment is noted. However, it does not relate to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			on the SDC Specific Plan Alternatives Report (November 2021), a community survey, and NSV MAC input. These details should be addressed in the Specific Plan policies and design guidelines. All "community survey" references below are to the non-affiliated survey conducted by Sonoma Valley resident Dr. Shannon Lee, Biology Department Faculty at Sonoma State University, in December 2021 (link).	
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-2	OPEN SPACE: General Information: ● Community input consistently emphasizes the singular opportunity the SDC campus represents in terms of protecting the open space and wildlife corridor in the context of a vibrant, sustainable community.● Over 90% of the community survey respondents ranked "preservation of open space" as of the highest priority.	The comment is noted. However, it relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-3	The Community Supports: ● Prioritizing the transfer of park-adjacent properties to Sonoma Valley Regional, Jack London State Historic parks, or a potential land trust with continued public access to trails and open space. ● Protecting the wildlife corridors, their permeability and related natural resources from the wide range of impacts associated with over-development of the campus. ● The wildlife corridors are not separate from SDC campus—animals are not cognizant of boundaries—and their protection is integral to all aspects of the site plan. ● Pursuing the development of performance standards to support housing and other development, as outlined in the Sonoma Land Trust's memo to the NSV MAC, Springs MAC and Sonoma Valley Citizens Advisory Council in follow-up of the November 18, 2021 joint meeting.	The comment is noted. Please see MR-7 regarding impacts of the Proposed Plan on wildlife movement. See also response to comment B8-3, B8-15, B8-16, and B8-19 for wildlife corridor policy amendments. The remainder of the comment relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-4	HOUSING DENSITY: General Information: ● The SDC site is outside of an urban growth area and surrounded by community separator lands and the rural village of Glen Ellen. ● Based on current United States' census definitions, the Eldridge "census designated place," including the SDC campus and the Glen Ellen community just south of the SDC, could add approximately 450 housing units, i.e., through redevelopment of the SDC campus, and still be within a rural (vs. urban) designation, assuming average occupancy in Sonoma County of 2.61 people per dwelling unit. ● Maintaining a rural designation for the site's development is consistent with the Guiding Principles established for the site plan in that new development must complement the surrounding communities of Glen Ellen and Eldridge/Glen Ellen.	The comment is noted. Please see Impact 3.10-2 on page 319 of the DEIR for an analysis on conflicts with any land use plan, policy or regulation. Given that the Proposed Plan is consistent with the General Plan's goals for the Planning Area and includes provisions to update the General Plan and Zoning Ordinance consistent with State law in order to ensure consistency as discussed above, there would be less than significant impact from implementation of the Proposed Plan related to conflicts with local plans and regulations. In addition, as noted under Impact 3.1-3 on page 105 of the DEIR, new development under the Proposed Plan will occur primarily within the previously developed Core Campus area, excluding the SR 12 connector which will reuse the existing street network and avoid damage to scenic resources to the greatest extent feasible. Therefore, the proposed development would not differ substantially or detract from the existing visual quality and public views of the site by keeping with the overall scale and development height variation at the current SDC campus and by preserving the site's open space framework outside the Core Campus. Further, comment is related to the Specific Plan and not the adequacy of the DEIR.
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-5	The Community Supports: The creation of additional housing on the SDC site, particularly affordable housing, however at a substantially lower density—450 or fewer housing units—than in any of the draft alternatives published to date. (The number of housing units in all three plan alternatives is 990 or greater.) ● 89% of community survey respondents support no more than 450 housing units; 65% of those supporting between 400-450 units, and 24%, less than 400 units.	The comment is noted. Please see MR-8 regarding the Historic Preservation Alternative. The remainder of the comment relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			● Related to this and to complementary community development as mentioned above, 87% of community survey respondents cited "preserving the rural character of Glen Ellen" as "very important." ● The community does not prioritize market rate housing.	
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-6	AFFORDABLE HOUSING: The Community Supports: ● A higher percentage of mixed level affordable housing than the 25% of the published alternatives. Specifically: ● 76% of community survey respondents think that 25-50% (or more) of the SDC housing should be affordable; 49% of all respondents would push that percentage higher, with at least 50-75% of housing units affordable. Over half of that 49% would prefer that 75%+ of all housing be affordable. ● Housing to include housing for individuals with developmental disabilities (as indicated in state statute); community comments also support senior and veterans housing and related services. ● Housing should be fully accessible (to disabled), as outlined in letters from representatives of the disabled community. ● The survey showed little support for estate homes (81% of respondents opposed) or 3-story apartment buildings (68% opposed), however during the NSV MAC discussion of 12/15/21 it was acknowledged that 3-story housing may need to be considered to achieve higher levels of affordable housing. ● Adaptive re-use of existing buildings (see below) may alleviate need for 3-story structures. ● The community generally agrees that clustered housing and integrated affordability level housing should be considered. ● The state of California has prioritized the creation of affordable housing, as has Sonoma County. The state must	The comment is noted. However, it relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			reconcile this priority with its fiscal responsibility with respect to the SDC property by defraying the significant site remediation costs. ● Housing clusters and siting should be designed to support open space priorities as identified above. ● Housing should be located away from Arnold Drive to preserve the existing visual and historic character and density of the SDC campus.	
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-7	Potential funding sources: - Federal Infrastructure Investment and Jobs Act ADAPTIVE REUSE OF EXISTING BUILDINGS: General Information: ● ALL responsible structural studies of the single-story buildings on the east side of the SDC campus indicate that re-use of the buildings is both financially feasible, and a likely positive use of existing resources. ● It is important to note that all of the studies related to the re-use option were conducted using old financial data. Local new construction costs have escalated sharply in the past few years, and particularly in the past 12 months. ● The discussions of adaptive re-use have focused on perceived low demand, and the potential unwillingness of people to live in buildings that have been re-designed. However, there are examples of creative, livable residential re-use deigns throughout urban environments both locally, and in other regions of the US, including lofts in old train stations, apartments in old manufacturing facilities, etc. Additionally, those discussions regarding design do not take into account the changes we have seen in the past couple of years alone. Tiny houses, re-purposed shipping containers, etc., are designs that are now considered livable and comfortable despite the out-of-date view of such designs.	The comment is noted. Please see MR-8 regarding the Historic Preservation Alternative and the financial feasibility associated with adaptive reuse. The remainder of the comment relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-8	Community Benefits: ● The re-use option will reduce greenhouse gases associated with demolition and construction. It will reduce air quality problems since the impacts of dismantling of concrete, wood and toxics will be considerably reduced as compared to that of demolished whole buildings. ● The roadways will not be further burdened by the weight and number of overloaded trucks. ● Public safety will be improved due to reduced traffic flows. ● The unique and beautiful architectural nature of the existing buildings will be preserved. ● The re-use of the buildings will be less expensive, and less time consuming, resulting in a more rapid occupancy schedule. ● Local job creation will increase with the use of adaptive re-use of existing buildings due to the nature of the specialty construction skills required for the work. ● "Proof of concept," or the demonstration project aspect of the work, will serve as a model for additional other communities or similar projects.	The comment is noted. Please see MR-8 regarding the Historic Preservation Alternative. The remainder of the comment relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-9	The Community Supports: ● The community survey found that 49% of all respondents find adaptive reuse of buildings to serve at-risk populations to be of highest or high priority combined. ● In addition, a total of 64% of all respondents find adaptive reuse of buildings to serve special needs populations to be of highest or high priority combined. ● In addition, the community has indicated support for alternative housing types, e.g., co-housing, that could be implemented to make reuse financially feasible. Potential funding sources: - Grants - Developer funds	The comment is noted. However, it relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-10	UTILITY INFRASTRUCTURE: Sewer Treatment / Water Recycling General Information: ● The Sonoma Valley County Sanitation District Treatment Facility is located approximately 13 miles from the SDC Campus. The area surrounding the current treatment facility, located at the end of 8th Street East, routinely floods during the wet season. ● Untreated effluent is discharged into Nathanson Creek during flood events. ● Climate change, and associated sea level rise, will result in operations at the current location becoming increasingly difficult to maintain and sustain. ● Flood events will increase as groundwater levels rise. ● Discharges into Nathanson Creek will increase. ● Currently the Sanitation District pays a fine every time it has to dump overflow into the Nathanson Creek system. This happens multiple times a year. Adding additional homes to the sanitation system design will likely cause more frequent overflow problems.	The comment is noted. Please see Impact 3.9-1 on page 294 of the DEIR for an analysis on impacts on waste discharge. Development under the Proposed Plan would be designed and maintained in accordance with regional and County water quality requirements, such as the San Francisco Bay MS4 Permit, existing Sonoma County General Plan, and local plans. Policy 6-16 of the Specific Plan also emphasizes the minimization of impervious surfaces and use pervious pavements where possible. Therefore, construction and operation would comply with all current regulatory requirements and would not violate water quality standards or degrade water quality, and there would be a less-than-significant impact. Further, as noted on page 298 of the DEIR, Conditions of Approval WQ-1 and WQ-4 would ensure compliance with applicable polices and regulations such that impacts from surface runoff would be less than significant.
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-11	Community Benefits: ● A sewage treatment facility could be sited on the SDC site—a location in the Sonoma Valley which is resistant to the impacts of climate change and sea level rise. ● Localized water recycling makes re-use financially feasible since the Sonoma Valley County Sanitation District does not, and will not, have the funds to create a large-scale water recycling program from its current location at the end of 8th St. East. ● Localized water recycling and storage is part of a fire resiliency plan. ● Wetlands associated with water treatment could be associated with a wildlife preserve and fire break, adding to climate resiliency. ● Groundwater recharge in the upper Sonoma Valley would benefit the groundwater plan requirements. ● Infrastructure requirements associated with	The comment is noted. However, it relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			SDC development would require an upgraded sewer treatment and water recycling plan.	
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-12	Potential funding sources: - Grants - Reduced penalties for discharges into the Nathanson Creek system could be applied to the construction of a treatment facility. - Recycled water sales. - Local sewer district fees including SDC development, the existing town of Glen Ellen and potential expansion into areas that are currently served by underperforming septic systems. - Developer funds. - Federal Infrastructure Investment and Jobs Act	The comment is noted. However, it relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-13	Federal Infrastructure Investment and Jobs Act Energy Resiliency / Microgrid Construction General Information: ● An energy sustainability plan and microgrid design should accompany any SDC development. ● Community Choice Aggregation is available in 23 municipalities and counties in California, serving 11 million customers. ● The Climate Center, located in Santa Rosa, is among the main organizing and lobbying organizations responsible for the development and adoption of Community Choice Aggregation. ● PG&E has shown itself to be an increasingly unreliable source for the electric grid. Community Benefits: ● A move towards a localized, sustainable energy infrastructure can serve as an emergency preparedness resource. ● Reduced greenhouse gas emissions. ● Lower energy costs will attract potential commercial interests, and reduce operating costs for a sewage treatment plant, public school, etc. ● Local job creation will increase due the highly skilled workers required for construction, and the administration and monitoring of the system. Potential funding sources: - Grants - Local rate payers - Federal Infrastructure Investment and Jobs Act	The comment is noted. As noted on page 243 of the DEIR, Policy 6-19 would require each building within the Core Campus connect to a microgrid. Further, Impact 3.6-2 on page 249 on the DEIR states that development under the Proposed Plan would be required to comply with State and local renewable energy and energy efficiency plans, as such, this impact would be less than significant. The remainder of the comment relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-14	FIRE SAFETY / CLIMATE RESILIENCY: Fire Safety / Protections General Information: ● Many of our appendix items address this indirectly, including water treatment and wetlands as fire protection; microgrid as protection against large scale electrical grid failure or neglect; adaptive reuse of the reinforced concrete buildings and the open space designation as fire protection. A community center could be used for any number of emergencies. ● Additionally, fire protection building code and WUI (Wildlands Urban Interface) requirements are codified. ● Evacuation plans and roadway emergency preparedness are big questions; it's our understanding that the EIR will address these issues.	The comment is noted. Please see MR-4 related to the adequacy of the wildfire evacuation analysis. Further, as stated on page 519 of the DEIR, development will comply with existing State and local codes and regulations, such as California Fire and Building Codes, as well as proposed policies that would reduce impacts to a less-than-significant level related to exacerbating wildfire risks during implementation of the Proposed Plan. The remainder of the comment relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-15	Climate Resiliency General Information: ● The Sonoma Valley wildlife corridor on the SDC campus is critical to maintain the quality of our water, forests, and wildlife in a rapidly changing and warming environment. ● Keeping landscapes connected via habitat linkages or corridors is the most frequently recommended approach to maintain ecosystem resilience in the face of climate change as it provides an "escape route" for plants and animals to relocate when their habitats are no longer viable. ● Linking also allows resources, including water and nutrients, to pass between habitats that are increasingly confined by human development to maintain ecosystem health for humans and wild residents. ● In 2015, when the SDC was still operational, a paper prepared for Sonoma Land Trust by researchers from the University of California, Berkeley, not only documented how the SDC's wildlife corridor maintains connectivity, but also addressed what it will take to ensure its integrity. ● The SDC "has high potential for landscape permeability and therefore is expected to allow for free passage of wildlife if left undisturbed," the	The comment is noted. Please see MR-7 regarding impacts of the Proposed Plan on wildlife movement. See also response to comment B8-3, B8-15, B8-16, and B8-19 for wildlife corridor policy amendments. The remainder of the comment relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			researchers wrote. They also cited a state mandate—"a cornerstone of California's State Wildlife Action Plan"—that places a priority on making sure development does not encroach on such corridors. ● The researchers noted that protecting the corridor "will require preventing further development, especially in the northern portion of the SDC; as well as reduction in traffic speeds, artificial lighting, invasive species and domestic animal control, limiting human access, and a move toward wildlife-friendly fencing throughout the corridor." ● Aligns with the state's 30x30 goals. Community Benefits: ● Clean and abundant water: connected creek corridors protect our streams and groundwater. ● Reduced wildfire risk: well-managed landscapes have less fuel to carry and spread flames. ● Climate change resilience: plants and animals can move through corridors to cooler places. ● Room to roam: connected landscapes maintain healthy flows of plants, animals, and resources.	
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-16	HISTORIC PRESERVATION: General Information: ● The community supports and recognizes the importance of preserving the historic, architectural, and aesthetic character of the SDC campus, including permanent protection, preservation and management of selected buildings and structures, This would include the historic cemetery, and related landscapes that sit within the boundary of the historic district of Sonoma Developmental Center. ● Inclusion of a museum, archival research center, library, and visitor center (The Gateway to Sonoma Mountain) on the grounds linked with and complementary to the Historic Cemetery, Open Space and Wildlife Corridor. ● This management structure is compatible with the goals of the Sonoma Land Trust, co-housing advocates, disability rights supporters, the numerous stakeholders that	The comment is noted. Please see MR-8 regarding the Historic Preservation Alternative. As noted on page 296 of the DEIR, proposed policies and the Standard Conditions of Approval (LU-1, LU-2, LU-3, LU-4, LU-5, and LU-6) would help reduce impacts to the historic district to the maximum extent practicable, which includes preserving the cemetery and considering reuse of the Sonoma House as a museum. The remainder of the comment relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			contributed to past community forums, and the recent community survey conducted and presented to the NSV MAC.	
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-17	Community Benefits: ● In addition to bringing people together through public events, lectures and workshops, a museum will help provide a sense of community and place by celebrating our collective heritage. ● Museums educate, inspire, foster dialogue, curiosity, self- reflection and serve to help future generations comprehend their history and recognize the achievements of those who came before. ● Fosters partnerships and collaboration with the larger community and other non-profits ● Adaptive reuse of buildings to house research, museum and visitor centers will be effective in reducing our carbon footprint preparing for a future of fire safety, climate resiliency and sustainability of Sonoma Valley ● Historic preservation and reuse of historic buildings reduces resource and material consumption, puts less waste in landfills and consumes less energy than demolishing entire buildings and constructing new ones. Destruction of historic buildings unleashes vast amounts of embodied carbon into the atmosphere contributing to an already overtaxed and warming planet and adding to our carbon footprint. ● An historic district ensures that we are protecting and revitalizing the character of our town and ensuring that the most iconic and diverse collection of architectural buildings, sites and object are preserved for future generations ● Documentation supports that well preserved and revitalized historic districts are an economic boon to a community and affect property values in a very positive way. ● Historic districts are a vibrant, social and economic center for towns and are regarded as world class destinations.	The comment is noted. However, it relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-18	The Community Supports: ● Preservation and rehabilitation of historically significant buildings, structures, landscapes and historic cemetery. These buildings include Sonoma House, McDougall, Oak Lodge, Hatch, PEC and King. ● Preservation of the SDC Library and other sources of written knowledge. ● Preservation of historic artifacts and digital archives currently stored on campus. ● Preservation of the knowledge possessed by individuals associated with SDC, Eldridge and Glen Ellen. Potential Funding Sources: - Glen Ellen Historical Society has already received grants and funding from private philanthropists to support a museum and visitor center. - The Board of Directors of GEHS and general membership include experienced legal, development, grant writing, fundraising and cultural heritage professionals engaged in raising funding for the project. - Establishment of "Friends of Glen Ellen Historic District" will be instrumental in organizing fundraisers and events providing financial assistance. Modeled after the Friends of Jack London, this will have a self-generating funding source which includes an event/community center, museum, visitor center that includes historic tours and a world class archival and research hub - Federal and State Grants - State Historic Preservation Office Funding - National Park Service Historic Preservation Funding - National Trust for Historic Preservation Funding - Privately Funded Grants - Scholarships and Research Fellowships - Governor Newsom's 2021 Executive Order for 30 x 30 State Funding	The comment is noted. However, it relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-19	COMMERCIAL SPACE / JOB CREATION: The Community Supports: ● The community has expressed support for innovative or educational use of commercial space at a scale that is compatible with the semi-rural Valley. Vocational training center is a popular idea. ●	The comment is noted. However, it relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Although it is the NSV MAC's understanding that it is premature to designate too specifically, community suggestions have included a non-profit hub and a trade skills vocational center. ● Community comments have also noted that we have no identified tenants for commercial space at this time, and that the level of demand for commercial space is uncertain, reflective of significant changes in work patterns. ● Community comments have also noted that it's not clear that we have a shortage of jobs in Sonoma Valley—versus a shortage of affordable housing—and that the scale of the commercial space designation needs to be appropriate for this rural community. ● Commercial space ranked second lowest for "not important / neutral" as a re-development priority in the community survey. ● However, when survey respondents were asked to prioritize commercial development, a Community Center was the most popular (77% of survey respondents supporting), following by an Innovation/Research /Climate Hub at 60%. ● Hotel / Resort was the least popular with 10% support from community survey respondents. Potential funding sources: - Federal Infrastructure Investment and Jobs Act - Legislative job training bill	
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-20	COMMUNITY-ORIENTED COMMERCIAL: The community is supportive of commercial space to be set aside for community-oriented usage to potentially include: Community Center General Information: ● Glen Ellen currently does not have a community center. Community benefits: ● Potential uses and needs: emergency shelter, temporary emergency health clinic, community meetings, live performances. ● Provides a great boost to the local economy, providing jobs, both in the building and running of the facility. It also provides opportunities for the town to	The comment is noted. As noted on page 395 of the DEIR, Policy 4-1 would promote a fine-grained mix of land uses within the Historic Core, with housing, hospitality, office, commercial, and community uses fronting on the Central Green to create a vibrant community center with activity throughout the day. The remainder of the comment relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			raise money through events, performances and weddings. ● Provides an opportunity for youth to congregate in a safe space promoting strong relationships through sports and recreational activities. ● Can be associated with the local Dunbar School for general assemblies, meetings, and activities, resulting in reduced project costs. Potential funding sources: - Grants - Community fundraising - Adaptive re-use of an existing building as a cost-saving measure	
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-21	Relocate Dunbar School to SDC campus General Information: ● Dunbar school currently serves grades K-5 and is located 3.5 miles from the SDC Campus. The current Dunbar campus is aged and located in a rural setting which requires either busing or car transportation for the commute. ● It is acknowledged that the Sonoma Valley Unified School District would need to run demographic and other feasibility studies as part of any determination to relocate. Community Benefits: ● Job creation for the SDC development through school administration, maintenance, and enhanced school campus use by the public. ● The relocation allows for greater use of foot traffic to school from the proposed SDC campus development and the south Glen Ellen area. ● Reduced bus and individual car trips through Glen Ellen. ● Reduced greenhouse gases. ● Reduced bus maintenance and fuel costs. ● Multiple studies have indicated that school campus proximity to neighborhoods and housing promotes increased school campus use and greater neighborhood/ community continuity. ● Modernized Dunbar School campus Potential funding sources: - Grants - Local school construction bonds - Sale of existing Dunbar school campus as surplus land - Developer funds. Most developments of the scale proposed	The comment is noted. As noted under Impact 3.13-1 on page 403 of the DEIR, Policy 6-2 would require project applicants for development under the Proposed Plan coordinate with Sonoma County school districts to ensure that the future population of the Planning Area can be accommodated adequately in public schools. Additionally, project applicants for development under the Proposed Plan would be required to comply with SB 50, which mandates statutory school facilities fees for residential and commercial developments. Compliance with SB 50 would financially offset impacts on SVUSD capacity and would provide funding for potential future school facility development needs associated with the Proposed Plan-related population increase. Therefore, due to available school capacity, compliance with SB 50, and implementation of Proposed Plan policies, construction or expansion of new school facilities would not be required, and this impact would be less than significant. The remainder of the comment relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			for the SDC campus would require new school construction.	
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-22	SITE GOVERNANCE: General Information: ● Many members of the public have requested consideration of establishing a trust to implement the Specific Plan rather than a private developer. A trust would open opportunities for financing and site management that would broaden the potential for successful redevelopment AND community compatibility. ● The model of the Land/ Government-owned Trust for SDC governance and development was introduced at the first public meeting in 2016. Local community response was supportive of the Trust model for SDC governance. The SDC Planning Resource Committee was convened to consider the feasibility of forming a "State-Owned" trust, and to examine the required land disposition, land planning, development management, and infrastructure improvements issues. ● In 2018, the SDC Planning Resource Committee received a proposal from WRT Consulting for a financial assessment study of SDC site development potential, with an emphasis on: conservation of wildlife habitat and open space areas, protection and re-use of historic structures, adaptive re-use of existing buildings, and potential redevelopment off-setting revenue uses for the central SDC campus. ● It is important to note WRT Consulting performed the original Existing Conditions Assessment of the SDC site under a contract with the California State Department of General Services. ● An example of a successful community land trust model: OPAL Community Land Trust	The comment is noted. However, it relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	1/6/2022	B2-23	Community Benefits: ● The non-profit government trust model reduces the profit incentives associated with private developers. Development companies generally generate a 25-30% profit on a specific project. ● Local trust	The comment is noted. However, it relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			governance allows for far more development financing opportunities. Public funding (governmental in nature), private funding (traditional lending sources: banks, pension funds, insurance companies), private non-profit funding (land trusts, housing trusts, other types of trust related grants). ● Local trust governance may allow for affordable housing occupancy formulas which enable a larger percentage of local workers and residents to live in the newly constructed homes. A private developer cannot make the housing available ONLY to local residents and workers. Any applicant, no matter their location of residency or occupation, is eligible for occupancy. ● A community housing trust-based model would only be responsible for the work associated with SDC campus development. Potential funding sources: - Private non-profit grants - Private fund raising - Governmental grants - Traditional developer fund resources - Income from commercial development	
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-1	On behalf of the North Sonoma Valley Municipal Advisory Council (NSV MAC), we respectfully submit the following comments pertaining to the Public Review Draft of the Sonoma Developmental Center (SDC) Specific Plan (Proposed Plan) and the SDC Specific Plan Draft Environmental Report (DEIR), as issued by Sonoma County in August 2022. While this letter is reflective of community input, it is not intended to be exhaustive or to take the place of individual comments from community members and other interested parties. Given the tremendous amount of input from Sonoma Valley residents and business owners concerned about the project size and its impacts, as well as this MAC's own request and the Board of Supervisors' direction to scale back the Specific Plan, it is surprising that the proposed	Thank you for your comment letter. The DEIR analyzes environmental impacts as a result of the Proposed Plan in Chapter 3 as well as cumulative regional environmental impacts in section 5.2 of the DEIR starting on page 584.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Specific Plan still contains over 1,000 homes and approximately 940 jobs. It appears that the DEIR fails to disclose the full extent of impacts that will result throughout Sonoma Valley from this large-scale development outside of an urban growth area, as is further detailed in this letter.	
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-2	The Specific Plan represents one of the largest, if not THE largest, developments in the history of Sonoma Valley and is in conflict with County General Plan policies calling for city-centered growth. Furthermore, the proposed plan is inconsistent with its own guiding principles calling for a balance between redevelopment and historic preservation; the plan will destroy the very qualities that make the historic SDC site unique and its implementation will have far-reaching, significant adverse impacts on Sonoma Valley residents. With this in mind, we provide the following comments, by general category. Please explain the following inconsistencies in the DEIR:	The comment is noted. Please see Impact 3.10-2 on page 319 of the DEIR for an analysis on conflicts with any land use plan, policy or regulation. Given that the Proposed Plan is consistent with the General Plan's goals for the Planning Area and includes provisions to update the General Plan and Zoning Ordinance consistent with State law in order to ensure consistency, there would be less than significant impact from implementation of the Proposed Plan related to conflicts with local plans and regulations. Please see also MR-8 regarding the Historic Preservation Alternative.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-3	PROJECT SCALE & HOUSING Increasing the supply of affordable and workforce housing is broadly supported by the Sonoma Valley Community, but not at any cost to the environment and the health and safety of Sonoma Valley residents. Our understanding is that the DEIR should help the community better understand the scale of the environmental impacts of the Specific Plan, how they will be mitigated, what options were considered, and why these options were dismissed. We do not believe the DEIR has yet met these objectives. For example, the DEIR identifies the smaller-scale Historic Preservation Alternative (Historic Alternative) as the environmentally superior alternative. It is not ruled out in	The comment is noted. In Chapter 3 Environmental Analysis, the DEIR outlines potential environmental impacts from the Proposed Plan, as well as any regulatory requirements and proposed policies or Standard Conditions of Approval that will further mitigate these impacts. Chapter 4 Alternatives also analyzes potential alternatives compared to the Proposed Plan. Please see also MR-8 Historic Preservation Alternative for more information why the Alternative would be infeasible.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			the DEIR because it meets the required objectives, but it is dismissed from full consideration. Why?	
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-4	If this alternative is environmentally superior and substantially reduces impacts of the proposed plan; if it more effectively meets some of the fundamental project objectives as outlined in the Specific Plan guiding principles, including Preservation of Historic Resources and Balancing Redevelopment with Land Use (DEIR pages 5 and 6); if it provides 450 new homes (still the largest project in Sonoma Valley); and meets the state's statutory objectives regarding the disposition of the SDC site, why is this alternative (or a version of it that addresses some of the issues identified) not being put forward as the proposed plan? "Overall, the Historic Preservation Alternative is the environmentally superior alternative, although significant impacts of the Proposed Plan and the two alternatives are largely comparable, and the Historic Preservation Alternative would be less superior in some environmental features such as energy use, biological resources, and wildfire risks. Additionally, this alternative would not support key project objectives related to increased housing supply, varied housing opportunities, community vibrancy, and long-term fiscal stability to the same degree as the Proposed Plan." (DEIR page 14)	The comment is noted. Please see MR-8 regarding the Historic Preservation Alternative.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-5	We do not find adequate data in the DEIR that supports the "less superior" distinctions above, or any reason why these couldn't be readily addressed. There is no requirement that maximum housing be developed, especially if it means significant impacts in several issue areas. In terms of biological resources, the analyses on page 563 of the DEIR indicates that the Historic Preservation Alternative would be "similar or slightly better" than the Specific Plan. In	The comment is noted. Please see MR-8 regarding the Historic Preservation Alternative. Please see also MR-6 regarding the adequacy of the transportation analysis and your comments concerning the Highway 12 impacts. See also MR-4 regarding the adequacy of the wildfire evacuation analysis and how Highway 12 would impact evacuation.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			terms of energy use, the older historic buildings are presumed to be less energy efficient, but it's not clear how the net calculation was made since "energy use" is also cited in conjunction with construction and demolition GHGs, which would be significantly higher in the Specific Plan. The increased wildfire risk with this lower density plan is presumably solely because of the arbitrary exclusion of the Hwy 12 connector road in this alternative. How would the proposed Specific Plan fare in comparison to the Historic Preservation alternative if it also excluded the Hwy 12 connector road, or if both included the Hwy 12 connection? Scale is the most obvious way to mitigate impact. While the types of impacts of the Historic and proposed Specific Plans may be the same, they are not equal in magnitude.	
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-6	FEASIBILITY If the Historic Preservation alternative was dismissed because of an assumption that feasibility will require higher development densities, how is a feasibility analysis considered in the DEIR and shouldn't this be more transparently addressed in the Proposed Plan? Since it's unclear what "economic feasibility" means for the SDC campus at this time, shouldn't there be an economic feasibility analysis as part of this evaluation process? The market demand study that was prepared for the alternatives report does not fill this need (and is inconsistent with the Specific Plan in any case in that it reports little demand for non-residential uses). *****	The comment is noted. Please see MR-8 regarding the feasibility of the Historic Preservation Alternative.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-7	MITIGATION MONITORING / PERFORMANCE STANDARDS It's of concern to the community that most of the policies in the proposed Specific Plan are not enforceable, generally because of the use of "should" in the descriptive language	The comment is noted. Please see MR-9 regarding mitigation monitoring/performance standards. See also MR-4, MR-6, and MR-7 regarding impacts on wildfire, transportation, and wildlife movement. See also Standard

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			rather than "shall" in many instances. Terms such as "if feasible" and "assumed" are also used repeatedly and the DEIR analysis acknowledges considerable uncertainly in the impacts and thus in the mitigation measures as well. Will the policies and conditions of the approval of the Specific Plan be put into a mitigation monitoring plan or program to ensure mitigation compliance for the project? Given the scale of the proposed Specific Plan and absence of any phasing requirements, it's critical that performance standards be developed and tied into the phasing of the project, especially since the DEIR calls for future studies and mitigations that are not yet identified. Will performance standards be put into place, potentially to consider impacts that might include Traffic, Wildlife Function, Resources, Noise?	Conditions of Approval related to biological resources and noise in Appendix A of the Specific Plan.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-8	HOUSING NUMBERS The Specific Plan states that it will result in 1,000 units and the DEIR uses that assumption, but as noted in Specific Plan Table 4.2 more units are suggested, even without likely density bonuses. That means that most of the environmental impacts in the DEIR are underestimated for the number of units permitted. If the analysis is limited to 1,000 units, why is the possibility of 1,100 or more of units included in the Specific Plan?	The comment is noted. As noted on page 79 of the DEIR, the base number of market rate units allowed is 550. With State and County density bonuses for inclusionary housing, the SDC site is anticipated to have around 660 new market rate units and a total of 1,000 housing units at buildout. These environmental impacts of the Proposed Plan are analyzed in Chapter 3 of the DEIR.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-9	CULTURAL RESOURCES / HISTORIC PRESERVATION Isn't it true that the Historic Alternative meets the fundamental project objectives listed on pages 5-6 of the DEIR? Isn't it true that the proposed Specific Plan is inconsistent with the fundamental project objective calling for balancing development with historic resource conservation? Regarding policies and impacts on cultural resources, isn't	The comment is noted. Please see MR-8 regarding the Historic Preservation Alternative. See also response to comment B4-2 regarding impacts on the historic district. The remainder of the comment relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			it true that the DEIR does not specifically address impacts on Contributing Resources. Please amend the EIR to include such impacts in its own section, not embedded in the discussion of impacts on the district as a whole or explain why not. Isn't it violative of CEQA for the EIR to assume that the project will be approved as proposed, without mitigations and alternatives to reduce impacts on historic resources having been determined feasible or infeasible? Wouldn't the loss of eligibility for the National Register of Historic Places remove protections for contributory resources? What environmental impacts would attend such losses of eligibility? What mitigations could avoid that loss? Please consider and analyze the benefits of the pending efforts to list SDC in the National Register.	
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-10	What are the performance-based standards to determine which buildings can feasibly be restored or adaptively reused? How is demolition of any building to be decided? What type of analysis and performance-based standards will be applied to permit demolition under the Specific Plan? Please amend the Specific Plan so that demolition of any qualified historic resource will require a Plan amendment based on codified criteria. If not, why not? Isn't protection of National Register eligibility required by CEQA if feasible? Regarding the Sonoma House and the main building, Specific Plan Policy 2-47 uses terms like "consider" and "if feasible." How will feasibility be determined? In light of significant impacts, why are mitigation measures not identified or analyzed? Doesn't CEQA disallow deferral of analysis and mitigation of the Specific Plan's foreseeable impacts on historic resources? Isn't it true that projects consistent with the Specific Plan, including those involving demolition of currently listed or eligible historic resources	The comment is noted. Please see MR-8 regarding the Historic Preservation Alternative and MR-9 regarding deferred mitigation. See also response to comment B4-2 regarding impacts on the historic district. Please see also response to comment B3-7. All individual projects would be subject to separate CEQA review to mitigate potential impacts on cultural and historic resources to the greatest extent feasible. Please see also MR-3 regarding the programmatic nature of the DEIR. As stated in CEQA Guidelines, Section 15093(a), if the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable." Therefore, given that State law stipulates that the SDC Specific Plan prioritize housing at the site per Government Code Section 14670.10.5, the environmental impacts of implementation of the Specific Plan on historic resources may be acceptable for policymakers. The remainder of the

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			will not be subject to discretionary CEQA review? If not, under what circumstances would CEQA review be required?	comment relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-11	UTILITY INFRASTRUCTURE The Valley of the Moon Water District (VOMWD) consistently contacts customers requesting a 20% reduction in water use, further stating that penalties will be assessed if the reduction is not met. Yet, for the purposes of the DEIR and the water assessment section, the DEIR and VOMWD assert they have the resources to serve the SDC project. What assumptions underpin this assertion? There are contradictions that should be addressed in the DEIR. For example: VOMWD's own estimates for future water deliveries and shortages are based upon single dry years, not the multiple dry year shortfalls we are already experiencing. Additionally, the Sonoma Valley Groundwater Sustainability Agency has made increasing projections for the need for groundwater re-charge throughout the Sonoma Valley, but the VOMWD has not estimated its own required contribution to groundwater re-charge and has maintained an increased groundwater "draw down" in the SDC water assessment report. What are the groundwater re-charge assumptions for the SDC site and are they included in the DEIR?	The comment is noted. Please see MR-5 regarding the adequacy of the water supply analysis. As stated on page 292 of the DEIR, groundwater supply and recharge are assessed by comparing existing conditions within the site area and after implementation of the Proposed Plan. Surface water and groundwater quality is analyzed by using information on existing water quality conditions. See Impact 3.9-2 on page 296 regarding Proposed Plan impacts on groundwater recharge. Given existing regulations and proposed policies, the Proposed Plan would not substantially decrease groundwater supplies and would not impede sustainable groundwater management of the basin, and this impact would be less than significant.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-12	Additional areas of the water assessment report that require clarification in the DEIR: The report assumes the planning area will be served by local, on-site surface water sources. However, for Fern and Suttonfield Lakes, the treatment plant and the pipes/infrastructure are not a part of the core campus development. For the purposes of the DEIR and water assessment, those resources do not exist. - What, specifically are the surface water sources the DEIR	The comment is noted. Please see MR-5 regarding the adequacy of the water supply analysis and response to comment B11-272. The remainder of the comment relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			is stating are available for use? - What becomes of those "non-available" water sources (the lakes, treatment plant)? - Who is responsible for the evaluation of the dams that contain all of that water? - Are the lakes going to be drained, filled in, maintained? • The riparian rights contradict the findings of both the Sonoma Ecology Center and the Sonoma Valley Water Sustainability study that urges an elimination of riparian water rights in order to provide groundwater recharge to diminishing Sonoma Valley aquifers. - Who maintains the riparian water rights? The VOMWD, the state, the developer? • The SDC water treatment plan has not been licensed for operation in many years. The DEIR states it will be evaluated for re-use by the water system operator. - Who will pay for the evaluation? If the plant requires re-construction, or is not salvageable, who pays for these updates? - Where, on the Specific Plan, will it be located?	
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-13	ENERGY MICROGRIDS: The DEIR language is vague in the section that pertains to an electrical microgrid. By definition, a microgrid is a locally controlled and maintained electrical grid with defined electrical boundaries. It is able to operate in both a grid-connected and "island" mode. A stand-alone or isolated microgrid only operates off-the-grid and cannot be connected to a wider electric power system. - Which type of system is being proposed, grid-connected or stand alone?- Will the system have localized generating capacity? - Where is the dedicated space on the Specific Plan for any	The comment is noted. The environmental impacts related to traffic, noise, and air quality and GHG emissions during construction and operation of energy facilities have been considered throughout this EIR (see Section 3.3: Air Quality, Section 3.6: Energy and Greenhouse Gas Emissions, Section 3.11: Noise, and Section 3.14: Transportation). Construction of individual projects would be subject to separate project-level CEQA review at the time the design and exact location is proposed in order to identify and mitigate any project-specific impacts as appropriate. The remainder of the comment relates to the Specific Plan and not the

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			proposed generation? - Who pays for it and maintains it? - Where is the electrical use projection data for microgrid design?	adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-14	VEHICLE MILES TRAVELED (VMT) The Specific Plan indicates that there will be no free parking on campus. Has the DEIR studied the VMT and traffic safety impacts of this policy with respect to visitor vehicle trips to find parking off-site; the impacts on the narrow streets in the adjacent neighborhoods, particularly the Glen Ellen streets south of the SDC (Martin, Lorna, Burbank, Sonoma Glen Circle, Marty and Madrone) where parking is free; or the public safety or emergency evacuation impacts of this policy? Has the potential limit on public access been evaluated? In addition, was there analysis done on the safety implications of increased VMT on the routes used by cyclists and commuters to travel from Glen Ellen to other county locations (Santa Rosa and Rohnert Park), specifically Warm Springs and Bennett Valley Roads. These narrow, winding roads are commonly traveled at relatively high speeds; their road shoulders are significantly deteriorated (no shoulder at all for significant portions). The safety implications on these roads due to the increased VMT in the Proposed Plan must be considered in the DEIR.	The comment is noted. The presence of priced parking near an area with free parking can cause motorists to search for spaces on those free streets (commonly known as "spillover"). However, there is a limited distance motorists are willing to walk from their vehicles. In the case of SDC, on-street parking pricing would only be considered in non-residential areas, primarily in the "core campus". The core campus is located roughly one-third mile from the nearest residential uses in Eldridge and almost two-thirds mile to Glen Ellen, walking distances that would be too lengthy and inconvenient for most motorists. Thus, the potential for spillover parking is minimal. The presence of free parking often leads to many motorists seeking spaces in the same highly desired locations, resulting in vehicles circling the area. This can have the unintended effect of marginally increasing VMT and creating potential safety issues as drivers spend a greater amount of time searching for parking spaces. VMT is a measure of the amount of automobile travel occurring in a region, as measured in miles. Consistent with State requirements, the VMT effects of the Proposed Specific Plan's land uses and Highway 12 road connection were assessed using performance metrics including VMT per capita, VMT per employee, total VMT per service population, and total regional VMT. VMT is a measure of distance and does not directly affect bicyclists, though increased use of bicycling as a travel mode does reduce automobile VMT. With respect to

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				broader bicycling conditions on Warm Springs Road and Bennett Valley Road, the 2010 Sonoma County Bicycle and Pedestrian Master Plan identifies a proposed Class II (bike lanes) facility along the length of Warm Springs Road, a proposed Class III (bike route) facility on Bennett Valley Road between Warm Springs Road and Grange Road, and a proposed Class II (bike lanes) facility on Bennett Valley Road between Grange Road and the City of Santa Rosa. With respect to bicycle commuting to and from Santa Rosa, the Bike Plan identifies the future Central Sonoma Valley Trail along the Highway 12 corridor, to which the proposed Specific Plan would include connections. The Central Sonoma Valley Trail bicycling route is anticipated to be the primary regional connection for commute and recreational travel, and will establish a much more comfortable route for bicyclists than Warm Springs and Bennett Valley Roads since it would be off-street, flatter, straighter, and thus safer. Proposed goals 3-A and 3-C emphasize creating complete streets that emphasize the effectiveness and safety of pedestrian, bicycle, and transit modes.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-15	There is no evidence at this juncture that anyone living on the SDC site will be employed at the site so this cannot be assumed. Has the DEIR considered this in one of its VMT scenarios? On a related note, while it's noted that institutional uses associated with the former SDC have been removed from the SCTM19 model's existing land use database (DEIR page 426), historical VMT numbers are still cited in the Historical Use section (DEIR 427-428) and implied to be relevant. VMT under the Proposed Plan will not be directly comparable to the historic SDC site in terms of either resident (non-driving) or single-employer shift	The comment is noted. Please see MR-6 regarding the adequacy of the transportation analysis. The Sonoma County Travel Model 2019 (SCTM19) is considered to be the best-available tool to estimate the travel demand characteristics associated with the proposed Specific Plan. SCTM19 includes several steps when projecting traffic volumes, the first of which pertains to trip generation by land use. This initial trip generation step is followed by sophisticated algorithms that estimate trip distribution, assignment, and mode split, as well as trip matrices that balance trip assignments and productions

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			work VMT per capita; any assumptions made pertaining to historical VMT need to be made clearer in the DEIR analysis and narrative. Finally, the DEIR cites a VMT increase of ~631, with the existing VMT at 59,654, and the Proposed Plan VMT at 60,285 in 2040 (DEIR, page 183). How can this be accurate based on the anticipated population and the VMT summaries cited throughout the DEIR? The DEIR's Project trip generation estimate was developed using the SCTM19 travel demand forecasting model maintained by the Sonoma County Transportation Authority (SCTA). The specific trip generation factors are not included in the DEIR. Thus, it is impossible to evaluate the reasonableness of either those factors or the resulting trip generation numbers.	within the region. The resulting output is expressed as traffic volume projections but is no longer categorized by individual land use. Accordingly, the trip generation estimates described for informational purposes on page 440 of the DEIR are presented as the aggregated number of daily trips added by the proposed Specific Plan to the surrounding roadway network. Regarding page 183 of the DEIR, the analysis used traffic data provided by W-Trans and incorporated it into air quality modeling (CalEEMod) to derive the VMT numbers used in the Air Quality Chapter. Since these numbers are directly linked to the inputs used for CalEEMod, these are the most appropriate numbers for assessing the BAAQMD threshold.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-16	Can the DEIR appropriately consider the completion of the Sonoma Valley Trail multi-use path, connecting the SDC site with Santa Rosa, as part of the SDC site VMT mitigation if this is a Caltrans controlled project? Why is the downscaling or elimination of the hotel not considered part of VMT mitigation? The hotel is no identified as a priority in the state legislation pertaining to the SDC site and will contribute significantly to VMT. In Table ES-2, the DEIR determines that VMT reduction measures cannot be guaranteed, and they may be insufficient to reduce VMT per capita below the applicable significance threshold or fully offset the effect of induced VMT. "There are no other feasible mitigation measures available." Why is this an allowed conclusion when there are certainly mitigation measures available that might justifiably be considered, even if reductions might not reduce impacts to levels that are less than significant? Examples of mitigation include a reduced scale alternative	The comment is noted. Please see MR-6 regarding the adequacy of the transportation analysis. The DEIR includes no mitigation measures related to VMT impacts, so does not rely on completion of the Sonoma Valley Trail as part of a VMT mitigation strategy. VMT reductions intended to reduce the Specific Plan's VMT impacts are tied to Specific Plan Policy 3-41, which requires all development allowed by the proposed Specific Plan to implement TDM strategies. This requirement will be enforced through standard conditions of approval. VMT reductions intended to reduce impacts will also be achieve through implementation of Specific Plan Policy 3-42, which requires establishment of a Transportation Management Association (TMA) that will develop and oversee trip reduction strategies for uses within the proposed Specific Plan. Neither of these approaches require or rely upon implementation of the Sonoma Valley Trail.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			or elimination (or reduction of size) of the hotel or other commercial development.	
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-17	WILDLIFE CORRIDOR There is no analysis of the impacts on the wildlife corridor through the campus and no acknowledgement of the fact that animals currently use the campus and will be impacted. Also, there is no assessment of the impacts of fencing on wildlife. (Only wooden fences are prohibited on the campus.) The fencing policies appear to apply only to the open space and human/wildlife interface areas, not the campus.	The comment is noted. Please see MR-7 regarding impacts of the Proposed Plan on wildlife movement. See also response to comment B8-3, B8-15, B8-16, and B8-19 for wildlife corridor policy amendments. Proposed Policy 2-16 also requires all fencing within the open space to be wildlife permeable.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-18	LAND USE IMPACTS The proposed Specific Plan is both inconsistent with several project objectives, as noted above, and inconsistent with existing County General Plan policies encouraging growth in transit-oriented, urban areas. It is also inconsistent with General Plan policies calling for an overall reduction in VMT since it introduces urban uses in a non-urban area; this will necessarily increase vehicle trips to reach services in either Sonoma or Santa Rosa.	The comment is noted. Please see MR-6 regarding the adequacy of the transportation analysis. Please see Impact 3.10-2 on page 319 of the DEIR for an analysis on conflicts with any land use plan, policy or regulation. Given that the Proposed Plan is consistent with the General Plan's goals for the Planning Area and includes provisions to update the General Plan and Zoning Ordinance consistent with State law in order to ensure consistency, there would be less than significant impact from implementation of the Proposed Plan related to conflicts with local plans and regulations.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-19	COMMERCIAL SPACE / JOB CREATION There appears to be no policy saying that the hotel can't be built first. Is there anything in the proposed Specific Plan requiring the developer to build housing first? Why is such a large-scale hotel being proposed when it's not a defined project objective, and when VMT is listed as a challenge?	The comment is noted. Please see MR-6 regarding the adequacy of the transportation analysis. The remainder of the comment relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-20	POPULATION and GROWTH ASSUMPTIONS The DEIR analysis of growth-inducing impacts is based on a comparison of the project size to county-wide population	The comment is noted. Please see Impact 3.12-1 on page 376 regarding impacts on induced population growth. buildout of the Proposed Plan would help fulfill State

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			and employment numbers, which is an unrealistic and invalid comparison. As a distinct planning unit, Sonoma Valley should be the region of comparison. Given the relatively small population of Sonoma Valley, the proposed plan represents a substantial growth-inducing project. Alone, it will double (triple?) the community housing numbers and draw population and employees from other parts of the county as well as from outside the county. Given its location away from necessary goods and services, it will generate pressure for additional urban land uses on surrounding and nearby unincorporated lands. This urban sprawl growth scenario is in direct conflict with climate change policies to encourage compact, in-city growth.	legislature requirements to develop affordable housing within the Planning Area and help mitigate the severe housing shortage facing Sonoma County. Further, the Sonoma County General Plan 2020 Housing Element specifies that future re-use of the SDC facility should include affordable housing. Therefore, given that the Proposed Plan's projected population growth is commensurate with State legislative requirements to prioritize affordable housing development as well as General Plan goals and policies, the Proposed Plan would not induce substantial unplanned population growth in the Planning Area and the impact would be less than significant. Please see also Section 5.1 on page 579 of the DEIR for further analysis on growth-inducing impacts.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-21	IMPACTS ON NEIGHBORHOODS SOUTH OF SDC The Glen Ellen neighborhoods adjacent to SDC will take the brunt of both the construction and operation impacts – not to mention the ongoing impacts of traffic and safety related to parking if there is no free parking on the SDC campus. The over 200 apartments and small lot single family homes directly south of the SDC property will be subject to the aggregate effects of noise, traffic, air emissions, and visual effects. These residents' daily routines will be disrupted during a very long-term construction period. This area is home to many low to moderate-income families who have arguably not had an adequate voice in this planning process. Has the DEIR adequately studied the effect of the Specific Plan on this neighborhood, to include the narrow Glen Ellen streets from Martin Street south to Madrone Road and along Madrone Road?	The comment is noted. In Chapter 3 Environmental Analysis, the DEIR outlines potential environmental impacts from the Proposed Plan, as well as any regulatory requirements and proposed policies or Standard Conditions of Approval that will further mitigate these impacts. Polices and Standard Conditions of Approval that would mitigate impacts in the Planning Area would also serve to mitigate potential impacts in surrounding neighborhoods. See also Chapter 5 for an analysis on cumulative environmental impacts starting on page 579 of the DEIR. See also section 2.2 of the DEIR for a description of the planning context and process.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-22	CUMULATIVE EFFECTS There are several foreseeable projects within 15 miles of the SDC site that will contribute to cumulative growth and related impacts, including but not limited to: the Graywood Ranch Hotel, Elnoka Village Senior Citizens housing project, Milestone Siesta Senior Citizens housing project, Donald Street housing development project, Verano hotel and housing project, Hanna Boys Center residential development program, and the proposed ~70% membership license increase at the Sonoma Golf Club. In the Transportation Methodology section (page 432), the DEIR states," The model's 2040 cumulative year includes growth that is consistent with adopted general plans within the County and with regional projections contained in Plan Bay Area 2040." Were the above-mentioned projects, and any additional foreseeable projects, considered either in the general plans or by Plan Bay Area 2040? Is Permit Sonoma able to share what was included in the model?	The comment is noted. Please see MR-6 for more information regarding the transportation analysis. The cumulative analysis is detailed in Chapter 5 - CEQA Required Conclusions, starting on page 584 of the DEIR, and considers the likely effects of surrounding regional growth. Given the cumulatively considerable VMT impacts from the Proposed Plan, the impacts from transportation are conservatively considered cumulatively considerable. As stated in CEQA Guidelines, Section 15093(a), if the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable." Therefore, given that State law stipulates that the SDC Specific Plan prioritize housing at the site per Government Code Section 14670.10.5, the environmental impacts of implementation of the Specific Plan on VMT are acceptable.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-23	FIRE / EMERGENCY PREPAREDNESS The DEIR did not consider a fire scenario in which the fire comes in from the west, down from Sonoma Mountain. "Historically, a fire approaching from the west may be less likely, and therefore did not warrant further specific analysis" (DEIR page 515). We know that fires are now burning in ways that are outside of historical precedent due to climate change and related impacts, and that this area has not burned in recent history. With this in mind, we believe a west-approaching fire scenario west must be considered. Did the DEIR consider an evacuation scenario where broadband and/or cell service is out, or is unreliable, affecting receipt of alerts? This occurred in both the 2017 and 2020 fires – land lines and cell service were knocked	The comment is noted. The DEIR did not consider a fire scenario from the west because the western portion of the Planning Area is located in a moderate FHSZ. Fire scenarios were selected as representative of the most likely potential fires to impact Sonoma Valley given the valley's previous fire history and considering such variables including but not limited to wind speeds, direction, humidity, topography, and rate of advancement. As identified in collaboration with the Sonoma Valley Fire District and other local officials, these scenarios represent a worst-case scenario through their impacts on the broader community and traffic congestion. Thus, a fire from the west would not be a worst-case scenario, and impacts would be less

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			out or overloaded and people had limited information to guide evacuation. In Section 16.1.3.4 (page 511), the DEIR states that to further mitigate potential impacts, Policy 2-54 requires that the project sponsor proactively plan for emergency wildfire safety by building or designating an on-site shelter-in-place facility, to be open to both SDC residents and the general public. In our community conversations to date, Sonoma County fire and emergency experts have not condoned or recommended this as appropriate for the SDC site, so we question this as an appropriate mitigation measure.	significant. Please see also MR-4 for more information regarding the adequacy of the wildfire evacuation analysis and credentials of those assisting in the development of the models. See Impact 3.16-1 for a discussion of proposed policies that reduce impacts on evacuation to a less than significant level. The remainder of the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-24	The DEIR indicates no significant increases in evacuation times with the Specific Plan. Tables show evacuation times in the order of 15-20 minutes, with and without the proposed project. The Evacuation Time analysis suggests that "added times" for travel during an evacuation range from 1 or 2 minutes to 37 minutes to get to Napa. These hypothetical scenarios defy residents' reality and the actual evacuation times experienced during recent fires: Nuns Canyon fire (2017) resulted in evacuation times out of Sonoma Valley of 1 hour or more; Glass Fire (2020) resulted in evacuation times from nearby Oakmont onto Hwy 12 of one to two hours; evacuations from Kenwood during recent fires took hours, not minutes; adding thousands of vehicles will exacerbate the problem. Page 520 of the DEIR states that, "The additional SR 12 connector road will provide additional fire access and evacuation routes." However, during a wildfire, it's quite possible that residents and workers in the proposed project area will not be able to take this connector route east toward highway 12 due to the high probability of a wildfire advancing from the highway 12 direction (see Specific Plan, figure 2.3-1). Has this possibility been considered in	The comment is noted. See MR-4 regarding the adequacy of the wildfire evacuation analysis and how the Highway 12 connector impacts evacuation.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			the DEIR analysis of evacuation times? Also, can the analysis assume the Hwy 12 roadway connection when it will be subject to a separate CalTrans review and approval process and might not be approved?	
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-25	The assessment of wildfire hazards in the DEIR appears to have a number of errors and omissions, the most serious of which lead to unwarranted conclusions that underestimate this hazard ("Impact 3.8-7 Implementation of the Proposed Plan would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. (Less than Significant)" p. 268). Page 503: "Primary responsibility for preventing and suppressing wildland fires in Sonoma County is divided between local firefighting agencies and the State of California, Department of Forestry and Fire Protection. The SDC Planning Area is currently located in an area identified as a State Responsibility Area (SRA)." 1. The Planning Area "includes the approximately 180-acre SDC Core Campus…" (DEIR, pg. 51) According to the State Fire Marshall's map: https://osfm.fire.ca.gov/media/6822/fhszs_map49.pdf, the Core Campus is within a Local Responsibility Area (LRA. See map on page 4), not the State's. Is this correct?	The comment is noted. As described on page 503 of the DEIR, the primary responsibility for preventing and suppressing wildland fires in Sonoma County is divided between local firefighting agencies and the State of California, Department of Forestry and Fire Protection. The SDC Planning Area is currently located in an area identified as a State Responsibility Area (SRA). Fire management in the SDC Planning Area is located in the Sonoma-Lake-Napa Unit SRA. Government Code Sections 51175-89 advises CAL FIRE, to identify areas, or zones, of very high fire hazard severity potential under the Fire and Resources Assessment Program (FRAP). These zones are mapped and identified based on expected burn probabilities, potential fuels over a 30–50-year time period, and their correlated expected fire behavior, to better predict the possible vegetation fire exposure to buildings and developments. Under the FRAP, the Planning Area is located in the Sonoma Creek watershed and includes areas of high to very high Fire Hazard Severity Zones west of Highway 12, areas of high fire hazard severity in the hills, and areas of moderate fire hazards severity zones in the vicinity of Suttonfield Lake and Fern Lake (Figure 3.16-2). The Core Campus is not included in any of these FHSZs. The DEIR uses the most up to date CAL FIRE FRAP mapping data currently available. The CAL FIRE FRAP mapping shows fire severity zones for both SRA and LRAs. Currently the site is in a SRA but the EIR assumes that this responsibility will shift to local agencies once the State disposes the

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				land, and the wildfire and evacuation analyses in the EIR is based on that premise. Thus, this does not change the significance of the wildfire Impact Analysis of the DEIR.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-26	Page 503: "Under the Fire and Resources Assessment Program (FRAP) "the Planning Area…includes areas of high to very high Fire Hazard Severity Zones west of Highway 12, areas of high fire hazard severity in the hills, and areas of moderate fire hazards severity zones in the vicinity of Suttonfield Lake and Fern Lake (Figure 3.16-2). The Core Campus is not included in any of these FHSZs. " The State Fire Marshall's final map is not intended to show moderate and high FHSZs within the Local Responsibility Area. The State's draft map (page 4), however does show moderate and high FHSZs covering a substantial portion of the Core Campus. While not finalized, this appears to be the best available fire risk data for the Planning Area.	The comment is noted. See response to B3-25.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-27	Goal PS-3 from the Sonoma County General Plan 2020 (DEIR, page 497), reads: "Prevent unnecessary exposure of people and property to risks of damage or injury from wildland and structural fires," with Objective PS-3.1 stating, "Continue to use complete data on wildland and urban fire hazards." 2. How was the data gap between the SRA and the LRA within the Planning Area addressed during the DEIR's analysis of wildfire threat? What evidence was the statement about the Core Campus (DEIR, pg 503. See above) based on? Was this conclusion reached because there is data showing low fire risk there or because lack of data was equated with low risk? 3. The Fire Constraints map (13.16-2) shows the Core Campus being almost entirely outside of any Fire Severity Hazard Zones. How would the Fire Severity Hazard data	The comment is noted. See response to B3-25. On page 518, the DEIR does note that development under the Proposed Plan could result in potentially significant impacts from exacerbating wildfire risks. This increased risk can be due to the site's history of wildfire and proximity to VHFSZs or from increasing the potential for wildfire ignition and spread with development. However, the Proposed Plan includes a plethora of policies and Standard Conditions of Approval to adequately mitigate potentially significant wildfire risks to a less than significant level. Such measures, as described under the Wildfire Impact Analysis starting on page 551 of the DEIR, require the Proposed Plan to construct and maintain a managed landscape buffer to aid in fire defense; enhance creek buffers; remove surface and aerial fuels; implement fuel management methods (such as fuel

Submitter	Date	Comment Code	Individual Comment	Response
			for the Core Campus, shown in the State's draft map, change the analysis of fire hazards there? Does this change the calculus for significance under 16.1.3.1 Criterion 2: "Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire."? 9 4. In addition, the Sonoma County Community Wildfire Protection Plan Update 2022 (referenced in the DEIR, 16.1.1.3. Regional and Local Regulations, p. 496) states that: "Wildland fires that start in the woods and spread into adjacent areas with relatively dense housing often result in the greatest losses of property and life. Efforts to save lives and property will take precedence over losses of wildland resources, so firefighters' response must focus on protecting populated areas rather than fighting a fire in the most efficient way." Even if we assume there are no FHSZs within the Core Campus, this suggests that building dense housing at SDC adjacent to wildlands could result in high "losses of property and life." Responding to such a fire might prevent firefighters from efficiently working to prevent further fire spread. How was this scenario taken into account during the DEIR analysis?	separation, defensible space with continuous tree canopy, and irrigated agriculture); plant fire resilient landscaping; include a five-foot buffer of defensible space around all developments; prohibit wooden fencing; require all new construction and retrofitting of existing buildings use Class A fire-rated roofing materials, fire-resistant siding, and dual-paned tempered glass windows; prohibit the storage of flammable materials under decks or porches; prune branches of trees; cover all building vent openings with wire mesh screens to prevent infiltration from embers of sparks; and ensure that all property owners are informed and educated about wildfire resiliency requirements at the site at the time of purchase. Further, Policy 6-21 would require all new and existing utility lines be buried underground to mitigate additional wildfire risk. Policy 2-40 would reduce ember ignitions and fire spread by requiring trimming of branches that overhang the home, porch, and deck and prune branches of large trees up to 6 to 10 feet (depending on their height) from the ground. Policy 2-40 would remove dead vegetation and debris from under decks and porches and between deck board joints. The Proposed Plan would also comply with all State and local codes and regulations, such as the California Fire Code and Sonoma County Code, which would further mitigate potential impacts. There are several proposed policies that would serve to mitigate impacts from wildland-urban interface areas. Such policies would implement managed landscape buffers, limit surface fuels, minimum clearances between fuels and each building or structure, defensible space, fire resilient landscaping, and fire-resistant construction practices. Further, development would comply with Fire

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				Code Section 4906 which contains existing regulations for vegetation and fuel management to maintain clearances around structures. This code includes provisions for ignition-resistant construction standards for new buildings.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-28	3.16.1.3.4. Wildfire Evacuation 1. Wildfire ignitions are known to increase with the size of a population. How was this relationship evaluated in the calculation of fire risk in the Planning Area?	The comment is noted. The DEIR does not claim there is no wildfire risk from development under the Proposed Plan. However, the Proposed Plan complies with all State, regional, and local regulations and includes a plethora of policies and Standard Conditions of Approval to adequately mitigate potentially significant impacts to a less than significant level. See response to comment B3-27.
North Sonoma Valley Municipal Advisory Council	9/21/2022	B3-29	CLOSING COMMENTS As evidenced through the comments above, we do not believe this DEIR yet adequately and completely evaluates the environmental and safety impacts of the Proposed Plan. Furthermore, we remain committed to the Sonoma Valley community's consistent input calling for both affordable housing and a lower density plan alternative. A plan closer to the Historic Preservation Alternative – determined as "environmentally preferred" in the DEIR analysis – successfully meets the project objectives and the established Guiding Principles for this project and should be given strong consideration. We remain committed to a plan that we can all support and appreciate this opportunity to provide comment. The NSV MAC letter process did not allow to adequately address all topic areas. Please respond to the public comments in the attached addendum that we received in advance of the NSV MAC meeting on 9/21/22, relating to the Specific Plan and	The comment is noted. It does not relate to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			the DEIR, which we are incorporating by reference, and give them full consideration.	
The Glen Ellen Historical Society		B4-1	The Specific Plan process, which was touted to be a community driven plan, has most definitely fallen short of its vision. The creation and implementation of the Planning Advisory Team (PAT), which was intended to be 'the voice of the community', appears to have had no voice at all. A general consensus of the local community, with over 2000 valley residents signing a petition in agreement, has resoundingly rejected this Proposed Plan. Regardless of the continual outcry and input provided from the public, the County sits steadfast on its position with this grandiose and elaborate plan. It's apparent that this plan is geared toward addressing the State's housing problem by constructing as many houses as possible on this historic campus in an effort to achieve their unreasonable goal and quota. The County and State are determined to build a new urban style town in the middle of this historic and rural community of Glen Ellen. With a thousand homes, a hotel and large commercial enterprises, the County is relentlessly pushing their agenda regardless of the wants and wishes of this community. In the guiding principles of the Specific Plan Glen Ellen is characterized as an "adjacent town", when in reality the SDC property sits directly in the middle of this historic village of Glen Ellen. If this proposed plan reaches fruition as written, it will destroy the character of this quaint and picturesque village forever.	Thank you for your comment letter. The comment is noted; however, it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
The Glen Ellen Historical Society		B4-2	The Glen Ellen Historical Society has been a strong community advocate for the preservation and prudent management of the Eldridge Property formerly known as Sonoma Developmental Center. And while we continue pursuing the National Registry of Historic Places (NRHP) status for entire 940+ acres, we cautiously endorse the	The comment is noted. The Draft EIR adequately analyzes potential cultural and tribal cultural resources impacts based upon a comprehensive records search conducted at the NWIC, located at Sonoma State University. The records search included a review of all recorded historic and prehistoric cultural resources within

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Historic Preservation Alternative as the only realistic and viable option available within this Specific Plan as written. It is with great urgency that this organization stresses that the urbanization of Eldridge is not portrayed accurately. The Draft EIR does not stress or give any credence to the preservation of cultural integrity, history, conservation and housing in an appropriate scale. The inadequacy of the 'self-mitigated" Specific plan appears to have fallen short of CEQA. CEQA Guidelines mandate consideration and analysis for all alternatives and gives desired designation to the most environmentally superior alternative. (Section 15126.6)	the Planning Area. In addition, the California State Historic Property Data File (HRI), which includes the NRHP, California Historical Landmarks, and California Points of Historical Interest was examined. The analysis also included a search of the NAHC Sacred Lands File, tribal outreach, review of Sonoma County documents, State regulations, and Proposed Plan goals and policies. While the impact of the Proposed Plan is considered significant because it would cause a substantial adverse change to the historical district, proposed policies and the Standard Conditions of Approval would help reduce these impacts to the maximum extent practicable. These includes retention, rehabilitation, and adaptive reuse of buildings, structures, and landscape features in the Core Campus area that contribute to the SSHHD (policies 4-20 through 4-31), as well as considering the preservation of contributing resources that are located in the hog and poultry area east of the Core Campus and the SDC water and sewage system to the west and north (Goals 2-I and 2-J and policy 4-32). However, there are no additional feasible mitigation measures available to avoid impacts entirely. Please see MR-1 for more information regarding the self-mitigating Specific Plan. CEQA requires that EIRs identify the Environmentally Superior Alternative, and discuss the facts that support that selection. (See PRC Section 21081.5; CEQA Guidelines Sections 15091, 15126.6(e)(2)). The Lead Agency is not, however, obligated to select the Environmentally Superior Alternative for implementation if it would not accomplish the basic project objectives and/or is infeasible (see State CEQA Guidelines Section

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				15126.6(a), (c) & (f)). Please see MR-8 for more information on why the Historic Preservation Alternative would not accomplish project objectives as required by the State legislature.
The Glen Ellen Historical Society		B4-3	Your analysis that; "Historic Preservation Alternative would be less superior in some environmental features such as energy use, biological resources, and wildfire risks." Is categorically untrue. There are many architects, including those within the National Trust for Historical Preservation, that express exactly the opposite view. Where is the data to support this claim? Examples of this lack of analysis with reference to environmental impacts is evidenced by the sugar-coated language used throughout this document such as, 'if feasible" or "reasonably foreseeable". Legally enforceable Mitigation and Monitoring should be included in every aspect of this DEIR that overtly states in most instances, "no mitigation needed. With regard to the massive demolition suggested in this Proposed Plan, We find it unconscionable that this DEIR makes such outlandish claims. Below are just a few examples of the dozens listed as "requiring no mitigation".	The comment is noted. Please see MR-1 for more information regarding the self-mitigating Specific Plan. Please see MR-8 for more information on why the Historic Preservation Alternative would not accomplish project objectives as required by the State legislature. As noted in Table 4.5-1 on page 572 of the DEIR, the Historic Preservation Alternative would result in less than significant impacts regarding Energy, Climate Change, and GHG Emissions; Biological Resources; and Wildfire which is equivalent to the Proposed Plan. While these impacts are less than significant, indirect emissions associated with electricity consumption, waste and wastewater generation, and water use, would likely be more than those of the Proposed Plan because of the inefficiency of the existing buildings, and the difficulty in updating existing construction to match current standards for energy efficiency and GHG emissions. Under the Historic Preservation Alternative, creek corridors and the wildlife corridor will also not be expanded which would negatively impact wildlife movement compared to the Proposed Plan. Further, the lack of Highway 12 direct access may lead to slightly longer evacuation times compared to the Proposed Plan.
The Glen Ellen Historical Society		B4-4	3.8 Hazards and Hazardous Materials 3.8-1 - Implementation of the Proposed Plan would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. No mitigation needed (where is your data?)	The comment is noted. As noted on page 261 of the DEIR, the Hazards and Hazardous Materials Impact Analysis considers the nature of foreseeable hazardous materials use, storage and disposal resulting from the redevelopment of the Sonoma Developmental Center. It

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			- Implementation of the Proposed Plan would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. No mitigation needed (demolition of old buildings releases huge amounts if embedded carbon into the atmosphere as well as releasing hazardous materials into the soil) - Implementation of the Proposed Plan would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No mitigation needed (Blatantly incorrect. There are dozens homes on Marty Dr and beyond that are fewer than a hundred yards away) - Implementation of the Proposed Plan would not result in development located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment. No mitigation needed. (There are multiple dumpsites on-grounds that are questionable. Where is your data?)	also identifies ways that hazardous materials could be exposed to the environment or individuals. The analysis includes a qualitative evaluation of impacts associated with the presence or hazardous materials. The analysis is based on a review of materials ranging from online databases such as Envirostar and Geotracker, hazard maps, Phase I & II Site Assessments (see Appendix G), and relevant plans and regulations at the Federal, State, and local levels. Therefore, upon implementation of the Specific Plan and regular operations of the site, compliance with the regulations for hauling hazardous substances would continue to reduce the potential of an accidental release of hazardous materials (Impact 3.8-1) to a less than significant level. Further, Standard Condition of Approval HAZ-3 would require implementation of Best Management Practices to reduce exposure of workers to contaminated materials during construction, including a soil management plan and a health and safety plan. Compliance with the Standard Conditions of Approval Measure HAZ-3 and existing regulations would reduce impacts related to the release of hazardous materials due to foreseeable upset or accident conditions to less than significant. There are no schools located or are proposed to be located within one-quarter mile of the Planning Area. Thus, implementation of the Proposed Plan would have no impact regarding hazard emissions or materials in within one-quarter mile of an existing or proposed school. Regarding Impact 3.8-4, implementation of HAZ-3 prior to construction would reduce the potential risks associated with releases of contaminated media as a result of Proposed Plan to a less-than-significant level.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
The Glen Ellen Historical Society		B4-5	5.3 Significant and Unavoidable Impacts (We find these statements (below) to be totally unacceptable and we challenge the validity of your assessment) 5.3.1 Cultural, Historic and Tribal Resources "Development under the Proposed Plan would potentially entail the demolition of at least 13 percent of historically contributing resources that were originally documented as part of the Sonoma State Home Historic District (SSHHD), which has been determined eligible for listing in the California Register of Historical Resources (CRHR) and qualifies as a historical resource under CEQA. Further, new construction under the Proposed Plan has the potential to disconnect the remaining contributing resources in the Core Campus from those in the Community Separator and Regional Parks lands to the east and west, disrupting the SSHHD's overall integrity to the point that it would no longer be eligible for listing in the National Register of Historic Places, CRHR, or as a California Historic Landmark. This impact, in addition to demolition of the aforementioned resources would result in a substantial adverse change to the significance of the historic district such that the significance of the historic district would be materially impaired" (It was expressed several times by Mr. Bhatia [Dyett &Bhatia] during the many virtual community outreaches that most of the older building on the west side campus are, in his words, "beyond repair". Again, those assertions have no merit or data to justify such claims. Recently local architects, well versed in historic restoration, assessed many of the oldest building on the west campus and they agreed that very few of these historic buildings are beyond refurbishing. It is also a proven fact that it is less expensive	The comment is noted. Please see MR-8 regarding the cost of reuse of the existing buildings on site. The DEIR references several data sources in its historic resources analysis. The analysis of potential cultural and tribal cultural resources impacts is based upon a comprehensive records search conducted at the NWIC, located at Sonoma State University. The records search included a review of all recorded historic and prehistoric cultural resources within the Planning Area. In addition, the California State Historic Property Data File (HRI), which includes the NRHP, California Historical Landmarks, and California Points of Historical Interest was examined. The analysis also included a search of the NAHC Sacred Lands File, tribal outreach, review of Sonoma County documents, State regulations, and Proposed Plan goals and policies. Further, the Adaptive Reuse Potential Evaluation Report was published on March 2021 and informed the DEIR analysis. This report details architectural potential for adaptive reuse, as determined by Hornberger + Worstell, architects on the Dyett & Bhatia team, based on site reconnaissance and review of historic building plans. The report outlines a number of challenges to retaining and reusing existing buildings, whether contributory to the site's history or otherwise. These include the poor condition of some buildings, the extent of work necessary to remediate them and bring them up to present building code standards, and requirements of potential new uses that would require significant changes to the buildings. In addition, the Alternatives Report which was published in November 2021 determines that rehabilitation and adaptive reuse at SDC is generally more expensive than new construction. Page 278 and 279 of the DEIR cite and detail the findings

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			and environmentally preferred to refurbish and reuse existing structures than to demolish and rebuild)	of the Historical Resources Inventory and Evaluation Report (HRIER) produced by JRP Historical Consulting, with Denise Bradley. Further, the WRT report is cited on page 272 of the DEIR to explain the historical setting of the site. The Proposed Plan would not also facilitate new development in the 750 acres of preserved open space, which is located outside of Core Campus boundaries. Thus, the Proposed Plan focuses on infill development and development of underutilized and vacant areas within the Core Campus in order to preserve scenic and biotic resources and avoid development within Community Separators. In addition, as noted under Impact 3.1-3 on page 105 of the DEIR, new development under the Proposed Plan will occur primarily within the previously developed Core Campus area, excluding the SR 12 connector which will reuse the existing street network and avoid damage to scenic resources to the greatest extent feasible. Therefore, the proposed development would not differ substantially or detract from the existing visual quality and public views of the site by keeping with the overall scale and development height variation at the current SDC campus and by preserving the site's open space framework outside the Core Campus.
The Glen Ellen Historical Society		B4-6	Retaining the historic character of these 100+ year old buildings, together with their unique architectural styling is equally important, as referenced in the Environmental Analysis > 3.1 Aesthetics, and again reiterated in the Specific Plan's "Guiding Principals": "… to balance Development with Historic Resource Conservation. Preserve and adaptively reuse the Main Building and the Sonoma House complex, conserve key elements of the site's historic landscape, and strive to	The comment is noted; however, it is not related to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			maintain the integrity of the historic district to the west of Arnold Driven by adaptive reuse of contributing buildings where feasible. Support a cohesive community feel and character, while allowing a diversity of architectural styles"	
The Glen Ellen Historical Society		B4-7	We (GEHS) feel that the Historic Preservation Alternative meets the fundamental project objectives listed on pages 5-6 of the DEIR. However, we also find that the Specific Plan is inconsistent with these fundamental project objectives, which calls for balancing development with historic resource conservation? What are the performance-based standards to determine which buildings can feasibly be restored or adaptively reused? How is demolition of any building to be decided? What type of analysis and performance-based standards will be applied to permit demolition under the Specific Plan? The removal of historic buildings is not something we (GEHS) take lightly. These old buildings are a major contributor and a part of the very fabric of our local community and beyond. We find that the lack of data regarding the structural integrity of these historic buildings is quite troubling, as well as the ease by which the County speaks of their removal. We found it necessary to refer back to the assessments of Wallace, Robert &Todd and JRP to find data on structural and seismic conditions as well as building materials condition. The assessment done by Diana Painter and Associates (2015) was also quite valuable in helping us understanding where these historic buildings stood structurally. With Page and Turnbull being one of your consultants, why is there no data available on current building conditions? It	The comment is noted. See response to comment B4-5 that outlines available data regarding current building conditions. The Existing Conditions Report by WRT and the Adaptive Reuse Potential Evaluation report can all be found on the project website at sdcspecificplan.com.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			is obvious to us (GEHS) that these historic buildings are merely considered obstacles in the path of the County's Proposed Plan and that the general consensus of the community at large with their concerns regarding the scope and density of the Proposed Plan have simply been ignored or considered unfounded. The Guiding Principles offer excellent insight and direction: "Ensure that new development complements the adjacent communities of Glen Ellen and Eldridge and fits the character and values of the site and surrounding areas…"	
The Glen Ellen Historical Society		B4-8	Legacy of Care From the beginning of the Specific Plan process the term, "Legacy of Care" has been used and continually tossed around without focus or purpose. Perhaps it is to show a willingness to recognize and acknowledge the 130 years of dedicated service and care to those with developmental disabilities. Though it is heart warming to hear that SDC is being acknowledged and remembered by those who wish to replace it, this sentiment rings hollow with the absence of truly addressing the historical significance of California's first care facility for children with developmental disabilities. Dozens of times we've heard this term "Legacy of Care" used, yet never once has the County and their consultants expressed any interest or desire in creating a Historic Preservation Area - an area that would be dedicated specifically to the Legacy of this once great Developmental Center. The Proposed Plan makes suggestions of remembrances but has nothing of any substance to offer. Where is your plan to address this often-	The comment is noted; however, the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	Date	Comment Code	Individual Comment	Response
			used term, "Legacy of Care'"? It appears to be just a term used to console and placate those who truly care about the history of the old Sonoma State Home: The people who lived and worked there; the families whose loved-ones resided there; the local communities that flourished along side… It's these people, places and stories that truly constitute a vision of Legacy of Care. To the County and their consultants Legacy of Care appears to mean nothing, as evidenced by their lack of interest in preserving California History.	
The Glen Ellen Historical Society		B4-9	The Specific Plan make references to preserving the old administration building (PEC building 1908) and the Superintendent's residence (Sonoma House 1897) as evidence enough to prove that Legacy of Care exists in their plan. Ironically tho, these two historic building are already protected on the NRHP and as a County Historic Landmark, respectively. The County also has suggested in their Proposed Plan that these two historic buildings should be slated as part of the hospitality / hotel idea. Is this really how the County wants to portray Legacy of Care? Does the County and State have any plans to respectfully acknowledge the existence of this historic care home? If so, what are they?	The comment is noted. As detailed on page 295 of the DEIR, the Proposed Plan includes policies and actions that would minimize or avoid impacts on individual historical resources by requiring the preservation and maintenance of such resources (Policies 2-47, 4-20, 4-25, 4-26, 4-31). Because the Main Building and Sonoma House and its support buildings and structures are also contributing resources to the SSHHD, projects involving these buildings are subject to the Standard Conditions of Approval policies LU-1, LU-5, and LU-6, per the discussion under Impact 3.5-2, would require the consideration of the Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties. Proposed Policy 4-20 requires the Specific Plan to preserve and reuse the two historically significant buildings, the Main Building (PEC) and the Sonoma House Complex, including its six support structures. Furthermore, at the time when rehabilitation projects for these two individual historic resources or new work immediately adjacent to the historic resources are proposed, the project-level CEQA document would need to identify potential impacts to historic resources. The CEQA Guidelines state that a project that generally

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				follows the Secretary of the Interior's Standards for the Treatment of Historic Properties is considered to have a less than significant impact on historic resources. Therefore, the impact of implementation of the Proposed Plan on individually significant historical resources would be less than significant with implementation of the proposed policies and actions referenced above and existing State regulations.
The Glen Ellen Historical Society		B4-10	The Glen Ellen Historical Society has submitted multiple plans to address the indifference and unresponsiveness toward Historic Preservation. It is deeply concerning that these plans have never received a response or recognition of any kind. The willingness of the County to turn a blind eye on an area of such historical significances is worrisome. Our (GEHS) plans are concise and well thought out. Our vision is simple. Establish a small Historic Preservation Area that includes a museum and library, a visitor's center and a small community conference and archive center. The proposed Historic Area would be strategically positioned at the location that is currently suggested as "The Firehouse Commons" in the County's Proposed Plan. Hospitality is the County's focus for this area. Historic Preservation is ours… The County and Dyett & Bhatia have seen our plans: "The Gateway to Sonoma Mountain and the Historic Cemetery" This is what "Legacy of Care" really looks like.	The comment is noted; however, the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
The Glen Ellen Historical Society		B4-11	In closing, the GEHS respectfully requests the following; - A CEQA level identification of potential impacts of known or potential historic sites and landscapes. - Consider the historic sites as an entire cultural landscape	The comment is noted. Starting on page 294 of the DEIR is the Cultural, Historic, and Tribal Cultural Resources Impact Analysis which provides an identification of potential impacts to historic resources as required under

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			and not identify individual buildings individually to be demolished. - Require a future developers to prepare a historic preservation plan, based on desired development and suitability of buildings for adaptive reuse, with the overarching objective of preserving a set of buildings that reflect the diversity of building types and the continuum of life at the former SDC. For instance, retain and reuse buildings that represent various architectural styles that are character-defining to the Historic District, including French Eclectic, Spanish Eclectic, and Tudor Revival, as well as character-defining materials such as tile roofs, stucco and brick cladding, and wood windows. - Include a reference or rationale of why Sonoma County has not responded to a two-year-old application for Historical Landmark status for Eldridge.	CEQA. See MR-3 regarding the programmatic nature of the DEIR. All individual development projects are required to prepare more precise, project-level analyses to fulfill CEQA requirements, including impacts on historic resources. Further, proposed policy 4-22 requires that the developer project sponsor prepare a historic preservation plan, based on desired development and suitability of buildings for adaptive reuse, with the overarching objective of preserving a set of buildings that reflect the diversity of building types and the continuum of life at the former SDC. For instance, retain and reuse buildings that represent various architectural styles that are character defining to the Historic District, including French Eclectic, Spanish Eclectic, and Tudor Revival, as well as character-defining materials such as tile roofs, stucco and brick cladding, and wood windows. The remainder of the comment is not related to the adequacy of the DEIR, thus no further response is required.
The Glen Ellen Historical Society		B4-12	Explain how the demolition of buildings reduces the eligibility of the property for the National Register of Historic Places. The property application has been submitted by SHPO and the GEHS has been asked for additional and expanded information on the property, specifically the east side of Arnold Drive. According to the Draft not all buildings, structures, and landscape elements within the historic district boundary are considered contributing resources because some of them are outside the 1889 1949 period of significance and others do not have sufficient historical integrity. Due to the expansion of the historic district boundary as requested by SHPO, the number of contributing resources grew from 46, as identified in JRP's May 2017 report, to 94 buildings and	The comment is noted. See also responses to B4-5 and B4-7. Page 278 and 279 of the DEIR cite and detail the findings of the Historical Resources Inventory and Evaluation Report (HRIER) produced by JRP Historical Consulting, with Denise Bradley. Further, the WRT report is cited on page 272 of the DEIR to explain the historical setting of the site. On page 296, the DEIR explains that the Proposed Plan would affect the cohesiveness of SSHHD's overall integrity to the point that it would no longer be eligible for listing in the NRHP, CRHR, or as a California Historic Landmark. The impact of such activities is considered significant because they would cause a substantial adverse change to the historical district as defined by CEQA Guidelines Section

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			structures. Where is any reference to Wallace, Roberts and Todd or Page and Turnbull or JRP and their findings regarding historical preservation of building and landscapes?	15064.5. While proposed policies noted above and the Standard Conditions of Approval (LU-1, LU-2, LU-3, LU-4, LU-5, and LU-6) would help reduce these impacts to the maximum extent practicable, there are no mitigation measures available to avoid impacts entirely. As such, this impact would remain significant and unavoidable. As stated in CEQA Guidelines, Section 15093(a), if the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable." Therefore, given that State law stipulates that the SDC Specific Plan prioritize housing at the site per Government Code Section 14670.10.5, the environmental impacts of implementation of the Specific Plan on the historic district may be acceptable to County policymakers.
The Glen Ellen Historical Society		B4-13	Why is there no mention of historic preservation in the initial bullet points? The statement of Balance with Historic Resource Conservation is acceptable however it is qualified with 'where feasible.' What is the definition of the phrase 'where feasible?' - CALFIRE identified the oldest fire suppression buildings in the State dating to 1931-2. The Eldridge Fire Department was built in 1932 yet it is not considered significant and one to be potentially removed. Then the plan calls the area Fire House Commons. Why will the area be named for a building to be remove as 'insignificant? - The Historic Core appears to consist of two buildings: The Sonoma House and the Professional Education	The comment is noted. According to CEQA Guidelines, Section 15364, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. According to Proposed Policies 4-20 to 4-27, the Proposed Plan will preserve and reuse the two historically significant buildings, the Main Building (PEC) and the Sonoma House Complex, including its six support structures. The Proposed Plan will also preserve and enhance the landscape elements that contribute to the significance and character of the Sonoma State Home Historic District, including the formal tree grid at the Central Green, the baseball field,

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Building. The buildings adjacent to them (Oak Lodge, Hatch and McDougall) are important representatives of early 20th century institutional care. This section is nearly contiguous with the cemetery and Jack London HISTORICAL State Park. Has there been any rationale to create a historic area within the property historic district and how the Department of Parks and Recreation could be expanded to include this historic area.F139	Sonoma Bridge, the front entrance gate, and the Eldridge Cemetery, as well as primary circulation routes. Further, the Plan will preserve and reuse the contributing resources identified in Figure 4.3-1, to the greatest extent feasible. If all of the contributing resources identified in Figure 4.3-1 cannot be retained, the following buildings should be considered as least significant of those 28 contributors and studied for removal: Acacia II, Goddard, and Workshop. If all 28 contributing resources identified in the Sonoma Developmental Center Land Use Diagram cannot be retained, in addition to those listed above as least significant contributors, the following buildings should be considered less significant of those 28 contributors and studied for removal: Walnut (significant damage), Firehouse, Main Store Room, Maintenance Shop, and Acacia I. The Proposed Plan will preserve and reuse buildings at both the north and south terminus of Sonoma Avenue, including Wagner, Dunbar and Wright to the north, and Walnut and Hatch to the south. The Plan will preserve and reuse at least 8 of the 10 contributing buildings fronting Sonoma Avenue (including Sonoma Circle): Wagner, Dunbar, Wright, Finnerty, McDougall, Oak Lodge, Hill, Walnut, Hatch, Main Building. The Plan will preserve and reuse all the contributing buildings that face the Central Green, including the Main Building, Chamberlain Hospital, Palm Court, Pines, and Entrance Gate. The Plan will also preserve and reuse houses along Arnold Drive within the core campus, reconstructing as necessary. Reconstruction will adhere to the Secretary of the Interior's Standards for Reconstruction. Thus, the Proposed Plan will also conserve contributing structures to the Historic District beyond the Main Building (PEC) and the Sonoma House Complex. The remainder of the

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
A Voice Of Reason	9/25/2022	B5-1	By way of introduction, VOR – A Voice Of Reason - is a national non-profit founded in 1983. For nearly forty years, we have been advocating for high quality care and human rights for all individuals with intellectual and developmental disabilities (I/DD). I write you today on behalf of those individuals with the most severe and profound I/DD and autism in California, in regard to the county's plans for the property that was once home and community for many of our loved ones with I/DD at the Sonoma Development Center. It is my understanding that the property is being divided and parceled out to property developers and investors. We would like to ask that you please keep a substantial portion of the property available to providers of services for those individuals most deeply impacted by I/DD and autism, in keeping with the original intent of those who first developed this property.	Thank you for your comment letter. The comment is noted; however, the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
A Voice Of Reason	9/25/2022	B5-2	Sonoma County is known around the world for its beauty, its amazing vineyards, and for its people. Forest fires may change the landscape. Drought may ruin a season of grapes. But the people of Sonoma County have a chance to retain their heart, their soul, and their dignity, by determining to continue to provide for California's most vulnerable citizens. Business schools used to teach about the value of "Goodwill". You cannot set a price on it, but it is an asset that can bring greater value to all of the other assets a business, or a county, holds. We urge the Sonoma County commissioners to bring that unique and rare value to their	The comment is noted; however, the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			community, and to maintain the goodwill that they have considered one of the many blessings that have long graced Sonoma County and its families.	
Jack London Park Partners	9/26/2022	B6-1	On behalf of Valley of the Moon Natural History Association dba Jack London Park Partners ("Jack London Park Partners"), this will provide comments relating to the County of Sonoma's ("County's") draft Environmental Impact Report ("DEIR") for the draft Sonoma Developmental Center Specific Plan ("Specific Plan" or "Project") under the California Environmental Quality Act (Pub. Resources Code §21000 et seq., or "CEQA") and CEQA's implementing Guidelines (Cal. Code Regs., tit. 14, §15000 et seq., or "Guidelines"), concerning the transfer and disposition of the Sonoma Developmental Center ("SDC") property under Government ("Gov't") Code §14670.10.5. The governing statute recognizes that the SDC property is "composed of a developed campus covering approximately 180 acres and approximately 700 acres of open space adjacent to the Sonoma Valley Regional Park and the Jack London State Historic Park," that the property includes "exceptional open-space, natural resources, and wildlife habitat," and expressly provides that "[i]t is the intent of the Legislature that the lands outside the core developed campus and its related infrastructure be preserved as public parkland and open space." Gov't Code §14670.10.5(a)(1), (7) & (9).	Thank you for your comment letter. The comment is noted; however, the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Jack London Park Partners	9/26/2022	B6-2	The statute further provides that the "disposition of the property or property interests shall provide for the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible and shall be upon terms and conditions the director deems to be in the best interests of the state," and expressly	The comment is noted; however, the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			recognizes "the need for conservation of water resources to preserve or enhance habitat, fish and wildlife resources" in evaluating proposed uses of the property. Gov't Code §14670.10.5(c)(3) & (5).	
Jack London Park Partners	9/26/2022	B6-3	With this in mind, and as set forth below, Jack London Park Partners requests that the DEIR be revised and recirculated to (1) provide for the direct transfer of the SDC open space west of Arnold Drive to the California Department of Parks and Recreation ("State Parks") to be "preserved as public parkland" and ensure "permanent protection of the open space and natural resources as a public resource," as required by Gov't Code §14670.10.5(a)(3) and (9); (2) analyze environmental impacts on the open space and adjacent areas of Jack London State Historic Park (the "Park") that would be posed by unrestricted access by Project residents and hotel guests; (3) analyze the potential impacts of the proposed Project on water resources critical for biological resources, including the flora, fauna and habitat in the upgradient SDC open space and adjacent areas of the Park; and (4) provide for a southern entrance ("Southern Park Entrance") to the Park in the SDC open space area immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive, mitigating both environmental impacts from unrestricted access and traffic impacts, allowing adaptive reuse of the two historic buildings in that area, and providing for wildlife corridor protections and enhancements there.	The comment is noted. Pursuant to Gov't Code §14670.10.5, the Proposed Plan will preserve the open space surrounding the core campus in public ownership in perpetuity, preventing further development in undeveloped areas and ensuring ongoing stewardship in partnership with neighboring State and regional parks and other institutions and organizations (Goal 2-A and Policy 2-1). Under CEQA, biological resource impacts of the Proposed Plan are analyzed, as well as impacts on open space and water resources. Jack London State Park is adjacent and not part of the Proposed Project. See the impact analyses on biological resources and hydrology and water quality in sections 3.4 and 3.9 of the DEIR. Recirculation is not required because significant new information has not been added to the EIR after public notice is given of the availability of the draft EIR for public review. See MR-6 and MR-7 regarding impacts on VMT and wildlife movement. See also MR-8 regarding the feasibility of adaptive reuse. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the state transfers the open space to. See MR-2. The remainder of this comment advocates for a southern park entrance which is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Jack London Park Partners	9/26/2022	B6-4	Jack London Park Partners emerged during a budgetary crisis in 2012 that would have shuttered many state parks. It was the first non-profit organization to take up management of a state park on behalf of the people of California. Since then, it has been successfully managing, restoring and maintaining the natural and historical features of the Park under contract with State Parks, the owner of the Park. Jack London Park Partners also contributes funds to advance cultural and recreational programs, and create educational exhibits, interactive displays, signage and other features at the Park. Jack London Park Partners is the outgrowth of Valley of the Moon Natural History Association, a citizens' group established nearly a half-century ago to support the interpretive needs of three parks in Sonoma County, including the Park. The Association has played a vital role in recruiting and organizing the hundreds of volunteers who support all functions of the Park. Among the organization's most noteworthy accomplishments are the award-winning restoration of the cottage that was the residence of Jack and Charmian London after acquiring the "Beauty Ranch," and the completely re-imagined House of Happy Walls Museum which interactively brings the story of Jack and Charmian London to life.	The comment is noted; however, the comment does not relate to the adequacy of the DEIR, thus no further response is required.
Jack London Park Partners	9/26/2022	B6-5	Most recently, Jack London Park Partners began the restoration of 40 acres of historic orchard, established on SDC property more than a century ago, which became part of the Park in 2002. While many of the trees had died, some were still alive and bearing fruit, and the surviving trees have provided scions to grow new, historically authentic fruit trees to restore the orchard. With a combination of agricultural expertise and tender loving care, the orchard is on its way toward healthy stabilization	The comment is noted; however, the comment does not relate to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			with revitalized trees producing several varieties of apples and pears, prune plums, apricots, cherries, and quince.1 Jack London Park Partners has formed a partnership with Farm to Pantry to provide fruit from the orchard to Sonoma organizations that help people facing food insecurity.	
Jack London Park Partners	9/26/2022	B6-6	With this history and continuing commitment in mind, Jack London Park Partners has a keen interest in ensuring that "[t]he disposition of the property or property interests shall provide for the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible," as set forth in the statute governing the future of the SDC property, Gov't Code §14670.10.5(c)(3), analysis of which is required by CEQA. Similarly, as a steward of the Park, Jack London Park Partners has an interest in protection of water resources critical for the extant flora, fauna and habitat in the SDC open space and adjacent areas of the Park, as is similarly required by Gov't Code §14670.10.5(c)(5) and analysis of which is required by CEQA. And, Jack London Park Partners has an interest in preventing harm to wildlife, habitat and other biological resources that would be posed by unrestricted access to the western open space and the adjacent Park by large numbers of Project residents and visitors. Such harm could be addressed in part by the proposed Southern Park Entrance, which could also mitigate traffic and vehicle miles traveled ("VMT") impacts and provide opportunities to adaptively reuse historic buildings and enhance the wildlife corridor in the area immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive. None of these potentially significant effects on the environment and proposed mitigation measures are addressed in the County's DEIR. Accordingly, these comments address direct transfer of the open space to State	The comment is noted. See MR-6 and MR-7 regarding impacts on VMT and wildlife movement. See also MR-8 regarding the feasibility of adaptive reuse. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the state transfers the open space to. See MR-2. This comment advocates for a southern park entrance which is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Parks to ensure that it will be a public resource as parkland, and other key issues relating to water resources, habitat preservation, public access, and protection and enhancement of the wildlife corridor.	
Jack London Park Partners	9/26/2022	B6-7	Relevant CEQA Standards: The failure of the County's DEIR to adequately analyze the environmental impacts requires that it be revised and recirculated. An EIR is inadequate as a matter of law where, for example: · The project description "did not adequately apprise all interested parties of the true scope of the project for intelligent weighing of the environmental consequences of the project;" · "[I]t cannot be found that the FEIR adequately investigated and discussed the environmental impacts of the development project;" or · "[T]he discussion of alternatives omitted relevant, crucial information." San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus (1994) 27 Cal.App.4th 713, 729, 734, 739 (internal quotation marks omitted). An agency's determinations must be set aside where there is a prejudicial abuse of discretion. An "[a]buse of discretion is established if the agency has not proceeded in a manner required by law or if the determination or decision is not supported by substantial evidence." Pub. Resources Code §21168.5; see Pub. Resources Code §21168; Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova (2007) 40 Cal. 4th 412, 426-27 & 427 fn. 4 ("Vineyard Area Citizens"); Laurel Heights Improvement Assn. v. Regents of University of California (1988) 47 Cal.3d 376, 392 fn. 5 ("Laurel Heights I").	The comment is noted; however, the comment does not relate to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Jack London Park Partners	9/26/2022	B6-8	"[T]here are instances where the agency's discussion of significant project impacts may implicate a factual question that makes substantial evidence review appropriate." Sierra Club v. County of Fresno (2018) 6 Cal.5th 502, 514 ("Friant Ranch"). Under CEQA, "substantial evidence includes fact, a reasonable assumption predicated upon fact, or expert opinion supported by fact," but "not argument, speculation, unsubstantiated opinion or narrative, evidence that is clearly inaccurate or erroneous, or evidence of social or economic impacts that do not contribute to, or are not caused by, physical impacts on the environment." Pub. Resources Code §21080(e)(1) & (2). Here, the County's DEIR wholly fails to analyze the potential impacts described herein and has therefore not proceeded in the manner required by law. The California Supreme Court has recognized that "adequacy of discussion claims are not typically amenable to substantial evidence review." Friant Ranch, supra, 6 Cal.5th at 515. Additionally, an agency's abuse of discretion is prejudicial where its environmental disclosure documents omit information required by CEQA and necessary for an informed discussion. See POET, LLC v. State Air Resources Bd.(2017) 12 Cal.App.5th 52, 84. "The failure to comply with the law subverts the purposes of CEQA if it omits material necessary to informed decisionmaking and informed public participation;" the "[c]ase law is clear that, in such cases, the error is prejudicial." Friant Ranch, supra, 6 Cal.5th at 515 (internal quotation marks omitted).	The comment is noted. See Chapter 3 regarding impact analyses of different environmental categories pursuant to CEQA requirements. No specific assertions have been made to indicate how the DEIR is inadequate. Therefore, the comment does not relate to the adequacy of the DEIR and no further response is required.
Jack London Park Partners	9/26/2022	B6-9	For the foregoing reasons and those set forth below, the DEIR must be revised to include (1) an adequate Specific Plan that clearly states that the open space west of Arnold Drive will be directly transferred to State Parks to further the mandate of the governing statute, Gov't Code	The comment is noted; see response to comment B6-3.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			§14670.10.5; (2) an analysis of potential environmental impacts posed by unrestricted access by Project residents to the western open space and the adjacent Park; (3) an analysis of the potential impact of the proposed Project on water resources critical for the biological resources, including extant flora, fauna and habitat, in the SDC open space and adjacent areas of the Park; and (4) an adequate consideration of alternatives that include and analyze a new Southern Park Entrance to address unrestricted access, mitigate VMT and other traffic impacts, adaptively reuse the two historic buildings, and enhance of the wildlife corridor in that area. Such revisions will provide significant new information and will thus require recirculation of the DEIR.	
Jack London Park Partners	9/26/2022	B6-10	The Project Description Fails to Reflect Direct Transfer of Open Space and the DEIR Fails to Analyze Impacts to Biological Resources from Unrestricted Access: "An accurate, stable and finite project description is the Sine qua non of an informative and legally sufficient EIR." County of Inyo v. City of Los Angeles (1977) 71 Cal.App.3d 185, 192-193. "A curtailed or distorted project description may stultify the objectives of the reporting process," because it is "[o]nly through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal (i.e., the 'no project' alternative) and weigh other alternatives in the balance." Id. Numerous cases have reiterated this principle because, for example, "a project description that gives conflicting signals to decision makers and the public about the nature and scope of the project is fundamentally inadequate and misleading."	The comment is noted. See response to B1-22 regarding open space impacts. Impacts to biological resources are analyzed in Section 3.4 of the DEIR. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the State transfers the open space to. See MR-2. The remainder of the comment does not relate to the adequacy of the DEIR and no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Stopthemillenniumhollywood.com v. City of Los Angeles (2019) 39 Cal.App.5th 1, 17 (internal quotation marks omitted).	
Jack London Park Partners	9/26/2022	B6-11	As explained below, the Project Description (see DEIR, Chapter 2) and the Specific Plan omit discussion of whether the western and eastern SDC open space will be transferred to State Parks and to the Sonoma County Regional Parks Department ("Regional Parks"), preserved as public parkland, and protected from impacts posed by the Project. The Project Description should be revised to address this critical omission and, specifically, to clearly state that the open space west of Arnold Drive will be transferred to State Parks. Public officials, government agencies, and numerous public commentators have repeatedly called for a direct transfer of the open space to State Parks and Regional Parks, yet the Specific Plan and the DEIR fail to address this issue, and the DEIR fails to analyze the potential impacts of unrestricted access by Project residents and hotel guests on the biological resources that exist in the SDC open space and the adjacent Park.	The comment is noted. As stated in Government Code Section 14670.10.5, it is the intent of the Legislature that the lands outside the core developed campus and its related infrastructure be preserved as public parkland and open space. Accordingly, page 68 of the DEIR states that the Core Campus will be surrounded by a vast network of permanently preserved open spaces. Further, proposed Policy 2-1 ensures that land shown In Figure 2.2-1 as Preserved Open Space is dedicated or maintained as permanent public open space, and the Managed Landscape/Fire Buffer is designed and maintained for that purpose. The DEIR analyzes the potential impacts of residential and commercial development on biological resources starting on page 235 of the DEIR. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the State transfers the open space to. See MR-2.
Jack London Park Partners	9/26/2022	B6-12	Indeed, not only does the DEIR fail to analyze such impacts, it sets forth a "vision" that is directly contrary to the statutory requirement that the open space be preserved as "public parkland" and as a "public resource:" The DEIR proposes that the core 180-acre developed area will feature "recreational open space integrated with the surrounding park systems" and that "[r]esidents [will] enjoy pedestrian access to essential services and parks, and seamless connections to surrounding open spaces." DEIR, p. 64. Similarly, the Specific Plan's Guiding Principles include	The comment is noted. As described on page 319 of the DEIR, the Core Campus will be surrounded by a vast network of permanently preserved open spaces to protect natural resources, foster environmental stewardship, and maintain and enhance the permeability of the Sonoma Valley Wildlife Corridor for safe wildlife movement throughout the site. This adheres to the requirements of the State legislation. See also response to comment B1-22. Impacts to biological resources are analyzed in Section 3.4 of the DEIR.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			"[s]upport[ing] the responsible use of open space as a recreation resource for the community." Specific Plan, Guiding Principle 3, p. 1-9.2	
Jack London Park Partners	9/26/2022	B6-13	The County's preferred alternative includes up to 1,000 residential units, 2,400 residents, a hotel and other facilities. Even at the height of operations, the SDC did not provide unrestricted recreational activities in the open space or the surrounding park systems for this volume of residents and staff. Moreover, in the decades since SDC operations wound down,3 fragile ecosystems, wildlife, flora and habitat have developed in the open space and in adjacent areas of the Park. The environmental impact of unrestricted "recreational" access and use of these areas by the "community" of thousands of Project residents and hotel guests is of grave concern, poses the potential for significant impacts, and must be analyzed under CEQA. The language of the DEIR and Specific Plan also suggests preferential and unrestricted access tantamount to private use of these areas by Project residents and hotel guests, contrary to the governing statutory requirements. See Gov't Code §14670.10.5(a).4	The comment is noted. As described on page 242 of the DEIR, there is some increased risk of open space and biological resource impacts that may result from increased vehicular traffic, increased recreational use, and domestic pets. However, policies in the Proposed Plan and Standard Conditions of Approval would serve to reduce potential impacts to a less than significant level. Outside of the developed areas, the Proposed Plan establishes dedicated open space areas. Managed open space in these areas would preserve and, in some cases, enhance the quality of sensitive habitats such as wetlands, native grasslands and oak woodlands. Several special-status wildlife and some plant species would be positively impacted by the preservation of these habitats. The open space would preserve the Sonoma Valley Wildlife Corridor and maintain its permeability for the movement of wildlife at a regional scale. Policies 2-6 through 2-26 address development-related impacts on non-status and special-status species and their habitats. These policies reduce the potential for significant impacts, especially from operational impacts after the completion of the construction of individual projects. They also restrict most development near and in the most sensitive habitat types and habitat types that support special-status plant species, including all of those referenced in Table 3.4-3. Additionally, policies 2-25 (protective buffer of Sonoma Creek), 2-27 (County's Municipal Code for riparian corridor protection), and 2-30 (maintain standard project protection measures for any development adjacent to riparian corridors) would ensure protection of streams

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				and riparian resources during any adjacent ground disturbing actions. Proposed Policy 2-13 would restrict access to the wildlife corridor and creek corridor to designated pedestrian paths marked with clear signage. Proposed Policy 2-14 would prohibit all unleashed outdoor cats and restrict off-leash dogs and other domestic animals to private fenced yards and designated area. With implementation of the applicable polices, the operational impact on riparian habitat and other sensitive activities would be less than significant. The type of recreational uses mentioned in the comment pertains to the Specific Plan. Thus, this is not related to the adequacy of the DEIR, and no further response is required.
Jack London Park Partners	9/26/2022	B6-14	It was precisely because of such concerns that the statute requires that the open space be preserved as "public parkland" and as a "public resource." And it is precisely because of such concerns that public officials, coalitions of government agencies and the public have insisted for years that there be a direct transfer of the open space to State Parks and Regional Parks. For example, the express goal of the SDC Coalition Land Committee's Land and Water Protection Proposal (February 2019)5 was to ensure a "low cost/no-cost transfer of ownership of the areas outside the existing developed campus of SDC to the California Department of Parks and Recreation (State Parks) or the Sonoma County Regional Parks Department (Regional Parks) to ensure permanent protection." At the January 8, 2022 Community Workshop on the Future of SDC, Sonoma Land Trust similarly observed that a "crucial outcome" is the transfer of the 750-acres of open space to State or County parks, and is vital to	The comment is noted. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the state transfers the open space to. See MR-2. however, the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			protection of the wildlife corridor and other natural resources and the preservation of this land as a public resource.	
Jack London Park Partners	9/26/2022	B6-15	Public officials have also repeatedly declared their support for a direct transfer of the open space to State Parks and Regional Parks. At the County Board of Supervisor's meeting on January 25, 2022, where the Board of Supervisors considered the County Staff's SDC Vision Plan Frameworks, Potential Development Types and Outcomes, Supervisor Susan Gorin expressed support for direct transfer of the SDC open space, stating that it is time to "to move it into annexation of the parks, both Jack London State Park and the Regional Park." Other Supervisors supported her comments. More recently, on June 14, 2022, State Senators Bill Dodd and Mike McGuire, along with Supervisor Gorin, issued a joint statement affirming that the SDC open space will be a public resource, consistent with direct transfer to State Parks and Regional Parks: "The land outside the core campus is already legally protected in state law as parkland and open space, and we will ensure it will always remain public land. Public agencies are working together to ensure the best long-term management of this incredible public resource."6	The comment is noted. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the State transfers the open space to. See MR-2. The remainder of the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Jack London Park Partners	9/26/2022	B6-16	The State Legislature has declared that "[t]he state parks and other nature, recreation, and historic areas deserve to be preserved and managed for the benefit and inspiration of all state residents and visitors to the state parks," and that "[i]ndividual units of the state park system derive increased importance and recognition through their inclusion in a unified state park system that is preserved and managed for the benefit and inspiration of all Californians and visitors to the state." Pub. Resources Code §5001(a)(2) & (3).	The comment is noted; however, the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Pursuant to this declaration, State Parks is committed to "promote and regulate the use of the state park system in a manner that conserves the scenery, natural and historic resources, and wildlife in the individual units of the system for the enjoyment of future generations," and "provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation."7 The governing statute here, Gov't Code §14670.10.5, is clearly intended to apply these mandates to the SDC open space.	
Jack London Park Partners	9/26/2022	B6-17	The failure of the Specific Plan and DEIR to provide for direct transfer is contrary to these assurances by public officials and the requirements of the governing statute. The failure of the DEIR to analyze the environmental effects of unrestricted access to the open space and adjacent areas of the Park is a violation of CEQA. We also note that the governing statute gives the current owner of SDC, the State Division of General Services ("DGS"), the right to transfer all or part of the SDC. The governing statute acknowledges the potential for transfer of a portion of the SDC property after "the county has granted necessary approvals to rezone the property, approved a specific plan or plans for the property, and approved any necessary development agreements needed for disposition of all or any portion of the property, or the director has determined that the transfer, sale, or final disposition is in the best interests of the state." Gov't Code §14670.10.5(e)(2).8	The comment is noted. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the State transfers the open space to. See MR-2. Pursuant to CEQA, the DEIR does analyze the Proposed Plan's impacts on biological resources and public services and recreation in Sections 3.4 and 3.13 of the Chapter 3 Environmental Analysis. The remainder of the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Jack London Park Partners	9/26/2022	B6-18	Consistent with this authorization, on May 17, 2022, DGS published a Request for Proposal ("RFP") seeking proposals from qualified parties "to purchase the Subject Property (described below) for potential redevelopment," and identified the Subject Property as "an approximately ±180 acre developed core campus ('Subject Property') surrounded by over ±700 acres of open space." RFP, p. 4. As Senator Dodd, Senator McGuire and Supervisor Gorin observed in their joint statement, "[w]e want to be crystal clear – the open space is absolutely not included in the Department of General Service's request for proposals."9 Accordingly, the open space and adjacent areas of the Park should not be subject to preferential and unrestricted access tantamount to private use of these areas by Project residents and hotel guests.	The comment is noted; however, the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Jack London Park Partners	9/26/2022	B6-19	The Specific Plan and the DEIR should acknowledge that the RFP does not include the open space, and that it will be directly transferred to State Parks and Regional Parks to ensure preservation as "public parkland" and a "public resource." Gov't Code §14670.10.5(a). Moreover, the DEIR must analyze and mitigate the environmental effects on biological resources in the SDC open space and adjacent areas of the Park that would be posed by unrestricted access of thousands of core campus Project residents and hotel guests.	The comment is noted. Pursuant to CEQA, the DEIR does adequately analyze the Proposed Plan's impacts on biological resources and public services and recreation in Sections 3.4 and 3.13 of the Chapter 3 Environmental Analysis. These impacts are mitigated to a less than significant level with implementation of proposed policies and Standard Conditions of Approval as outlined in the DEIR. The remainder of the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Jack London Park Partners	9/26/2022	B6-20	The DEIR Fails to Analyze Impacts from Project Use of Water Resources on Biological Resources in the Open Space and Adjacent Parkland. "The ultimate inquiry, as case law and the CEQA guidelines make clear, is whether the EIR includes enough detail 'to enable those who did not participate in its preparation to understand and to consider	The comment is noted. Impacts on biological resources are analyzed in Section 3.4 of the DEIR. The remainder of the comment is not related to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			meaningfully the issues raised by the proposed project.'" Friant Ranch, supra, 6 Cal.5th at 516 (citations omitted); see Guidelines §15151. As a result, "[t]o facilitate CEQA's informational role, the EIR must contain facts and analysis, not just the agency's bare conclusions or opinions." Laurel Heights I, supra, 47 Cal.3d at 404.	
Jack London Park Partners	9/26/2022	B6-21	An EIR must consider the potential environmental impacts from supplying water to a project, not simply whether there are sufficient water resources for a project. "The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided." Pub. Resources Code §21002.1(a). This includes impacts from water usage, because "[t]he ultimate question under CEQA . . . is not whether an EIR establishes a likely source of water, but whether it adequately addresses the reasonably foreseeable impacts of supplying water to the project." Vineyard Area Citizens for Responsible Growth, supra, 40 Cal.4th at 434 (emphasis in original).	The comment is noted. The DEIR does consider the potential construction and operational impacts from supplying water to the site. Page 480 of the DEIR states that the land use and population projections developed for the Proposed Plan and used as the basis for technical modeling in this EIR account for the construction of this new local conveyance infrastructure. Therefore, the environmental impacts related to construction period traffic, noise, and air quality and GHG emissions have been considered throughout this EIR at a programmatic level. Distribution mains would be installed within the Street Network Figure of the Proposed Plan and where new streets are to be constructed; installation of the mains will be done concurrently with roadway construction. Further, construction would be subject to separate project-level CEQA review at the time specific projects are proposed in order to identify and mitigate project-specific impacts as appropriate. As such, compliance with existing regulations and implementation of Proposed Plan policies would reduce impacts to the maximum extent practicable. Overall, buildout of the Proposed Plan would result in less than significant impacts related to the provision of water treatment and conveyance facilities.
Jack London Park Partners	9/26/2022	B6-22	An EIR is inadequate where, "even if the Water District does have the ability to meet the water requirements of the project, the EIR is silent about the effect of that delivery on	The comment is noted. Cumulative impacts on water resources are analyzed in Chapter 5 of the DEIR. The

Submitter	Date	Comment Code	Individual Comment	Response
			water service elsewhere in the Water District's jurisdiction." Santiago County Water Dist. v. County of Orange (1981) 118 Cal.App.3d 818, 831 ("Santiago County Water Dist."). An agency presenting evidence "to show that there are sufficient water resources available for the project. . . . is beside the point," because "[i]t is the adequacy of the EIR with which [courts] are concerned, not the propriety of the board of supervisors' decision to approve the project." Id. Accordingly, "[d]ecision makers must, under the law, be presented with sufficient facts to 'evaluate the pros and cons of supplying the amount of water that the [project] will need.'" Vineyard Area Citizens, supra, 40 Cal.4th at 431 (quoting Santiago County Water Dist., supra, 118 Cal.App.3d at 829). Where an agency fails to include such an analysis, it has "failed to proceed in the manner prescribed by CEQA." Id. at 435 (internal quotation marks omitted).	remainder of the comment does not relate to the adequacy of the DEIR and no further response is required.
Jack London Park Partners	9/26/2022	B6-23	Here, the DEIR wholly fails to consider the impacts that Project water use will have on biological resources in the SDC open space and adjacent areas of the park. As noted above, the County's preferred alternative includes up to 1,000 residential units, 2,400 residents, a hotel and other facilities. It has been decades since the SDC operated at anything approaching this population and, even at the height of operations, SDC did not involve the level of water use posed by the Project or the drought conditions and groundwater use restrictions currently affecting and forecast for Sonoma County. Moreover, ecosystems exist and have developed in the open space and in adjacent areas of the Park, including coastal redwoods estimated to be more than 1,000 years old, diverse wildlife species and fragile habitat, and the historic orchard that is undergoing restoration and is located immediately west and upgradient	The comment is noted. See response to comment B6-21 and B3-11. Please see also MR-3 regarding the programmatic nature of the DEIR and MR-5 regarding the adequacy of the water supply analysis.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			of the Project. The DEIR fails to analyze the impact of the Project's proposed use of surface and groundwater on these biological resources.	
Jack London Park Partners	9/26/2022	B6-24	Jack London Park Partners expressly identified this concern in a letter commenting on the Notice of Preparation ("NOP") for the Project, submitted to the County on March 25, 2022.11 Similarly, the Sonoma Land Trust's comments on the NOP point out that "the EIR must consider the impacts of the Project on biological resources within [existing] parks" and that "[a]ll such impacts are particularly likely here given intensity of proposed development and SDC's proximity to major regional parks, including Sonoma Valley Regional Park to the northeast and Jack London State Historic Park to the west."12 In fact, the DEIR acknowledges that "[d]irect impacts to streams and surrounding habitat could result in the loss of suitable habitat or harm of these species if they are present," and that "[d]irect mortality, substantial loss of habitat, or loss of breeding habitat may be considered potentially significant impacts." DEIR, pp. 241-242. However, the DEIR fails to analyze the impacts from this new and massive water usage—either on the biological resources in the open space or on the biological resources of the adjacent Park. Instead, the DEIR merely states that "[i]mplementation of the Proposed Plan would not increase water demand within the Planning Area from historical peak amounts" (DEIR, p. 484), wholly failing to analyze the impacts from the Project's water usage on animal and plant species, habitat, ecosystems and other biological resources in the western open space and adjacent areas of the Park. Such impacts must be analyzed for the DEIR to be compliant with CEQA. See Vineyard Area Citizens, supra, 40 Cal.4th at	The comment is noted. While it is true that operation of the Proposed Plan could result in increased risk to impacts on biological resources, implementation of proposed policies and Standard Conditions of Approval would mitigate impacts to a less than significant level. Please see response to comment B6-13. See also MR-5 regarding water usage.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			434; Santiago County Water Dist., supra, 118 Cal.App.3d at 831.	
Jack London Park Partners	9/26/2022	B6-25	The failure to include this analysis cannot be salvaged by claiming the Project is self-mitigating. First, the DEIR does not identify and analyze this impact on biological resources in the open space and adjacent Park areas, which is itself a fatal flaw under CEQA. Second, an EIR cannot treat mitigation measures as elements of the Project. An EIR may not proceed by "incorporating the proposed mitigation measures into its description of the project and then concluding that any potential impacts from the project will be less than significant" because, "[b]y compressing the analysis of impacts and mitigation measures into a single issue, the EIR disregards the requirements of CEQA." Lotus v. Department of Transportation (2014) 223 Cal.App.4th 645, 655-656. In particular, "[a]bsent a determination regarding the significance of the impacts to [specific biological resources, such as] the root systems of the old growth redwood trees, it is impossible to determine whether mitigation measures are required or to evaluate whether other more effective measures than those proposed should be considered," because a determination that there is a significant impact "would trigger the need to consider a range of specifically targeted mitigation measures, including analysis of whether the project itself could be modified to lessen the impact." Id. at 656. Here, the DEIR wholly fails to analyze such impacts.	The comment is noted. See response to comment B6-21. Please see also MR-3 regarding the programmatic nature of the DEIR, and MR-1 regarding the self-mitigating nature of the Specific Plan.
Jack London Park Partners	9/26/2022	B6-26	Additionally, the analysis of biological impacts that is included in the DEIR is impermissibly limited to the Project area itself and treats mitigation measures as elements of the Project—including certain Specific Plan Policies and Standard Conditions of Approval —and	The comment is noted. See response to comment B6-21. Please see also MR-3 regarding the programmatic nature of the DEIR.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			thereby erroneously finds that although the Project "could have a significant direct or indirect impact on special-status species or habitats if it would result in the removal or degradation of the species or potentially suitable habitat," such impacts would be less-than-significant because "[p]olicies in the Proposed Plan would serve to reduce potential impacts." DEIR, pp. 241-242. This approach does not provide the impact analysis required under CEQA. Furthermore, the policies in the proposed Specific Plan are limited to "identifying the presence of special-status species and sensitive habitats at proposed development sites." DEIR, p. 240 (quoting Specific Plan Policy 2-28, emphasis added). They do not address impacts caused by Project water use on biological resources in the open space and adjacent areas of the Park.13	
Jack London Park Partners	9/26/2022	B6-27	In sum, the DEIR's failure to analyze Project water use impacts to biological resources in the open space and adjacent areas of the Park is contrary to well-established requirements of CEQA. The DEIR's conclusion that there are sufficient water resources for the Project and that there are no significant impacts to biological resources at the proposed developments sites is itself inadequately supported and, moreover, wholly fails to analyze the impacts caused by Project water use on biological resources in the open space and adjacent areas of the Park.	The comment is noted. See response to comment B6-21. Please see also MR-3 regarding the programmatic nature of the DEIR and MR-5 regarding the adequacy of the water supply analysis.
Jack London Park Partners	9/26/2022	B6-28	The Proposed Southern Park Entrance Will Mitigate Unrestricted Access and Traffic and Provide Historic Preservation and Wildlife Corridor Protection. The DEIR finds only two Project impacts to be significant—and finds these to be unavoidable: A substantial adverse change to the significance of an historic district, and an increase in VMT. See DEIR, pp. 8-9, 524. As Jack London Park Partners proposed in comments on the NOP,14 both could	The comment is noted. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the State transfers the open space to. See MR-2. The remainder of the comment is related to the Specific Plan

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			be mitigated in part by including a Southern Park Entrance in the area immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive, and adaptively reusing the two historic buildings in that area as a visitor center. Additionally, together with direct transfer to State Parks, the Southern Park Entrance could mitigate biological impacts from unrestricted access to the western open space and adjacent areas of the Park by Project residents and hotel guests, and could promote protection of the wildlife corridor in that area.	and not the adequacy of the DEIR, thus no further response is required.
Jack London Park Partners	9/26/2022	B6-29	"Without meaningful analysis of alternatives in the EIR, neither the courts nor the public can fulfill their proper roles in the CEQA process." Laurel Heights I, supra, 47 Cal.3d at 404. Specifically, "[a]n EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." Guidelines §15126.6(a). Accordingly, "it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation." Id.	The comment is noted. The DEIR adequately presents and analyzes alternatives pursuant to CEQA requirements – see Chapter 4 of the DEIR. No specific assertions have been made to indicate how the DEIR is inadequate. Therefore, the comment does not relate to the adequacy of the DEIR and no further response is required.
Jack London Park Partners	9/26/2022	B6-30	The DEIR's analysis of the Project's impacts to biological resources is insufficient, and the DEIR's failure to recognize significant impacts to such resources results in an inadequate consideration of project alternatives. In addition to failing to consider impacts from the Project's water usage and unrestricted access, as discussed above, the DEIR makes a conclusory statement that "given the extensive park and recreational opportunities that will be offered within the Planning Area, development under the Proposed Plan would not increase the use of existing	The comment is noted. As discussed on page 405 of the DEIR, the Proposed Plan would preserve approximately 755 acres of open space within the 945-acre Planning Area, which is envisioned as a recreational amenity with designated trails and water recreational opportunities that integrate with existing regional parks (proposed policies 2-1, 2-4, and 2-5). Additionally, the Core Campus subarea within which development would primarily be focused would include approximately 12.1 acres of active open space which is envisioned to include the Central

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, and this impact is less than significant." DEIR, p. 406. Yet, as noted above, the DEIR also sets forth a "vision" that the estimated 2,400 "[r]esidents [would] enjoy pedestrian access to essential services and parks" and "recreational open space integrated with the surrounding park systems." DEIR, p. 64. Clearly, these "vision" statements are inconsistent with the conclusion, devoid of analysis, that any impacts will be less than significant.	Green, Baseball Fields, a dog park, and a diverse range of parks and public spaces (proposed policies 6-3, 6-4, 6-5, and 6-6). All of these proposed park and recreational facilities would distribute use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of these facilities would not occur or be accelerated. Moreover, proposed Goal 6-B and Policy 6-3 require the protection and maintenance of existing and proposed recreational facilities to support continued public access without physical deterioration. Therefore, given the extensive park and recreational opportunities that will be offered within the Planning Area, development under the Proposed Plan would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, and this impact is less than significant.
Jack London Park Partners	9/26/2022	B6-31	As noted above and in Jack London Park Partners' March 25 letter, the SDC open space area immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive could provide a Southern Park Entrance for improved public access and mitigate unrestricted access to the Park, including the historic orchard, via existing trailheads and access roads. The area also includes two historic buildings, believed to have been constructed more than 100 years ago, that could be restored and adaptively reused as a visitor center, with ADA accessible parking, visitor parking, and access by public transportation on Arnold Drive. There could also be measures to protect and enhance the wildlife corridor in this area.	The comment is noted. See Section 3.4 of the DEIR for discussion of proposed policies and Standard Conditions of Approval that would reduce impacts on wildlife to a less than significant level. The remainder of the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Jack London Park Partners	9/26/2022	B6-32	The area is physically separated by Sonoma Creek from the SDC core campus, and adaptive reuse could help protect, and provide opportunities to enhance, the wildlife corridor including potential land bridges. The area is also across Arnold Drive from the SDC open space north of the core campus, which could similarly be adaptively reused to enhance the wildlife corridor, and could provide overflow visitor parking for the proposed visitor center and southern entrance to the Park, as well as visitor parking for Sonoma Valley Regional Park.	The comment is noted; however, the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Jack London Park Partners	9/26/2022	B6-33	A Conceptual Site Plan of a Southern Park Entrance for this area was an Attachment to Jack London Park Partners' March 25 letter commenting on the NOP, which is attached hereto. As can be seen in that Conceptual Site Plan, the Southern Park Entrance incudes adaptive reuse of existing structures for a visitor center and Jack London Park Partners staff offices, ADA accessible parking and other visitor parking, access to public transportation, and wildlife corridor protections and enhancements in the SDC open space area immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive.	The comment is noted; however, the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Jack London Park Partners	9/26/2022	B6-34	The DEIR should be revised and recirculated to consider and include the Southern Park Entrance proposed by Jack London Park Partners. The proposal appears consistent with Specific Plan Policy 2-4, which seeks to "[r]ealign and upgrade the trails to improve the use experience and accessibility, while minimizing impacts to open space" (Specific Plan Policy 2-4, pp. 2-9), and the DEIR's recognition of "the 11-acre non-contiguous Camp Via grounds within Jack London State Historic Park" that includes "an existing network of trails and access roads." DEIR, pp. 3-4.	The comment is noted; however, the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Jack London Park Partners	9/26/2022	B6-35	The Project will dramatically increase both the population in the area and the potential for unrestricted access to the open space and the Park. As noted above, the DEIR projects that the Project will increase the local population by 2,400 residents (DEIR, p. 7), and recognizes multiple potential access points as part of development of the SDC core campus. See, e.g., Specific Plan, Figures 3.1-1 and 3.2-1. The DEIR also recognizes that the open space includes "many acres of valuable wildlife habitat," and that, "[i]n terms of potential operations and maintenance related impacts, some increased risk to special-status species may result from . . . increased recreational use, and domestic pets." DEIR, pp. 3, 241. However, the DEIR fails to identify and analyze such impacts, as discussed above.	The comment is noted. Pursuant to CEQA, the DEIR does adequately analyze the Proposed Plan's impacts on biological resources and public services and recreation in Sections 3.4 and 3.13 of the Chapter 3 Environmental Analysis. These impacts are mitigated to a less than significant level with implementation of proposed policies and Standard Conditions of Approval as outlined in the DEIR.
Jack London Park Partners	9/26/2022	B6-36	The Southern Park Entrance, together with direct transfer to State Parks and other measures, could mitigate the significant biological impacts that the DEIR currently fails to identify and analyze. The SDC open space northwest of the Jim Berkland Memorial Bridge provides opportunities to protect and enhance this area of the wildlife corridor, and the proposed South Park Entrance and visitor center could reduce the risk of environmental harm that could otherwise result from unrestricted Park and open space access by large numbers of Project residents and hotel guests following development of the SDC core campus.	The comment is noted. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the State transfers the open space to. See MR-2. Impacts to biological resources are adequately analyzed pursuant to CEQA requirements in Section 3.4 of the DEIR. With compliance to regulations and implementation of proposed policies and Standard Conditions of Approval, impacts to biological resources would be less than significant. See also MR-7. The remainder of the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Jack London Park Partners	9/26/2022	B6-37	As shown on the Conceptual Site Plan attached hereto, there are existing trailheads and access roads leading to the Park from the SDC open space area northwest, and immediately south, of the Jim Berkland Memorial Bridge.	The comment is noted; however, the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			There is also an existing, dedicated pedestrian walkway on the western side of the Jim Berkland Memorial Bridge that would provide access between the proposed visitor center, existing trailheads, and the SDC core campus. These access points would be controlled, allowing existing wildlife corridor features to be protected and enhanced, and operation of the Southern Park Entrance and visitor center would be limited to Park hours, avoiding human impacts to wildlife movement.	
Jack London Park Partners	9/26/2022	B6-38	The Southern Park Entrance could also help mitigate the two significant impacts identified in the DEIR. The DEIR states that "[t]he Proposed Plan would result in significant and unavoidable impacts related to transportation (Impact 3.14-2), and historic resources (Impact 3.5-2)," and that its discussion of alternatives is intended to "inform the public and decision-makers about feasible alternatives that may avoid or substantially lessen the significant effects of the Proposed Plan." DEIR, pp. 524-25. The Southern Park Entrance and public transportation access on Arnold Drive would reduce traffic that must now continue through the center of Glen Ellen and along London Ranch Road for access to the Park. In addition, the proposed Southern Park Entrance includes adaptive reuse of existing structures for a visitor center and would thus preserve those two historic buildings.	The comment advocates for a southern park entrance which is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Jack London Park Partners	9/26/2022	B6-39	Accordingly, the Southern Park Entrance proposed by Jack London Park Partners should be identified in a revised Specific Plan and recirculated DEIR, and analyzed for mitigation of significant impacts to biological resources that the DEIR failed to identify, as well as the significant traffic and historical resources impacts acknowledged by the DEIR.	The comment is noted; however, the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Jack London Park Partners	9/26/2022	B6-40	Conclusion On behalf of Jack London Park Partners, we appreciate your consideration of these comments, which we believe are important for public access, water resource, biological resource and environmental protection, enhancement of the wildlife corridor, and the future use of SDC open space as a public resource and public parkland in accordance with the governing statute.	The comment is noted; however, the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Jack London Park Partners	9/26/2022	B6-41	On behalf of Valley of the Moon Natural History Association dba Jack London Park Partners ("Jack London Park Partners"), this will provide comments relating to the County of Sonoma's Notice of Preparation ("NOP") and scoping for the proposed Program Environmental Impact Report ("PEIR") under the California Environmental Quality Act ("CEQA"), and related matters, for the future of the Sonoma Developmental Center ("SDC") property under Government ("Gov't") Code §14670.10.5.	The comment is noted. The comment is related to the NOP. The NOP comments previously received were addressed in the DEIR in the summary of NOP Comments (Appendix A, including this letter, which is attached to the DEIR comment letter) and summarized at the beginning of each topical section. See page 45 of the DEIR. No further response is required.
Jack London Park Partners	9/26/2022	B6-42	As set forth below, Jack London Park Partners requests that the NOP project description be clarified to provide for, and that the PEIR analyze, (1) direct transfer of the SDC open space west of Arnold Drive to the California Department of Parks and Recreation ("State Parks") to be "preserved as public parkland" and ensure "permanent protection of the open space and natural resources as a public resource," as required by the governing statute, Gov't Code §§14670.10.5(a)(9); and (2) a southern entrance to Jack London State Historic Park (the "Park"), visitor center, and wildlife corridor protections and enhancements in the SDC open space area immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive.	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the State transfers the open space to. See MR-2.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Jack London Park Partners	9/26/2022	B6-43	Jack London Park Partners: Jack London Park Partners emerged during a budgetary crisis in 2012 that would have shuttered many state parks. It was the first non-profit organization to take up management of a state park on behalf of the people of California. Since then, it has been successfully managing, restoring and maintaining the natural and historical features of the Park under contract with State Parks, the owner of the Park. Jack London Park Partners also contributes funds to advance cultural and recreational programs, and create educational exhibits, interactive displays, signage and other features at the Park.	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41.
Jack London Park Partners	9/26/2022	B6-44	Jack London Park Partners is the outgrowth of Valley of the Moon Natural History Association, a citizens' group established nearly a half-century ago to support the interpretive needs of three parks in Sonoma County, including the Park. The Association has played a vital role in recruiting and organizing the hundreds of volunteers who support all functions of the Park. Among the organization's most noteworthy accomplishments are the award-winning restoration of the cottage that was the residence of Jack and Charmian London after acquiring the "Beauty Ranch," and the completely re-imagined House of Happy Walls Museum which interactively brings the story of Jack and Charmian London to life.	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41.
Jack London Park Partners	9/26/2022	B6-45	Most recently, Jack London Park Partners began the restoration of 40 acres of historic orchard, established on SDC property more than a century ago, which became part of the Park in 2002. While many of the trees had died, some were still alive and bearing fruit, and the surviving trees have provided scions to grow new, historically authentic fruit trees to restore the orchard. With a combination of agricultural expertise and tender loving care, the orchard is on its way toward healthy stabilization	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			with revitalized trees producing several varieties of apples and pears, prune plums, apricots, cherries, and quince.1 Jack London Park Partners has formed a partnership with Farm to Pantry to provide fruit from the orchard to Sonoma organizations that help people facing food insecurity.	
Jack London Park Partners	9/26/2022	B6-46	With this history and continuing commitment in mind, Jack London Park Partners has a keen interest in ensuring that "the disposition of the property or property interests shall provide for the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible," as set forth in the statute governing the future of the SDC property, Gov't Code §14670.10.5(c)(3). In these comments, we address issues relating to public access, protection and enhancement of the wildlife corridor, and direct transfer of the open space to ensure that it will be public parkland and a public resource in fulfillment of these goals.	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the State transfers the open space to. See MR-2.
Jack London Park Partners	9/26/2022	B6-47	Direct Transfer of Parkland/Open Space: As noted above, the governing statute expressly provides that "[i]t is the intent of the Legislature that the lands outside the core developed campus and its related infrastructure be preserved as public parkland and open space" (Gov't Code §14670.10.5(a)(9)); and that "the disposition of the property or property interests shall provide for the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible." Gov't Code §14670.10.5(c)(3)(emphasis added).	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the State transfers the open space to. See MR-2.
Jack London Park Partners	9/26/2022	B6-48	The express goal of the SDC Coalition Land Committee's Land and Water Protection Proposal (February 2019)2 was to ensure a "low cost/no-cost transfer of ownership of the areas outside the existing developed campus of SDC to the California Department of Parks and Recreation (State Parks) or the Sonoma County Regional Parks Department	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			(Regional Parks) to ensure permanent protection." At the January 8, 2022 Community Workshop on the Future of SDC, Sonoma Land Trust similarly observed that a "crucial outcome" is the transfer of the 750 acres of open space to State or County parks, and is vital to protection of the wildlife corridor and other natural resources and the preservation of this land as a public resource.	
Jack London Park Partners	9/26/2022	B6-49	The County Staff's SDC Vision Plan Frameworks, Potential Development Types and Outcomes for the January 25 Supervisors' meeting included a reference to State Parks and Regional Parks as among the proposed Government Partnerships (Vision Plan at page 23); and the County Staff's January 25 Summary Report stated that each alternative would "dedicate 750 acres of the 930 acres3 to open space preservation/park expansion." (Summary Report at page 1). At the January 25 meeting, Supervisor Gorin expressed support for direct transfer of the SDC open space, stating that it is time to "to move it into annexation of the parks, both Jack London State Park and the Regional Park." Other Supervisors supported her comments.	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the State transfers the open space to. See MR-2.
Jack London Park Partners	9/26/2022	B6-50	However, there is nothing in the NOP, the County staff documents for the January 25 Supervisors' meeting, or the materials for the February 17 scoping meeting or the March 22 virtual workshop proposing that the open space will be directly transferred to State Parks and the Regional Park. In fact, the NOP states that the SDC open space will simply be "linked to regional parks and open space systems" and, in response to public comments advocating direct transfer at the County's March 22 virtual workshop, the County's consultant stated that "certain complexities" relating to "water rights" would make it "difficult" to transfer the open space to anyone other than the developer of the core	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the State transfers the open space to. See MR-2.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			campus. The County's consultant also expressed this position at an earlier public meeting.	
Jack London Park Partners	9/26/2022	B6-51	Such statements are contrary to the governing statute's requirement that the SDC open space be preserved as public parkland and protected as a public resource. Gov't Code §§14670.10.5(a)(9) and (c)(3). Moreover, the position of the County's consultant is contrary to the water rights ownership and use provisions expressly included in the statute. Specifically, the statute governing the future of the SDC property provides that "[t]he state owns riparian water rights and pre-1914 and post-1914 appropriative water rights . . . these rights may be held by the state for existing and future domestic uses on the property." Gov't Code §14670.10.5(f).4 The suggestion that water rights issues prevent direct transfer of the open space also ignores the availability of easements and licenses to ensure continued SDC core campus access to water supply sources and infrastructure.	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the State transfers the open space to. See MR-2.
Jack London Park Partners	9/26/2022	B6-52	Similarly, earlier suggestions that including the SDC open space in a sale to core campus developers will increase the potential purchase price or provide tax benefits are not only contrary to the statutory requirement that the land be preserved as public parkland and protected as a public resource, they are also belied by legal authorities disallowing such deductions where, as here, the developer would not be foregoing development rights to the open space, or where the developer would be receiving a quid pro quo or substantial benefit.	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41.
Jack London Park Partners	9/26/2022	B6-53	We note that the governing statute acknowledges the potential for transfer of a portion of the SDC property after "the county has granted necessary approvals to rezone the property, approved a specific plan or plans for the property,	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			and approved any necessary development agreements needed for disposition of all or any portion of the property, or the director has determined that the transfer, sale, or final disposition is in the best interests of the state." Gov't Code 14670.10.5(e)(2).5 Following transfer of the SDC open space west of Arnold Drive to State Parks, Jack London Park Partners contemplates a management contract with State Parks on terms similar to those that have achieved significant public benefits, environmental protection, and historic preservation for the existing Park during the past decade.	
Jack London Park Partners	9/26/2022	B6-54	For all of these reasons, Jack London Park Partners requests that the project description recognize, and the PEIR analyze, direct transfer of the SDC open space west of Arnold Drive to State Parks to be "preserved as public parkland" and to provide "permanent protection of the open space and natural resources as a public resource," as required by the governing statute. Gov't Code §§14670.10.5(a)(9) and (c)(3).	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41. The disposition of the property is a decision of the State independent of the Specific Plan and the EIR accurately studies the potential use of that area [restricted to open space] regardless of when or to who the State transfers the open space to. See MR-2.
Jack London Park Partners	9/26/2022	B6-55	Wildlife Corridor/Southern Park Entrance: The SDC open space area immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive could provide a south entrance for improved public access to the Park, including the historic orchard, via existing trailheads and access roads, in addition to protecting and enhancing the wildlife corridor in this area. The area also includes two historic buildings that could be restored and adaptively reused as a visitor center and staff offices, with ADA accessible parking, visitor parking, and access by public transportation on Arnold Drive. A Conceptual Site Plan for this area is an Attachment to these comments. The area is physically separated by Sonoma Creek from the	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			SDC core campus, and adaptive reuse could help protect, and provide opportunities to enhance, the wildlife corridor including potential land bridges. The area is also across Arnold Drive from the SDC open space north of the core campus, which could similarly be adaptively reused to enhance the wildlife corridor, and could provide overflow visitor parking for the proposed visitor center and southern entrance to the Park, as well as visitor parking for Sonoma Valley Regional Park.	
Jack London Park Partners	9/26/2022	B6-56	As shown on the attached Conceptual Site Plan, there are existing trailheads and access roads leading to the Park from the SDC open space area northwest, and immediately south, of the Jim Berkland Memorial Bridge. There is also an existing, dedicated pedestrian walkway on the western side of the Jim Berkland Memorial Bridge that would provide access between the proposed visitor center, existing trailheads, and the SDC core campus. The south entrance and public transportation access on Arnold Drive would also reduce traffic that must now continue through the center of Glen Ellen and along London Ranch Road for access to the Park.	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41.
Jack London Park Partners	9/26/2022	B6-57	The wildlife corridor enhancement, environmental protection and adaptive reuse of this area is consistent with the County Staff's Summary Report for the January 25 Supervisors' meeting, which acknowledges that "[t]he Board may consider directing staff to explore additional protection measures for the wildlife corridor." (Summary report at page 6.) Existing wildlife corridor features could be protected and enhanced, and operation of the south entrance and visitor center would be limited to Park hours, avoiding human impacts to wildlife movement, consistent with County's materials and public comments at the March 22 meeting. The adaptive reuse as a visitor center and	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			southern entrance is also consistent with preservation of the two historic buildings in that area, and again, with the governing statute's directive that "[i]t is the intent of the Legislature that the lands outside the core developed campus and its related infrastructure be preserved as public parkland and open space." Gov't Code §14670.10.5(a)(9).	
Jack London Park Partners	9/26/2022	B6-58	The County Staff's SDC Specific Plan and PowerPoint slides for the January 25 Supervisors' meeting include multiple access points to the parkland ("Proposed Connections to Open Space" in SDC Specific Plan "Features Common to Alternatives"), including one location in the area of the Jim Berkland Memorial Bridge. Additionally, the Project Setting section of the NOP acknowledges that "non-contiguous Camp Via" is within the Park, and that the open space includes "an existing network of trails and access roads." We note that the Project Setting section of the NOP acknowledges "many acres of valuable wildlife habitat" and includes a reference to "Biological Resources" among issues to be addressed in the PEIR. We also note that the materials presented at the County's March 22 workshop reference the need to "promote conservation of existing habitat," and "protect natural resources and critical wildlife habitat, maintain wildlife linkages and foster environmental stewardship." Jack London Park Partners has a history of promoting and achieving these objectives at the Park during the past decade.	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41.
Jack London Park Partners	9/26/2022	B6-59	The SDC open space northwest of the Jim Berkland Memorial Bridge provides opportunities to protect and enhance this area of the wildlife corridor, and the proposed south entrance and visitor center would reduce the risk of environmental harm that could otherwise result from unrestricted Park and open space access by large numbers	The comment is noted; however, the comment is related to the NOP and not the adequacy of the DEIR, thus no further response is required. See response to B6-41.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			of residents and visitors at multiple locations following development of the SDC core campus. For all of these reasons, Jack London Park Partners requests that the project description be clarified to include, and that the PEIR analyze, a southern entrance to the Park, a visitor center with ADA accessible parking and other visitor parking, access to public transportation, and wildlife corridor protections and enhancements in the SDC open space area immediately northwest of the Jim Berkland Memorial Bridge on Arnold Drive. On behalf of Jack London Park Partners, we appreciate your consideration of these points, which we believe are important for public access, environmental protection and enhancement of the wildlife corridor, and the future use of SDC open space as a public resource and public parkland in accordance with the governing statute.	
Valley of The Moon Alliance	9/26/2022	B7-1	Thank you for this opportunity for Valley of The Moon Alliance (VOTMA) to comment on the Sonoma Developmental Center (SDC) Specific Plan (SP) and DEIR. This is the most significant project proposed for the Valley in many decades, and it will permanently affect the whole of Sonoma Valley. The impact could be quite negative if the project is oversized for the area. Your diligence in getting the appropriate plan and development is appreciated by the communities surrounding SDC. There has been a lot of discussion and community input into this process and not too many perceived positive results for it. We hope that you will consider and respond to our questions and/or suggestions, and to the other well informed and impacted commentators, including the Sonoma Land Trust, Mobilize Sonoma, and the North Valley Municipal Advisory Committee.	Thank you for your comment letter. The comment is noted; however, it is not related to the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Valley of The Moon Alliance	9/26/2022	B7-2	Following are some comments and questions for your response. We have numbered and put in bold the questions, although in some places the text may suggest additional questions. 1. Adequacy of the Documents 1) How can the Specific Plan and accompanying EIR be enforced when the language is so imprecise?	The comment is noted. See MR-9. No other specific assertions have been made to indicate how the DEIR is inadequate. Therefore, the comment does not relate to the adequacy of the DEIR and no further response is required.
Valley of The Moon Alliance	9/26/2022	B7-3	When reviewing the adequacy of the DEIR, one is faced with the dilemma that, as a Specific Plan and a document under CEQA, it is improperly incomplete and inadequate. The current SP contains some goals and objectives that are written with language that is not specific. For example, "Policies in the Sonoma Developmental Center Specific Plan (SDC Specific Plan) are prepared in response to analysis in the EIR to ensure that the plan minimizes or reduces significant environmental impacts to the extent feasible; in this way the plan is "self-mitigating." CEQA also provides opportunities for environmental "tiering," and provides an exemption from subsequent environmental review for certain projects, including housing developments, that are consistent with a specific plan for which an environmental impact report has been prepared. If certified, the EIR will apply to development in the Planning Area that is consistent with the Specific Plan, and further environmental review will not be necessary."	The comment is noted. Please see MR-1 regarding the adequacy of a self-mitigating Specific Plan and MR-3 regarding the level of detail of analysis and programmatic nature of the DEIR.
Valley of The Moon Alliance	9/26/2022	B7-4	This is only one of the areas where language is imprecise, and in this case is a bit scary as well, as it appears designed to eliminate or severely curtail further environmental review of project phases. At page 7-2 of the SP, the Director of Permit Sonoma appears to be substituted as the review authority for all Administrative Design Review for building, grading and drainage permits in lieu of the Design Review Committee. 2) How does that make sense in terms of facilitating community input and balanced community	The comment is noted. Please see MR-6 regarding the adequacy of the transportation analysis and MR-5 regarding the adequacy of the water supply analysis. See also MR-7 regarding the adequacy of impacts on wildlife movement in the DEIR. See also MR-3. The size and scope of the plan itself won't vary; what is studied is a reasonable outcome of the plan. The remainder of the

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			assessment? 3) How can the DEIR properly analyze a plan when the plan is not specific, and when its size and scope could vary substantially? Where is the specificity in the language to assess the impact of a future development on the wildlife corridor, or the impact on the community. There is not adequate analysis to say that no mitigation is needed (i.e., that it is "self-mitigating"). Specific standards are needed now for the County to make an informed decision about this property, its future uses, and its impacts, not later. While different commenters may have different views on aspects of what should be done with the property, this concern for lack of precision is a common complaint of almost all commenters, from ourselves, to the Sonoma Land Trust, to the North Valley MAC.	comment is not related to the adequacy of the DEIR, thus no further response is required.
Valley of The Moon Alliance	9/26/2022	B7-5	2. Scale of Development In the DEIR's ES.2 Areas of Controversy list below, we have some other concerns and questions: A. Neighborhood Character 4)How can the SDC site and the surrounding rural neighborhoods and infrastructure possibly support the maximum 1000 housing units and large-scale non-residential development proposed? The traffic on the roads, the demand for water, and the impacts on the wildlife corridor from this level of development would simply be too great. B. Community Identity 5) Will this development be an extension of Glen Ellen, or will it be its own community of Eldridge, or could an alternative governance structure be preferable?	The comment is noted. Please see MR-1 regarding the adequacy of a self-mitigating Specific Plan and MR-3 regarding the level of detail of analysis and programmatic nature of the DEIR. See also MR-7 regarding the adequacy of impacts on wildlife movement in the DEIR. The remainder of the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Valley of The Moon Alliance	9/26/2022	B7-6	C. Historic Resource Alternative 6) Why is the Historic Resource Alternative not the preferred project when it is found in the DEIR to be the environmentally superior and otherwise meets the primary	The comment is noted. Please see MR-8 regarding the feasibility of the Historic Preservation Alternative.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			objective of the legislation? With 450 housing units, wouldn't this alternative be more be more appropriate for the rural neighborhood community which it is proposed? It was not named the environmentally superior alternative for nothing. It would allow for more opportunities for re-use of the existing buildings and would create housing and jobs for local essential workers. While the Historic Option might be "less" economically feasible, there is no finding that it is not economically feasible. 7) Why is there no financial model presented that allows a transparent comparison of the economic feasibility of various alternatives?	
Valley of The Moon Alliance	9/26/2022	B7-7	D. Legacy of Care 8)Why is the "legacy of Care" spelled out as a goal virtually ignored in the proposed Specific Plan? 9) How did the DEIR arrive at the level of care that the DEIR deemed was adequate? 10) How was the economic feasibility of legacy care units modeled and was any imputed value attributed to preserving the legacy of care? We believe that a more serious attempt is needed to meet goal 2-I of the SP, "to promote the Legacy of Care" in recognition of the work and history of SDC's work. There are presently only five parcels devoted to housing the disabled. 11)What kind and size of parcels are being considered and how many persons with developmental disabilities would be housed in the buildings on those parcels? 12) How was that level of care determined? There are existing buildings that need to be seriously investigated as sites to provide shelter for the disabled and comfort for the mentally challenged or a rehabilitation center. That investigation is missing from the plan. The SDC was established in this location because of its natural	The comment is noted; however, it is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			serenity and beauty. There remains a need for these kinds of services in such a setting.	
Valley of The Moon Alliance	9/26/2022	B7-8	E. Density The DEIR fails to adequately articulate the decision model for determining that 1000 housing units together with a hotel and a quality restaurant should be the preferred project. Economic feasibility is not the primary articulated decision criteria in the legislation. 13)How were the varying objectives in the legislation valued, weighted, and prioritized? 14) Who made the final decision for the preferred project details in terms of housing density and the ratio of affordable vs market rate housing? 15) What decision support model(s) were utilized?	The comment is noted; however, it is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Valley of The Moon Alliance	9/26/2022	B7-9	F. Type, Location and Size of Individual Housing Units: The DEIR assumes that major infrastructure facilities must be replaced under all alternatives. 16) Did the DEIR consider whether the scope and level of infrastructure replacement might be less if fewer new units were constructed, and greater restoration and reuse of the existing structures was instead the focus of the development strategy? 17) Did the DEIR consider the operational feasibility of isolating stormwater inflow and the cost savings (including the downstream avoidance of capacity additions to the treatment facilities) that would result from a simplified smaller housing unit strategy and expanded reuse of existing buildings? 18) Did the DEIR evaluate available newer technology to acceptably mitigate asbestos risks in existing building by isolating and sealing off the hazardous materials instead of ripping that material out and disposing of it? VOTMA believes that increasing the amount of new construction inflates the estimated infrastructure costs and climate change impacts, which in turn inflates the amount and type (i.e., market rate units) of	The comment is noted. The DEIR did consider Utility and Service System impacts for each Alternative located in Chapter 4 of the DEIR. As noted in Table 4.5-1 on page 576 of the DEIR, all Utility and Service System and Hazards and Hazardous Materials impacts would be less than significant for the Proposed Plan and each of the Alternatives. However, Alternatives with few housing units, like the Historic Preservation Alternative, would have fewer impacts on utility and service systems and hazard and hazardous materials compared to the Proposed Plan. Please see MR-8 regarding how GHG emissions in the Proposed Plan compare to the Historic Preservation Alternative. The remainder of this comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			development being proposed to recapture those costs. "Big" becomes self-reinforcing, which it should not be, particularly when the impacts to the environment and community can be so substantial. The DEIR says little if anything about the actual size of various units contemplated in the preferred project. 19) What are the maximum sizes (sq. ft.) for any of the units, and what is the minimum size of the smallest unit? 20) Why did the DEIR not propose a maximum size for any unit, and maximum sizes (sq. ft.) for the various types of units/multifamily facilities? The legislation from which the SP is being developed focuses on affordable housing. By controlling the maximum size of units, the "market rate" units become more affordable. The DEIR suggests that the preferred project is the most economically feasible. 21) Where is the modeling that supports the proposal that 1000 units with 75% of those units priced at market rate is the appropriate outcome consistent with the legislation?	
Valley of The Moon Alliance	9/26/2022	B7-10	G. Connection to Highway 12. 22) What impact on Highway 12 traffic flow would the proposed connector have if the connector is used only for emergency escape? 23) Would there be a new traffic signal for this connector on Highway 12? 24) How far would that signal be from the existing Madrone Road/Hwy 12 signal and how would those signals be coordinated? VOTMA is uncertain about this proposed connection. Another emergency evacuation route, depending on the size of the project, its intensity of use, its precise location, its probable need for yet another stoplight on Highway 12, all need further explanation. Further, the SP, 3-22 proposes to "establish an express bus service to and from Sonoma/ Santa Rosa that would utilize a new connector road between the SDC Core Campus and Hwy 12." 25) Does	The comment is noted. Please see MR-6 regarding the VMT impact of the Highway 12 connector. As noted on page 516 of the DEIR, the Proposed Plan would reduce some travel times from the Madrone/Proposed Plan area due to the planned additional connection to Highway 12 which would aid in evacuation and emergency response times. As noted on page 543 of the DEIR, if the Highway 12 connector was used solely for emergency access, it would eliminate the potential induced VMT impact identified for the Proposed Plan. However, even if an alternative would eliminate induced VMT impacts from a Highway 12 connection, there would likely be similar impacts related to development VMT including VMT per capita, VMT per employee, and total VMT per service population. Therefore, emergency access connection to

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			the proposal assume that the County would provide the funding to construct and operate the line? 26) If not, how would that be funded? 27) What and where is the analysis that supports the conclusion that a new road is needed for that purpose?	Highway 12 would not reduce VMT per capita sufficiently to avoid a significant and unavoidable VMT impact. The remainder of this comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Valley of The Moon Alliance	9/26/2022	B7-11	H. Wildlife Corridor.VOTMA believes that the wildlife corridor at issue here is unique in this region of the State, including its usage by mountain lions and black bear. 28) What studies and representative examples of similar wildlife corridor/adjacent dense development projects influenced your determination that the construction and operation of the 1000 housing units, hotel, quality restaurant, commercial and other enterprise developments that encompass the preferred project would not adversely affect the feasibility of this well-functioning natural wildlife corridor as portrayed by the DEIR and required by the legislation? VOTMA feels it is essential to protect the existing wildlife corridor, which is both unique to the Bay Area and essential for many important species. The transfer of ownership to the parks, SLT or other agencies that would support and maintain the Corridor is needed outside of the choosing of a developer. The size of the project also has an obvious and unavoidable impact on the Corridor. The population and traffic resulting from 1,000 new residences, a hotel and many businesses will have substantial and irreversible impacts on wildlife's use of the area. Furthermore, maintaining the integrity of the Corridor and the ability of wildlife to transit and disperse through the SDC property and adjacent parks is critical to meeting sustainability objectives. VOTMA endorses the Sonoma Land Trust's comments on this issue.	The comment is noted. Please see MR-7 regarding the adequacy of impacts on wildlife movement in the DEIR.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Valley of The Moon Alliance	9/26/2022	B7-12	Wildfires and wildfire evacuation. 29) Were any of the available traffic congestion databases (including those that specifically incorporate the real time traffic conditions on Highway 12 in the Sonoma Valley fires during 2017-2020) used in reaching the conclusion that the evacuation time would not increase significantly if the proposed project were developed? 30) How did you model the conflicting demands of inbound emergency and fire equipment/personnel, with outbound citizen evacuation demands in view of the two-lane status of all major arterials? 31) If done, what were the results and findings? This is a serious consideration especially for those of us who have been evacuated in the past. The testimony given about the length of time it took to get out of the danger zones should cause a recalculation of the timing presented. With this recalculation there needs to be considered how many other people will be trying to leave on the roadways at the same time. In the fires of 2017 and 2020, the traffic was alarming. 31) What happens when other developments, like Kenwood Ranch and Elnoka, are added to the stresses SDC redevelopment poses to Highway 12 as an evacuation corridor?	The comment is noted. Please see MR-4 regarding the adequacy of the wildfire evacuation analysis in the DEIR.
Valley of The Moon Alliance	9/26/2022	B7-13	Water supply. On page 469, the DEIR claims that "The WSA concludes all future demands within its service area can be met, inclusive of the Proposed Project in normal and multiple dry hydrologic years from 2025 through 2045". This same DEIR only acknowledges the likelihood of "single dry years", rather than a concatenation of multiple dry years. 33)Why hasn't the WSA considered he worst-case scenario with multiple dry years – a scenario we are currently facing? This could be our reality. 34) How does the DEIR look at preventive actions in the face of this uncertainty?	The comment is noted. The WSA does consider a multiple dry years scenario. Please see MR-5 regarding the adequacy of the water supply analysis in the DEIR. Policy 6-26 of the Specific Plan, as noted on page 478 of the DEIR, ensures that the SDC site's water rights are retained for uses within the Core Campus and for habitat preservation, ecological services, groundwater recharge in the open space area, and to increase the reliability of the regional water supply.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			35) Would it be prudent to include the Sonoma Valley Groundwater Sustainability Agency (GSA) for comments since the State still holds surface water rights and groundwater wells may be needed for supply water for this project? 36) Was the transfer of the State's water rights included as a done deal within the DEIR evaluation? 37)What if they continue to hold these rights within the open space, like Lake Suttonfield?	
Valley of The Moon Alliance	9/26/2022	B7-14	Hazardous Materials. VOTMA filed comments on the need for further environmental assessment work on March 24, 2022, in response for requests for comments in the NOP for the EIR. Those comments are included in pages 459-464 of the appendix to the DEIR. The DEIR acknowledged those comments on page 236 of Section 3.8 Hazards and Hazardous Waste. But the subsequent portion of this section does not add any new analysis of the recognized environmental conditions (REC) that VOTMA referenced. 38) Why was no further investigation undertaken and presented? The discussion for the most part addresses hazardous materials and substances issues that were identified as known or likely to exist in the Core Planning Area (CPA). The discussion acknowledged that the 2017 Limited Phase II report identified a variety of areas, both in the Core Planning Area (CPA) and in the lands outside of the CPA where "further investigation was needed". (Page DEIR 248; download, page 425). The discussion at various points indicates that if needed further investigation could be undertaken. Deferral of investigation and mitigation are not an allowed strategy under CEQA. The DEIR appears incomplete and defective on this issue. 39) Why were Phase II environmental assessments regarding hazardous materials and substances in the gap areas of recognized	The comment is noted. The DEIR adequately analyzes impacts from hazardous facilities as well as legacy environmental hazards and hazardous waste materials within the Planning Area. As noted on page 261 of the DEIR, the analysis considers the nature of foreseeable hazardous materials use, storage and disposal resulting from the redevelopment of the Sonoma Developmental Center. It also identifies ways that hazardous materials could be exposed to the environment or individuals. The analysis includes a qualitative evaluation of impacts associated with the presence or hazardous materials. The analysis is based on a review of materials ranging from online databases such as Envirostar and Geotracker, hazard maps, Phase I & II Site Assessments (see Appendix G), and relevant plans and regulations at the Federal, State, and local levels. As discussed on page 265 of the DEIR, hazardous materials identified at Phase I & Phase II Site Assessments have the potential to be released into the environment. In such an occurrence several Federal, State, or local agencies such as the EPA, SF Bay Regional Water Quality Control Board, DTSC, or Sonoma County will provide oversight in remediation. Additionally, proper abatement procedures will be

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			environmental conditions (RECs) identified in the prior Phase I but Limited Phase II investigations not undertaken? 40) For areas outside the CPA, where agriculture and recreation with public access are contemplated, will disturbance of soil be prohibited? 41) If not, how did the DEIR determine that there was no significant risk that hazardous material and waste that might have resulted from past activities over the last 125 years in those areas and what might be harmful to the persons, crops or wildlife could be disturbed or uncovered?	followed when renovating any of the structures that have lead-based paint or asbestos. Compliance with the Standard Conditions of Approval Measure HAZ-3 and existing regulations would reduce impacts related to the release of hazardous materials due to foreseeable upset or accident conditions to less than significant. Further, compliance with Standard Conditions of Approval and existing regulations is required for any development activities within the Planning Area that occur outside the Core Campus. However, given that all development will occur within the already developed Core Campus area under the Proposed Plan, hazardous materials impacts would be less than significant in the preserved open space areas. Please see also MR-3 regarding the programmatic nature of the DEIR. Individual projects are required to prepare more precise, project-level analyses to fulfill CEQA requirements.
Valley of The Moon Alliance	9/26/2022	B7-15	Transportation/Traffic: 42) Where is the W-Trans traffic operations analysis that PS suggested in the DEIR footnote 118 had been done? 43) Why was it not made available for review as part of the DEIR? The DEIR analysis of transportation, and specifically traffic issues is inadequate. VMT analysis is acceptable for dense urban projects, but does not capture the rural transportation impacts, especially in an area with defined and limited transportation corridors. Furthermore, if anyone else has submitted this VMT analysis, the County presumably would have required a peer review. 44)Where is that? Importantly, the requirement to use VMT for the projects' CEQA analysis does not preclude requiring a Level of Service traffic impact analysis to assist decision making for land use policy planning purposes, for zoning purposes, and	The comment is noted. The Focused Traffic Operations Analysis for the Draft SDC Specific Plan is published on the project's website at https://www.sdcspecificplan.com/documents. Please see MR-6 regarding the adequacy of the transportation analysis in the DEIR.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			for assessing fire/flood/earthquake evacuation risk parameters, and for assessing risks to the wildlife corridor, as wildlife must live within and navigate whatever level of development is approved here.	
Valley of The Moon Alliance	9/26/2022	B7-16	When asked about this by VOTMA, Permit Sonoma responded that the analysis was in Appendix F of the DEIR appendix. Appendix F at page 748 consists of a one page set of "Traffic Volume Data". There is no text, no interpretation, no assumptions, no contextual analysis. Informed, sound analysis and decision-making require a stand-alone project specific analysis for this project. The textual analysis in the DEIR itself is full of summary and conclusory statements. On the face the findings include 1) on page 442 that traffic from Harney to Glen Ellen would be reduced from peak, 2) on pages 445-446 that household, employment, and total service VMT would be reduced by the project compared to peak, and 3) on page 451 that the project would not result in inadequate emergency access, all seem particularly unsupported, counter-intuitive, and problematic. It is not clear whether the VMT analysis included hotel and quality restaurant VMT (or for that matter whether the GHG analysis included air travel of guests). The GHG analysis and the transportation analysis also do not seem consistent. The GHG analysis does not appear to incorporate emission associated with "fueling" EVs. It would seem relevant in this context to ask some simple foundational questions for both LOS and VMT analysis, such as: 45) Where will the people working at SDC be coming from to work there? 46) Where will the people who live at SDC but work off site be traveling? 47) Where would guests at the hotel be coming from? 48) Where is the nearest pharmacy? 49) Where is the nearest full service	The comment is noted. Please see MR-6 regarding the adequacy of the transportation analysis in the DEIR. As noted on page 234 of the DEIR, emissions were quantified for existing (2019, to align with traffic data provided by the Proposed Plan's traffic engineers, W-Trans) conditions based on land uses and traffic data that reflect the closed SDC facility. The CalEEMod "City Park" land use subtype was used to model existing conditions due to its representative level of low intensity use and was scaled for the Planning Area based on traffic inputs provided by the Proposed Plan's transportation engineers. As a result, existing conditions reflect only mobile sources of GHG emissions and energy consumption. Full detail about modeling inputs is provided in Appendix B. Additionally, it is noted that because there has been no change in land uses at the facility since its closure in 2018, 2019 baseline conditions are appropriately comparable to current (2022) conditions. Project buildout conditions (2040) were quantified for the Proposed Plan based on anticipated land uses and modeled traffic data, which includes the Highway 12 connector road. Emissions modeled in CalEEMod include quantifiable policies, including building electrification, prohibited natural gas, prohibited pesticides, complete streets with pedestrian-oriented design, traffic-calming measures, mixed-use diversity of uses, on-site energy (microgrid) with renewable resources and methane capture, Title 24 and CALGreen Tier 2 levels, water recycling and water conservation strategies

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			affordable market? 50) Where are the nearest medical complexes? 51)What will be the impact on Highway 12 traffic of having another traffic signal at the new proposed connector? The answers to those questions are not in the transportation segment of the DEIR. The use of VMT analysis should not be an excuse to avoid real impact analysis for the many decision-making functions the County must exercise with respect to the appropriate level of development of this property.	and design, and solid waste reduction. The remainder of the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Valley of The Moon Alliance	9/26/2022	B7-17	In developing these comments VOTMA did review some of the earlier documents listed on the SDC SP website. VOTMA now assumes that the August 2022 W Trans Analysis referenced in DEIR footnote 118 was intended to reference the July 2022 Analysis posted on the website. That LOS study uses a single weekday in April 2022 as its sole data source, does not include weekend data, does not include winery event and seasonal data, does not include any segment or intersection data north of the Arnold Drive-Highway 12 intersection, does not include any transportation cumulative impact analysis, and does not reference, reconcile or incorporate the Sonoma Valley Traffic Study the County sponsored in connection with assessing the over-concentration of winery events in Sonoma Valley as it develops the winery event ordinance. The W-Tran is inadequate and incomplete. 52) Was the W-Tran analysis peer reviewed as required by PS guidelines?	The comment is noted. The Focused Traffic Operations Analysis for the Draft SDC Specific Plan is published on the project's website at https://www.sdcspecificplan.com/documents. Please see MR-6 regarding the adequacy of the transportation analysis in the DEIR. However, traffic LOS can no longer be used as metric in the EIR, thus any LOS impacts from the Proposed Plan would not be considered significant under CEQA.
Valley of The Moon Alliance	9/26/2022	B7-18	M. Cumulative Impacts 53) Where is the detailed cumulative impact analysis? The DEIR basically dodges this requirement by saying that the cumulative impacts are already covered in relevant regional analyses. The community and its representatives must live with these impacts, and we have a right to see a detailed cumulative impact analysis. For example, 54) have the	The comment is noted. The cumulative analysis is detailed in Chapter 5 - CEQA Required Conclusions, starting on page 584 of the DEIR, and considers the likely effects of surrounding regional growth. Given the cumulatively considerable VMT impacts from the Proposed Plan, the impacts from Transportation are conservatively considered cumulatively considerable. By

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			effects of the known proposed developments of Elnoka and Kenwood Ranch off Highway 12 been considered from either a traffic or water use perspective? In summary, VOTMA believes that the DEIR is inadequate under CEQA and that the Specific Plan is not precise enough in its project statement to meet the requirements of CEQA. The County needs to ensure that the future use of the SDC is consistent with both the character and limitations of Sonoma Valley and with the communities that reside here. There may be no decision you face that will have a more significant or lasting impact on the Sonoma Valley for decades to come. Please ensure that the unique beauty and character of this special place are not adversely affected by this SDC decision-making process.	2040 SDC water use is estimated to reach 225 acre feet per year, which is less than the historical water demand and well within the supply available at the site according to the Water Supply Analysis conducted by the Valley of the Moon Water District and referenced in Section 3.15. Therefore, the Proposed Plan's contribution to this potentially significant cumulative impact is less than cumulatively considerable.
Sonoma Ecology Center (SEC)	4/3/2022	B8-1	This letter covers two related topics: A. Empirical, recent biodiversity observations made by SEC for consideration in the SDC Specific Plan B. Recommendations on policy and programs for the SDC Specific Plan A. Biodiversity Observations The Sonoma Developmental Center (SDC) property, in addition to its well-known placement at the narrowest point of the Sonoma Valley Wildlife Corridor, is a center of biodiversity. Because of continuous state ownership over the last century, it contains much of the least-disturbed habitat in Sonoma Valley.Since January 2019, community scientists and Sonoma Ecology Center (SEC) have been working on a project to document the biodiversity throughout the SDC. Organized by SEC biologist Dr. Dan Levitis, community members have used an app called iNaturalist to record observations of species throughout the 945 acres of SDC. The project has identified 1,175 species of animal, insect, plant, and fungi based on 14,805 observations. There is no sign that we are running out of new species to find. We are still collecting	Thank you for your comment. The list of documented special-status species and assessment of potential for special-status species to occur (Table 3.4-2) has been amended to include Sonoma Ecology Center provided observations for special status species. Some of the comment's designations of individual species do not meet the criteria to be considered "special status" under CEQA. However, these species will all benefit from the above-mentioned policies and would not be significantly adversely affected by future projects. The Specific Plan places a high priority on biodiversity preservation, preservation of wildlife corridors and protection of special-status species (Vision Statement; existing County, State and Federal policies; please refer to Specific Plan Goals 2-D, 2-E; Specific Plan Policies 2-6 through 2-30). Though the comment does identify some special-status species that were not identified as observed in the DEIR, all potential significant impacts to these species would be mitigated to a less than significant level with the

Submitter	Date	Comment Code	Individual Comment	Response
			observations, which we will share with you. Thefindings reinforce the need to preserve the sensitive habitat and rare species throughout SDC.Major findings include the high biodiversity of the entire property, several protected speciesliving on the property which had not been previously documented, and the vital importance ofthe under-documented wetland features on the east end of the property. Much of theprotected biodiversity we found on the property were in either riparian areas or wetlands.We are providing these publicly available data so that the SDC Specific Plan can comply with CEQA and protect SDC's natural resources. 1. Observers using eBird have documented 114 bird species on the property. https://ebird.org/hotspot/L5410092/2. Almost 15,000 photo observations uploaded to the citizen science platform, iNaturalist, by 278 community members and SEC staff have thus far documented 1,175 wild species (including animals, plants, fungi, and microorganisms) across SDC. Observations include data from camera trapping by SEC along Sonoma Creek within the Sonoma Valley Wildlife Corridor. These thousands of photo observations have been reviewed and confirmed by experts, and are geo-located, providing a fine-scale understanding of what is living where, and thus which parts of SDC require the greatest protection. https://www.inaturalist.org/projects/sonoma-developmental-center-umbrella-project Below please find a list of protected species the SDC property shelters, with a link to an iNaturalist observation of each. Animals Specially Protected Mountain Lion https://www.inaturalist.org/observations/107081516 Vulnerable White-tailed Kite https://www.inaturalist.org/observations/21885630 Special	implementation of existing Local, State and Federal laws and policies and the specific and general policies in the DEIR and Specific Plan.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Concern Vaux's Swift https://www.inaturalist.org/observations/51438474 Vulnerable Olive-sided Flycatcher https://ebird.org/species/olsfly/L5410092 Special Concern Western Pond Turtle https://www.inaturalist.org/observations/72065647 Special Concern California Giant Salamander https://www.inaturalist.org/observations/36579284 Vulnerable Foothill Yellow-legged Frog https://www.inaturalist.org/observations/110535841 Threatened California Red-legged Frog https://www.inaturalist.org/observations/37283513 Endangered California Clam-shrimp https://www.inaturalist.org/observations/24482413 Critically Endangered Sonoma Shoulderband Snail https://www.inaturalist.org/observations/21959054 Critically Endangered California Lancetooth Snail https://www.inaturalist.org/observations/45612842 Threatened Steelhead Trout https://www.inaturalist.org/taxa/47516-Oncorhynchus-mykiss Threatened Chinook Salmon https://www.inaturalist.org/observations/110551445 Endangered California freshwater shrimp, https://www.inaturalist.org/observations/39258047 Additional protected birds reported on or over the property include Bald and Golden Eagles, Peregrine Falcon, Osprey, and American White Pelican. Plants Endangered Coast Redwood https://www.inaturalist.org/observations/109504361 Vulnerable Hornwort, Anthoceros fusiformis https://www.inaturalist.org/observations/21766069 Fungi Endangered Golden-gilled Waxycap https://www.inaturalist.org/observations/21562391 Sonoma	

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Ecology Center – SDC Specific Plan Policy Recommendations Protected species documented on adjoining parcels, but not on SDC itself include: Critically Endangered Sonoma Sunshine Endangered Northern Spotted Owl Special Concern Red-bellied Newt	
Sonoma Ecology Center (SEC)	3-Apr-22	B8-2	B. Recommendations on policy and programs for the SDC Specific Plan B1. Water and wildlife 1. Conduct a full wetland delineation in the eastern portion of the property, and protect wetlands that are likely not currently mapped. Wetlands on the SDC property are generally under-mapped. Surveys for the WRT assessment were conducted late in September. Our staff and volunteers found multiple seasonal ponds and pools that are not on the maps the county has shared, and diverse wetland-dependent wildlife. a) Western Pond Turtles (a California species of special concern) breed in the degraded wetlands that run from the northern to the southern edges of the property east of Lake Suttonfield, including the old horse corral. Further, these wetlands on the east end of the property were, prior to development, in many ways similar to, and connected to, wetlands in Sonoma Valley Regional Park where Sonoma Sunshine (Blennosperma bakeri) finds one of its few remaining homes. b) We were surprised to find the California Clam-shrimp, an Endangered crustacean that specializes in seasonal pools. We found these in unmapped seasonal ponds near the southern proposed route for a road linkage to Hwy 12.	Comment incorporated. Specific Plan Policy 2-1 has been amended to state: "Ensure that land shown In Figure 2.2-1 as Preserved Open Space is dedicated or maintained as permanent public open space, and the Managed Landscape/Fire Buffer is designed and maintained for that purpose. The owner/operator of the Preserved Open Space shall prepare an open space plan, to be approved by the County to manage the rich diversity of resources on site, including habitat, vegetation, wetlands, native species, and other critical resources, balanced with recreation and wildfire protection needs. As part of the open space plan development, conduct a formal aquatic resources delineation for habitat protection, and consider delineating a cohesive system of trails and pathways that balances recreation and wildlife conservation." Additionally, the DEIR notes mitigations and standard conditions of approval that require projects to conduct a biological resources assessment (Policies BIO-1, BIO-14, BIO-15, BIO-16) to identify, avoid, and mitigate potential impacts to wetlands. BIO-9 prescribes actions to reduce impacts to pond turtles and these actions may be enhanced through BIO-1. California clam-shrimp is not designated a special status species wildlife species by CDFW, however protections to its wetland habitats prescribed in the DEIR will provide protections to this species.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Sonoma Ecology Center (SEC)	3-Apr-22	B8-3	2. Make policy that the wildlife corridor, at its narrowest point along the north side of the campus, shall only ever be widened, not narrowed. Specifically, the developed footprint shall not go north past the location of the current ballfield on the east (removing current buildings Bane, Thompson, and the two houses between the bridges), shall not go northwest onto the hillside above the current kitchen (removing Goddard, Paxton, Industrial), and shall not go northeast beyond Snedeger (removing Roadruck and Bentley).	Specific Plan Policy 2-6 has been revised to incorporate comments. The updated policy now states: "Remove existing development along the north edge of the Core Campus, from area shown as Open Space in Core Area in Figure 2.2-1, and re-introduce compatible native species to expand the wildlife corridor. This includes removing existing buildings Paxton, Thompson/Bane, and Residence 126 and buildings on the northeast side of campus and ensuring that new development remains within the smaller development footprint as shown in Figure 2.2-1. Ensure that the wildlife corridor is not further restricted at its narrowest point along the north side of the campus. The project sponsor shall be responsible for demolishing buildings within the expanded wildlife corridor and establishing new planting and landscaping to support expanded wildlife movement and safety, prior to Certificate of Occupancy on any redevelopment on the eastside of Arnold Dr."
Sonoma Ecology Center (SEC)	3-Apr-22	B8-4	3. Make policy that paths and recreational areas shall not be placed in the northern areas where the wildlife corridor is narrowest. Remove the pedestrian access point in the narrowest part of the corridor (yellow asterisk on the maps in the 2021 alternatives).	Refer to response to comment B8-3.
Sonoma Ecology Center (SEC)	3-Apr-22	B8-5	4. Make policy that trails will not occur in riparian corridors except for short distances (these are habitat areas first, recreation areas second). 5. Make policy that there shall be no new pedestrian bridges over Sonoma Creek. 6. Make policy that setbacks along Sonoma Creek will be at least 100 feet, and larger where green infrastructure projects are planned, in accordance with the Upper Sonoma Creek Restoration Vision.	Comment partially incorporated. Specific Plan Policy 2-27 has been amended to state: "Ensure that all development adheres to Sonoma County Municipal Code Sec 26-65 on riparian corridor protection. Further, maintain and enhance connectivity between water features, including lakes, creeks, vernal pools, and intermittent streams, through vegetated native plant cover, absence of roads along the water features, ditches, and other barriers to water or animal movement, and

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				absence of human presence. Maintain water-related features, including swales, intermittent drainages, and seasonal waterways as open-air channels and avoid undergrounding waterways whenever possible." The DEIR also includes detailed discussion of existing riparian area protections that would be applied as well as Plan-specific policies and Standard Conditions of Approval under Impact 3.4-2.
Sonoma Ecology Center (SEC)	3-Apr-22	B8-6	7. Make policy that setbacks along Hill/Mill Creek will be 50' on the north side, and more than 50' on the south side. 8. Make policy that Lake Suttonfield, Fern Lake, Eldridge Marsh, and all mapped wetlands will have development setbacks of 100' or greater. 9. Make policy that connectivity between water features (lakes, creeks, vernal pools, intermittent streams) shall be enhanced and maintained. Connectivity means presence of vegetated native plant cover, absence of roads, ditches, and other barriers to water or animal movement, and absence of human presence. 10. Make policy that water-related features, including swales, intermittent drainages, and seasonal waterways shall not be undergrounded, but instead shall be daylighted and enhanced as visual amenities and wildlife habitat.	Refer to comment B8-5.
Sonoma Ecology Center (SEC)	3-Apr-22	B8-7	11. Make policy that scientific research and monitoring will be permitted freely on the entire property.	Comment noted. See MR-9 regarding mitigation monitoring.
Sonoma Ecology Center (SEC)	3-Apr-22	B8-8	12. Make policy that invasive species will be managed proactively to reduce fire risk and enhance biodiversity. This effort needs to increase, starting immediately–SEC is doing some of this work with grant funding–and continue in perpetuity.	Specific Plan Policy 2-18 encourages collaboration with local groups to remove invasive species. Additionally, Specific Plan Policy 2-26 has been amended to require ongoing use of an Integrated Pest Management sitewide (refer to response to comment B8-14).

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Sonoma Ecology Center (SEC)	3-Apr-22	B8-9	13. Make policy that Eldridge Marsh will be restored hydrologically and biologically, including retaining more water by blocking the ditches that currently drain it.	The comment is noted. See response to comment B8-5. This policy would support hydrologic and biological connections to Eldridge Marsh.
Sonoma Ecology Center (SEC)	3-Apr-22	B8-10	14. Make policy that development will face away from natural and protected areas to reduce interactions that might impact natural systems.	Thank you for your comment. The comment does not address the adequacy of the Draft EIR; therefore, no response is required. However, the commenter's opinion is noted and forwarded to the Board of Supervisors for their consideration in making a determination whether to approve the Specific Plan.
Sonoma Ecology Center (SEC)	3-Apr-22	B8-11	15. Make policy that Dark Sky standards will be adhered to in all development and maintenance activities. Institute an ongoing compliance program to retain dark skies during operations.	Comment incorporated. Specific Plan Policy 2-11 applies Dark Sky standards to the project design.
Sonoma Ecology Center (SEC)	3-Apr-22	B8-12	16. Make policy that all large healthy trees will be retained.	Comment incorporated. Policy 2-20 has been amended to state: "Require that the project sponsor work with an arborist to develop a tree planting plan that retains existing mature healthy trees and supplements the existing tree canopy with a diverse range of native and/or low water trees that provide shade and habitat. Locate new construction and public realm improvements around existing landscaping features that are retained."
Sonoma Ecology Center (SEC)	3-Apr-22	B8-13	17. Make policy that regionally native plants, selected for tolerance of climate conditions during the species' lifespan, will make up at least 80% of landscaping, during both initial construction and ongoing operation.	Refer to response to comment B8-12. Additionally, Policy 2-19 encourages inclusion of native plants in landscaping.
Sonoma Ecology Center (SEC)	3-Apr-22	B8-14	18. Make policy mandating the use of Integrated Pest Management, both for construction and ongoing operation.	Comment incorporated. Specific Plan Policy 2-26 has been amended to state: "Prohibit the use of pesticides, rodenticides, and poisons in materials and procedures used in landscaping, construction, and site maintenance within the Planning Area, and require ongoing use of Integrated Pest Management site-wide. This restriction

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				should be included in all Declarations of Covenants, Conditions and Restrictions (CC&Rs) to ensure that future homeowners are aware of the requirements."
Sonoma Ecology Center (SEC)	3-Apr-22	B8-15	19. Set a program to regrade and revegetate the area immediately around the Jim Berkland bridge so that animals can get down to and across Sonoma Creek, to aid wildlife passage east-west across this narrowest section of the property.	Comment incorporated. Specific Plan Policy 2-13 has been amended to state: "Restrict access to the wildlife corridor and creek corridor to designated pedestrian paths marked with clear signage and delineated by strategic wildlife-permeable fencing. Do not construct new paths or recreational areas in the area where the wildlife corridor is narrowest between the Core Campus and Lake Suttonfield, with the exception of a permeable-surface pedestrian trail on one side of Sonoma Creek."
Sonoma Ecology Center (SEC)	3-Apr-22	B8-16	20. Make policy that any owner(s) of the property will participate agreeably with any surrounding properties to improve wildlife habitat and permeability across property boundaries, up to and including the eventual construction and maintenance of a wildlife overpass or underpass across Hwy 12.	Comment incorporated. Specific Plan Policy 2-56 has been added to state: "The owner(s) of the property shall collaborate in good faith with any surrounding properties to improve wildlife habitat and permeability across property boundaries, up to and including the eventual construction and maintenance of a wildlife overpass or underpass across Highway 12."
Sonoma Ecology Center (SEC)	3-Apr-22	B8-17	21. Make policy that fencing inside and outside the campus shall be removed and only used in new projects to direct movement and reduce hazards to wildlife.	Specific Plan Policy 2-16 describes fencing requirements that are focused on maintaining wildlife corridor function.
Sonoma Ecology Center (SEC)	3-Apr-22	B8-18	Make policy that any new or enhanced road connecting to Hwy 12 shall not be paved or lighted, and shall only be accessible during emergencies. Both proposed road linkages from the new campus to Hwy 12 would cross unmapped wetland, endangering wildlife and encumbering any efforts at wetland restoration. The northern route (along Sunrise) in particular cuts through habitat where Western Pond Turtles lay their eggs.	Comment incorporated. See response to B8-16. Additionally, Policy 2-1 has been amended to state: "Ensure that land shown In Figure 2.2-1 as Preserved Open Space is dedicated or maintained as permanent public open space, and the Managed Landscape/Fire Buffer is designed and maintained for that purpose. The owner/operator of the Preserved Open Space shall prepare an open space plan, to be approved by the County to manage the rich diversity of resources on site,

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				including habitat, vegetation, wetlands, native species, and other critical resources, balanced with recreation and wildfire protection needs. As part of the open space plan development, conduct a formal aquatic resources delineation for habitat protection, and consider delineating a cohesive system of trails and pathways that balances recreation and wildlife conservation." Further, DEIR Policy BIO-1 requires a biological resource assessment for any new project. This assessment will identify wetlands and make recommendations for mitigation of any impacts to biological resources to a less than significant level. Further, BIO-9 will require development to avoid impacts to the Western Pond Turtle.
Sonoma Ecology Center (SEC)	3-Apr-22	B8-19	23. Make policy that fire fuels management activities, such as the proposed "buffers," adopt and use standards that achieve multiple objectives including enhancing biodiversity, reversing weed invasion, and protecting water resources. 24. Make policy that multi-benefit water resources projects shall be an acceptable use of land inside and outside the campus. "Multi-benefit" here is defined as projects that protect or create habitat and recreation benefits, and don't impede wildlife passage, while delivering water benefits to people and nature.	Policies 2-9 and 2-10 require fuels management to be minimized within wildlife corridors to limit disturbance to species. Additionally, Policy 2-31 has been amended to add: "Construct and maintain a managed landscape buffer along western and eastern edges of the Core Campus to aid in fire defense consisting of a shaded fuel break in wooded areas and grazed or mown grassland. Shrubs and chaparral should be limited within the managed landscape buffer. Management of this landscape buffer should aim to enhance biodiversity, reverse weed invasion, and protect water resources."
Sonoma Ecology Center (SEC)	3-Apr-22	B8-20	Set in place a permanent program, starting before demolition or construction begins, to monitor wildlife	DEIR measure BIO-1 requires that each new project conduct a biological resources assessment. Incorporated in this assessment would be recommendations for monitoring and additive measures, if needed, to reduce impacts to biological resources.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Sonoma Ecology Center (SEC)	3-Apr-22	B8-21	B2. Urban design: 1. Make policy that the developed campus shall be visually and functionally integrated with the surrounding natural environment. Sight lines shall preserve and invite connections to open space. Trails shall link developed areas to natural spaces. 2. Make policy that existing buildings will be retrofitted and reused to the degree that re-use can be shown to have greater or equal life-cycle environmental benefits than replacing them. Where cherished buildings are to be replaced, replace them with new buildings that are of similar style, in similar locations. 3. Make policy that collectively the buildings and spaces on the campus shall mirror the diversity seen in the historic buildings: a complexity of angles, materials, styles, and ages.	Policies in Section 5 of the Specific Plan address urban design. The comment does not address the adequacy of the Draft EIR; therefore, no response is required. However, the commenter's opinion is noted and forwarded to the Board of Supervisors for their consideration in making a determination whether to approve the project.
Sonoma Ecology Center (SEC)	3-Apr-22	B8-22	B3. Climate and emissions 1. Make policy that the site will be net zero energy, net zero or better emissions, as measured during operations, on an island-able, crisis-ready microgrid.	The comment does not address the adequacy of the Draft EIR; therefore, no response is required. However, the commenter's opinion is noted and forwarded to the Board of Supervisors for their consideration in making a determination whether to adopt the Specific Plan.
Sonoma Ecology Center (SEC)	3-Apr-22	B8-23	B4. Housing 1. Make policy that, in perpetuity, the proportion of housing at SDC that is below-marketrate will be maximized through use of private and public funding, and innovation in funding, ownership structures, design such as clustering and greater building heights, and construction materials and techniques. 2. Include a program that requires future landowners and/or lessees to partner and facilitate potential projects and programs to increase below-market-rate housing.	Section 4.2 addresses affordable housing in the Specific Plan. The comment does not address the adequacy of the Draft EIR; therefore, no response is required. However, the commenter's opinion is noted and forwarded to the Board of Supervisors for their consideration in making a determination whether to adopt the Specific Plan.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Sonoma Ecology Center (SEC)	3-Apr-22	B8-24	B5. VMT, Traffic, Transit, and Roads 1. Make policy that developers are required to go beyond conventional Sonoma County requirements to assure increased local and regional transit availability, headways, and actual use, including innovative transit such as car sharing, regional bikeways, and other alternatives to single occupancy vehicles.	Policies 3-41 through 3-44 require multimodal infrastructure to reduce single-occupancy vehicle travel. The comment does not address the adequacy of the Draft EIR; therefore, no response is required. However, the commenter's opinion is noted and forwarded to the Board of Supervisors for their consideration in making a determination whether to approve the project.
Sonoma Ecology Center (SEC)	3-Apr-22	B8-25	2. Make policy that a bike path should be linked to Sonoma County Regional Parks' Sonoma Valley Trail. 3. Make policy that workplaces and community services shall be promoted at SDC in order reduce vehicle trips, reduce driving time for residents, and create a sense of place.	Policies 3-41 through 3-44 require multimodal infrastructure to reduce single-occupancy vehicle travel, including development and connection with the Sonoma Valley Trail. The comment does not address the adequacy of the Draft EIR; therefore, no response is required. However, the commenter's opinion is noted and forwarded to the Board of Supervisors for their consideration in making a determination whether to approve the project.
Sonoma Ecology Center (SEC)	3-Apr-22	B8-26	B6. Safety: 1. Make policy that buildings, roads, and spaces within the developed area shall be designed to be ready for wildfire, including clustered buildings, roads to the outside, and power lines underground. For reference see "Building to Coexist with Fire: Risk Reduction Measures for New Development" at https://anrcatalog.ucanr.edu/Details.aspx?itemNo=8680. 2. Make policy that development shall be designed with spaces and resources to function as a local emergency resource hub, a place that area residents can evacuate to, not just evacuate from.	Policies 2-31 through 2-42 address design and management approaches to wildfire safety. These policies are in accordance with fire risk reduction measures in the article mentioned by the commenter. The remainder of the comment does not address the adequacy of the Draft EIR; therefore, no response is required. However, the commenter's opinion is noted and forwarded to the Board of Supervisors for their consideration in making a determination whether to approve the project.
Sonoma Ecology Center (SEC)	3-Apr-22	B8-27	B7. Governance: 1. Make policy that the entire SDC site shall be governed by an entity with a public-benefit mission, governed by representatives for an array of public and private interests, using clear guiding principles. This	The comment does not address the adequacy of the Draft EIR; therefore, no response is required. However, the commenter's opinion is noted and forwarded to the Board

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			entity could seek, receive, and spend money to increase the public benefits produced by the site. It would provide an ongoing guide for future development and operations of the entire site, assuring that key principles remain throughout the development of the site and beyond. 2. Set a program to design and create the governance entity described above.	of Supervisors for their consideration in making a determination whether to approve the project.
Center for Biological Diversity	9/26/2022	B9-1	On behalf of the Center for Biological Diversity, we are writing to express our concerns regarding the Draft Environmental Impact Report ("DEIR") for the proposed Sonoma Developmental Center Specific Plan ("Project"). The Center for Biological Diversity ("Center") is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 1.7 million members and online activists throughout California and the United States. The Center and its members have worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Sonoma County. The DEIR fails to adequately assess and mitigate impacts to sensitive habitats and special-status species, wildlife connectivity, and wildfire risk. As mentioned in the Center's March 4, 2022 comments on the Notice of Preparation ("NOP"), incorporated herein by reference, the Project would sever the last remaining artery of ecosystem connectivity in the area and result in harm to sensitive and imperiled species, loss of biodiversity, reduced resilience to climate change, and increased wildfire risk.	Thank you for your comment letter. The comment is noted. Please see MR-7 regarding impacts of the Proposed Plan on wildlife movement. See also response to comment B8-3, B8-15, B8-16, B8-19, and B3-27 for wildlife corridor policy amendments and description of fire risk reduction measures. Since the projected would concentrate development in the already built out area of the Core Campus, it would not sever ecosystem connectivity. See also Section 3.4 of an analysis of impacts on biological resources. The remainder of the comment does not specify how the DEIR is inadequate, thus no further response is required.
Center for Biological Diversity	9/26/2022	B9-2	The DEIR fails to adequately describe, analyze, and mitigate the Project's significant impacts to wildlife connectivity and special-status species. The DEIR downplays the Project's impacts to special-status species	The comment is noted. Please see response to comment B8-1 and B9-1. See also MR-7 regarding impacts on wildlife movement.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			and wildlife connectivity, stating that "Development under the Proposed Plan is anticipated to take place primarily within the developed footprint of the Planning Area, limiting the potential for adverse impacts on special-status species and sensitive natural communities" (DEIR at 241). This ignores the fact that the Sonoma Developmental Center has been unoccupied by people since 2018 and likely serves as both live-in and move-through habitat for numerous species, whether they were present pre-development, while people were using the campus, or have established or re-established there since the campus became vacant. Placing development in this critical connectivity area, even if it is within an existing (but vacant) development footprint, will undoubtedly have significant impacts to wildlife connectivity and sensitive and imperiled species in the area, from mountain lions to California red-legged frogs. New development that includes commercial and industrial facilities and new roads and infrastructure will fortify existing barriers, increase human activities, and severely degrade this already constrained connectivity area, which will result in both direct and indirect effects to species and ecosystems and reduce climate resilience.	
Center for Biological Diversity	9/26/2022	B9-3	The Project's impacts to wildlife connectivity will consequently have significant adverse effects on the many special-status species that rely on such connectivity for live-in and move-through habitat to support population health and long-term survival. Although the DEIR acknowledges the Project area as a "regionally important wildlife corridor" (DEIR at 235), it severely underplays the Project area's importance for wildlife connectivity. The Project is located in the last remaining wildlife connectivity area linking protected open space across Sonoma Valley from Jack London State Park and Sonoma Mountain to the	The comment is noted. Please see response to comment B8-1 and B9-1. See also MR-7 regarding impacts on wildlife movement. The DEIR does adequately outline existing riparian habitat conditions starting on page 211 of the DEIR and the riparian forest on site is described on page 218. Habitat Types are mapped in Figure 3.4-1. Sensitive habitats, including the riparian corridor, are outlined on page 234. See also response to comment B10-9 regarding riparian habitat impacts. The NOP and comments on the NOP received by the County are

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Mayacamas Mountains and beyond. CDFW identifies the Project area as an "Irreplaceable and Essential Corridor" with high levels of biodiversity1 and the Conservation Lands Network designates it as an "Area Essential to Conservation Goals."2 The area is important for terrestrial and riparian connectivity essential for both wildlife movement and climate resilience (Gray et al., 2018). It is also immediately adjacent to an important undercrossing under State Route 12. The Sonoma Land Trust has identified multiple wide-ranging species, including deer, bobcats, coyotes, and river otters, that actively use and move through the area. Its riparian corridors are important for numerous special-status species, many of which are currently present in the Project area. Despite the Center's extensive description of these critical habitat resources in its NOP comments, the DEIR omitted this information. The omission undermines the DEIR's analysis of these impacts, and also yields an inadequate description of the baseline physical conditions present on the project site and vicinity, which is required by CEQA and the CEQA Guidelines.	included as Appendix A of this EIR and noted briefly at the beginning of each topical section.
Center for Biological Diversity	9/26/2022	B9-4	The DEIR erroneously concludes that "Implementation of the Proposed Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites" (DEIR at 254, Impact 3.4-4). Similarly, the DEIR states that the Project would not have "a substantial adverse effect" on riparian or other sensitive habitats, arguing that future development would take place "previously developed portions of the Planning Area, limiting the potential for disruption to undeveloped habitat areas" (DEIR at 251). Among other shortcomings, this approach omits consideration of the Project's "edge	The comment is noted. See response to comment B9-1 and B9-3. See also MR-7 regarding impacts on wildlife movement. See also Section 3.4 of an analysis of impacts on biological resources, including their habitat.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			effects," which will result in habitat loss and induced human presence, traffic, and growth that will further degrade the Project area's connectivity value in this critical connectivity pinch point. Given the importance of riparian corridors for both local and regional wildlife connectivity, the DEIR's Policy 2-25, which requires 50-foot buffers along Sonoma and Mill Creeks (DEIR at 239) and other policies and best management practices are insufficient to mitigate impacts to these important riparian corridors and the special-status species that occur or have the potential to occur in these habitats to less than significant.	
Center for Biological Diversity	9/26/2022	B9-5	Riparian ecosystems have long been recognized as biodiversity hotspots performing important ecological functions in a transition zone between freshwater systems and upland habitats. Many species that rely on these aquatic habitats also rely on the adjacent upland habitats (e.g., riparian areas along streams, and grassland habitat adjacent to wetlands). In fact, 60% of amphibian species, 16% of reptiles, 34% of birds and 12% of mammals in the Pacific Coast ecoregion depend on riparian-stream systems for survival (Kelsey and West 1998). Many other species, including mountain lions and bobcats, often use riparian areas and natural ridgelines as migration corridors or foraging habitat (Dickson et al, 2005; Hilty & Merenlender, 2004; Jennings & Lewison, 2013; Jennings & Zeller, 2017). Additionally, fish rely on healthy upland areas to influence suitable spawning habitat (Lohse et al. 2008), and encroachment on these habitats and over-aggressive removal of riparian areas have been identified as a major driver of declines in freshwater and anadromous fish (e.g., Stillwater Sciences 2002; Lohse et al. 2008; Moyle et al. 2011). Therefore, establishing large buffers that allow for connectivity between the aquatic resource and upland	The comment is noted. See response to comment B10-9 regarding riparian habitat impacts and response to comment B8-1 regarding special-status species impacts.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			habitat in riparian areas is vital for many species to persist. The Project's inadequate mitigation will deteriorate the riparian habitat and connectivity value for federally threatened steelhead, chinook salmon, California giant salamanders, foothill yellow-legged frogs, western pond turtles, and the many other species that occur or have the potential to occur in and around the Project area.	
Center for Biological Diversity	9/26/2022	B9-6	A literature review found that recommended buffers around aquatic resources for wildlife often far exceeded 100 meters (~325 feet) (Robins, 2002). For example, Kilgo et al. (1998) recommend more than 1,600 feet of riparian buffer to sustain bird diversity. In addition, amphibians, which are considered environmental health indicators, have been found to migrate over 1,000 feet between aquatic and terrestrial habitats through multiple life stages (Cushman, 2006; Fellers & Kleeman, 2007; Semlitsch & Bodie, 2003; Trenham & Shaffer, 2005). For example, California red-legged frogs have been found to migrate about 600 feet between breeding ponds and non-breeding upland habitat and streams, with some individuals roaming over 4,500 feet from the water (Fellers & Kleeman, 2007). Newts have been documented traveling up to a mile from breeding ponds (Trenham, 1998). Western pond turtle nests have been found up to 1,919 feet from aquatic habitats and individuals have been documented to move regularly between aquatic habitats with long-distance movements of up to 2,018 feet (Sloan, 2012). Accommodating the more long-range dispersers is vital for continued survival of species populations and/or recolonization following a local extinction (Cushman, 2006; Semlitsch & Bodie, 2003). Therefore, even the best management practices that require 300-foot buffers from streams, ponds, and other wetlands from Oct 31-June 1 for reptiles and amphibians (BIO-9 –	The comment is noted. See response to comment B10-9 regarding riparian habitat impacts, comment B8-1 regarding special-status species impacts, comment B10-2 regarding wetland impacts, and comment B9-1 regarding wildlife connectivity.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			BIO-11) are insufficient for minimizing impacts to these and other species. In addition, more extensive buffers provide resiliency in the face of climate change-driven alterations to these habitats, which will cause shifts in species ranges and distributions (Cushman et al., 2013; Heller & Zavaleta, 2009; Warren et al., 2011). With the driest 22-year period in 1,200 years in the western US and drought conditions that will likely continue (Williams et al., 2022) climate change refugia and resilience provided by ecosystems like riparian areas will be ever more critical for species survival and ecosystem health. This emphasizes the need for sizeable upland buffers around streams and other aquatic resources, as well as connectivity corridors between heterogeneous habitats. The DEIR fails to adequately assess and mitigate impacts to local and regional wildlife movement and habitat connectivity.	
Center for Biological Diversity	9/26/2022	B9-7	Edge effects of development in and adjacent to open space, like the proposed Project, will likely impact key, wide-ranging predators, such as mountain lions and bobcats (Crooks, 2002; Delaney et al., 2010; Lee et al., 2012; Riley et al., 2006; J. A. Smith et al., 2015, 2017; Vickers et al., 2015; Y. Wang et al., 2017), as well as smaller species with poor dispersal abilities, such as song birds, small mammals, and herpetofauna (Benítez-López et al., 2010; Cushman, 2006; Delaney et al., 2010; Gray, 2017; Kociolek et al., 2011; Slabbekoorn & Ripmeester, 2008). Limiting movement and dispersal can affect species' ability to find food, shelter, mates, and refugia, especially after disturbances like fires or floods. Individuals can die off, populations can become isolated, sensitive species can become locally extinct, and important ecological processes	The comment is noted. See response to comment B10-9 regarding riparian habitat impacts, comment B8-1 regarding special-status species impacts, comment B10-2 regarding wetland impacts, and comment B9-1 regarding wildlife connectivity. See also MR-3 and MR-9 regarding the level of detail of analysis and programmatic nature of the DEIR and enforcement of policies.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			like plant pollination and nutrient cycling can be lost. Negative edge effects from human activity, such as traffic, lighting, noise, domestic pets, pollutants, invasive weeds, and increased fire frequency, have been found to be biologically significant up to 300 meters (~1000 feet) away from anthropogenic features in terrestrial systems (Environmental Law Institute, 2003). For example, field observations and controlled laboratory experiments have shown that traffic noise can significantly degrade habitat value for migrating songbirds (Ware et al., 2015). Subjects exposed to 55 and 61 dBA (simulated traffic noise) exhibited decreased feeding behavior and duration, as well as increased vigilance behavior (Ware et al. 2015). Such behavioral shifts increase the risk of starvation, thus decreasing survival rates. Policies like 2-13 and 2-14 that require signage and fencing to the wildlife corridor and creek corridor (with unspecified boundaries) and restrict off-leash pets, respectively (DEIR at 238), will not reduce the impacts of increased human activity, traffic, noise, light, etc. And although Policy 2-26 prohibits "the use of all pesticides, rodenticides, and poisons in materials and procedures used in landscaping, construction, and site maintenance within the Planning Area" (DEIR at 132), there is no mechanism of enforcement for this (or other best management practices) provided. The DEIR does not provide substantial evidence, as CEQA requires, that its proposed mitigation will reduce the Project's biological impacts to less than significant.	
Center for Biological Diversity	9/26/2022	B9-8	It is estimated that 90-95% of historic riparian habitat in the state has been lost (Bowler, 1989; Riparian Habitat Joint Venture, 2009). Using 2002 land cover data from CalFire, the Riparian Habitat Joint Venture estimated that riparian vegetation makes up less than 0.5% of California's total	The comment is noted. See response to comment B10-9 regarding riparian habitat impacts, comment B8-1 regarding special-status species impacts, comment B10-2

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			land area at about 360,000 acres (Riparian Habitat Joint Venture, 2004). This is alarming because riparian habitats perform a number of biological and physical functions that benefit wildlife, plants, and humans, and loss of what little is left will have severe, harmful impacts on special-status species, overall biodiversity, and ecosystem function. California cannot afford to lose more riparian corridors.	regarding wetland impacts, and comment B9-1 regarding wildlife connectivity.
Center for Biological Diversity	9/26/2022	B9-9	The DEIR fails to adequately describe, assess, and mitigate the Project's significant impacts to wildfire risk. The DEIR ignores important wildfire history and therefore fails to adequately describe, assess, and mitigate the Project's impacts to wildfire risk. The DEIR fails to mention or discuss the area's historical fire regimes and the role Indigenous communities likely played in shaping the fire ecology of habitats in and adjacent to the Project area. Wildfires due to lightning strikes and Indigenous cultural burning have occurred on California's landscapes for millennia. They're a natural and necessary process for many of California's ecosystems. But some of the recent fires have been exceptionally harmful to communities. In the past 200 years since European colonization, forced relocation and cultural genocide of Native Tribes, fire suppression and poor land management combined with poor land-use planning have shifted historical fire regimes throughout the heterogeneous ecosystems of the state. In addition, hotter, drier and more extreme weather conditions due to climate change make the landscape more conducive to wildfire ignitions and spread. Almost all (95-97%) contemporary wildfires are caused by humans and/or human infrastructure (Balch et al., 2017); therefore, the placement of new roads and development in and/or adjacent to high and very high fire hazard severity zones requires careful and comprehensive analyses of the area's	The comment is noted. The DEIR outlines the area's wildfire environmental setting, including the impacts of recent wildfires starting on page 500 of the DEIR. The DEIR does note that development will occur adjacent to a VHFHSZ. However, pages 518 and 519 outline various State, regional, and local regulations and proposed policies that would reduce wildfire risk to a less than significant level. See also, Master Response 4.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			fire history, the various ecosystems' fire ecology, and potential mitigation measures to reduce risk of ignition and fire within the Project area and spreading to nearby communities. The DEIR falls tragically short in this respect.	
Center for Biological Diversity	9/26/2022	B9-10	Decision-makers, including the County, must work to include Indigenous communities in climate change and wildfire discourse and planning. These communities are disproportionately affected by wildfire. Native Americans were found to be six times more likely than other groups to live in high fire-prone areas, and high vulnerability due to socioeconomic barriers makes it more difficult for these communities to recover after a large wildfire (Davies et al., 2018). In addition, farmworkers, who are majority people of color and often include migrant workers that come from Indigenous communities, often have less access to healthcare due to immigration or economic status. They are more vulnerable to the health impacts of poor air quality due to increased exposure to air pollution as they work. Yet farmworkers often have to continue working while fires burn, and smoke fills the air, or risk not getting paid (Herrera, 2018; Kardas-Nelson et al., 2020; Parshley, 2018).	The comment is noted. Pursuant to CEQA requirements as noted on page 46 of the DEIR, the County contacted nine tribal representatives in February 2022, providing information about the planning process and inviting them to initiate consultation under AB 52 if desired. One response was received from the Federated Indians of Graton Rancheria requesting further consultation. In addition, the Lytton Rancheria of California shared knowledge of historical Native American occupants. Correspondence from tribal contacts is included in Appendix C.
Center for Biological Diversity	9/26/2022	B9-11	"Indigenous communities have often been marginalized in the sciences through research approaches that are not inclusive of their cultures and histories." Traditional ecological knowledge ("TEK") is often excluded from analyses or distilled to conform to Western science (Ramos, 2022). The DEIR fails to acknowledge that Indigenous communities and cultural burning played a role in California's historical fire regime. Consultation with local Native Tribes and incorporation of Indigenous science, including but not limited to oral histories,	The comment is noted. See response to comment B9-10. The DEIR adequately explains the potential wildfire risks to development under the Proposed Plan under Impact 3.16-2 on page 518 of the DEIR as well as regulations and proposed policies that would mitigate this risk to a less than significant level. The analysis discloses and considers recent fire activity in and around the project site area and takes that activity into account. See also Master Response 4. Further, issues of cultural burning

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			ethnographies (that may include burn scars and charcoal records), and archeological data should be incorporated in fire history analysis. As a society, we need to work towards integrative research that "transcends disciplinary boundaries" and employs a range of methodological options to get a deeper understanding of the relationship between people and ecosystems (Ramos, 2022). Doing so will help inform fire management strategies and mitigation measures that work towards reducing harms of wildfire to people while facilitating beneficial fire for the appropriate ecosystems. The DEIR fails to adequately describe, assess, and mitigate the Project's impacts to wildfire risk and therefore fails to comply with CEQA.	were not raised through the tribal consultations process by the interested tribes.
Center for Biological Diversity	9/26/2022	B9-12	The DEIR also fails to provide adequate mitigation to reduce wildfire risk to less than significant. For example, the DEIR points to the Mayacamas Volunteer Fire Department and the construction of a new fire station to "meet the needs of the population under buildout" and therefore "would not substantially impair [] emergency response procedures" (DEIR at 511). However, it is unclear if human and monetary capital will be sufficient to sustain and maintain the new fire station. The DEIR does not specify how the Applicant will ensure the fire station will be adequately staffed so that quick response times are possible, nor is there assurances that there will be funding to operate and maintain the fire station. As such, it is too vague, unenforceable, and unsupported by evidence to qualify as adequate mitigation under CEQA. According to Captain Michael Feyh of the Sacramento Fire Department, California no longer has a fire season (Simon 2018); wildfires in California are now year-round because of increased human ignitions in fire-prone areas. Emergency	The comment is noted. According to Impact 3.13-1 on page 401 of the DEIR, the Proposed Plan would require the expansion of the existing Sonoma County fire district to serve the Planning Area and identify a location for the fire district to construct a new fire station within the Core Campus in order to meet the needs of the population under buildout (proposed Policy 6-1). The new location of the fire station will be within the Core Campus to ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes. Funding and staffing of this service is related to the Specific Plan and not the adequacy of the DEIR and increased demand for emergency services is an economic impact rather than an environmental impact, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			calls to fire departments have tripled since the 1980s (Gutierrez and Cassidy 2018), and firefighters (and equipment) are being spread thin throughout the state. Firefighters often work 24- to 36-hour shifts for extended periods of time (often weeks at a time), and they are being kept away from their homes and families for more and more days out of the year (Ashton et al. 2018; Bransford et al. 2018; Del Real and Kang 2018; Gutierrez 2018; Simon 2018).	
Center for Biological Diversity	9/26/2022	B9-13	The extended fire season is taking a toll on the physical, mental, and emotional health of firefighters, as well as the emotional health of their families (Ashton et al. 2018; Del Real and Kang 2018; Simon 2018). The physical and mental fatigue of endlessly fighting fires and experiencing trauma can lead to exhaustion, which can cause mistakes in life-or-death situations while on duty, and the constant worry and aftermath that family members endure when their loved ones are away working in life-threatening conditions can be harrowing (Ashton et al. 2018). According to psychologist Dr. Nancy Bohl-Penrod, the strain of fighting fires without having sufficient breaks can impact firefighters' interactions with their families, their emotions, and their personalities (Bransford et al. 2018). There have also been reports that suicide rates and substance abuse have been increasing among firefighters (Greene 2018; Simon 2018). This is not sustainable. And California's firefighter shortage is getting worse while more extreme heat waves due to climate change are making firefighting even more dangerous (Alexander, 2022; H. Smith & Mejia, 2022)(Smith and Mejia 2022; Alexander 2022). Recent wildfires have been exceptionally harmful to people. Between 2015 and 2020 almost 200 people in the state were killed in wildfires, more than 50,000 structures	The comment is noted. The DEIR adequately explains the potential wildfire risks to development under the Proposed Plan under Impact 3.16-2 on page 518 of the DEIR as well as regulations and proposed policies that would mitigate this risk to a less than significant level. Analysis of social impacts of fires is beyond the scope of this program EIR, and due to the amount of speculation involved, would not result in a meaningful analysis.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			burned, hundreds of thousands of people had to evacuate their homes and endure power outages, and millions were exposed to unhealthy levels of smoke and air pollution. Human-caused wildfires at the urban wildland interface that burn through developments are becoming more common with housing and human infrastructure extending into fire-prone habitats, and homes and structures can add fuel to fires and increase spread (Knapp et al., 2021). This is increasing the frequency and toxicity of emissions near communities in and downwind of the fires. Buildings and structures often contain plastic materials, metals, and various stored chemicals that release toxic chemicals when burned, such as pesticides, solvents, paints, and cleaning solutions (Weinhold, 2011). This has been shown with the 2018 Camp Fire that burned 19,000 structures; the smoke caused dangerously high levels of air pollution in the Sacramento Valley and Bay Area and CARB found that high levels of heavy metals like lead and zinc traveled more than 150 miles (CARB, 2021).	
Center for Biological Diversity	9/26/2022	B9-14	In addition, there are significant economic impacts of wildfires on residents throughout the state. One study estimated that wildfire damages from California wildfires in 2018 cost $148.5 billion in capital losses, health costs related to air pollution exposure, and indirect losses due to broader economic disruption cascading along with regional and national supply chains (D. Wang et al., 2021). Meanwhile the cost of fire suppression and damages in areas managed by the California Department of Forestry and Fire (Cal Fire) has skyrocketed to more than $23 billion during the 2015-2018 fire seasons.The DEIR fails to acknowledge that development and human infrastructure in high fire-prone areas increases the risk of igniting wildfires.	The comment is noted. The DEIR does acknowledge on page 518 that development under the Proposed Plan could result in potentially significant impacts from exacerbating wildfire risks. Further, the DEIR states that "Overall, only five percent of wildfires in California are caused by lightning strikes; the majority—95 percent—are caused by human activity. Major causes of wildfires in Sonoma County include lightning strikes, wind-damaged electrical transmission lines, power equipment use, burning of debris, vehicles driven over dry grass or brush, arson, campfires, and others." (DEIR at p. 500.) See response to comment B9-13. In addition, Policy 6-21

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			As detailed in a 2021 Center Report (Yap, Rose, Broderick, et al., 2021), development in highly fire-prone areas increases unintentional ignitions, places more people at risk (within and downwind of the Project area), and destroys native shrubland habitats that support high levels of biodiversity. Almost all contemporary wildfires in California (95-97%) are caused by humans in the wildland urban interface (Balch et al., 2017; Radeloff et al., 2018; Syphard et al., 2007; Syphard & Keeley, 2020). For example, the 2019 Kincade Fire, 2018 Camp and Woolsey fires, and 2017 Tubbs and Thomas fires were sparked by powerlines or electrical equipment. And although many of the 2020 fires were sparked by a lightning storm, the Apple Fire was caused by sparks from a vehicle, the El Dorado Fire was caused by pyrotechnics at a gender-reveal celebration, the Blue Ridge Fire was likely caused by a house fire, and electrical equipment is suspected to have ignited the Silverado and Zogg fires. Roads and energy infrastructure are sources of wildfire ignitions, and the Project will be placing both in high and very high fire hazard severity zones.	would require all new and existing utility lines be buried underground to mitigate additional wildfire risk.
Center for Biological Diversity	9/26/2022	B9-15	Policy 2-31 is grossly insufficient to mitigate the Project's impacts to wildfire risk. The proposal to construct a "managed landscape buffer along western and eastern edges of the Core Campus to aid in fire defense consisting of a shaded fuel break in wooded areas and grazed or mown grassland" and bulldozing shrubland and chaparral within the buffer (DEIR at 507) is vague and not based on sound science or substantial evidence. The DEIR disclosed neither the size of the buffer nor its exact location. And the DEIR provides no evidence that such a buffer would reduce ignition risk or prevent the spread of a wildfire either into or out of the Project area. The DEIR is also silent on what	The comment is noted. Policy 2-31 is adequate in mitigating wildfire risk. The Governor's Office of Planning and Research published the Wildland-Urban Interface Planning Guide in August 2022 located here: https://opr.ca.gov/docs/20220817-Complete_WUI_Planning_Guide.pdf. Best practices identified in this document include defensible space guidelines to maintain managed landscape buffers. This, Policy 2-31 is in accordance with State planning guidance. Please see also MR-3 regarding the programmatic nature of the DEIR. The DEIR does not assess project-specific impacts of potential future projects

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			the environmental impacts (e.g., additional habitat destruction) will be from implementation of this measure. (CEQA Guidelines §15126.4(a)(1)(D).)The DEIR fails to adequately mitigate the Project's impacts to wildfire ignition risk, and fails to consider feasible mitigation measures. New infrastructure in high fire-prone areas should be avoided. If unavoidable, mitigation measures should require structures to have ember-resistant vents, fire-resistant roofs, and irrigated defensible space immediately adjacent to structures (Knapp et al., 2021; Syphard et al., 2014; Syphard & Keeley, 2020). External sprinklers with an independent water source could reduce structures' flammability. Rooftop solar and clean energy microgrids could reduce fire risk from utilities' infrastructure during extreme weather. The County should commit to evidence-based mitigation measures that include equitably retrofitting existing communities near the Project area with similar fire-resilient measures and providing wildfire personal protective equipment (e.g., N95 masks, air purifiers) to nearby communities. Transmission lines could be placed underground. In addition, education and awareness for residents, visitors, and nearby communities should be provided and include how to reduce ignition risk.	under the proposed Plan, all of which are required to comply with CEQA as applicable. See also response to comment B9-13. Further, impacts do not support mitigation measures outside the Planning Area.
Center for Biological Diversity	9/26/2022	B9-16	In addition, wildfire mitigation must include emergency services and evacuation plans that are inclusive and consider diverse populations and vulnerable groups. Wildfire impacts disproportionately affect low-income and minority communities. As discussed in the Center's 2021 Built to Burn report (Yap et al., 2021): Past environmental hazards have shown that those in at-risk populations (e.g., low-income, elderly, disabled, non-English-speaking, homeless) often have limited resources for disaster	The comment is noted. See MR-4 regarding the adequacy of the wildfire evacuation analysis. Further, County evacuation plans already take into account issues associated with sensitive populations. See Impact 3.16-1; implementation of the Proposed Plan would not impair an emergency response or emergency evacuation plan and impacts would be less than significant.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			planning and preparedness (Richards, 2019). Vulnerable groups also have fewer resources to have cars to evacuate, buy fire insurance, implement defensible space around their homes, or rebuild, and they have less access to disaster relief during recovery (Davis, 2018; Fothergill & Peak, 2004; Harnett, 2018; Morris, 2019; Richards, 2019). In addition, emergency services often miss at-risk individuals when disasters happen because of limited capacity or language constraints (Richards, 2019). For example, evacuation warnings are often not conveyed to disadvantaged communities (Davies et al., 2018). In the aftermath of wildfires and other environmental disasters, news stories have repeatedly documented the lack of multilingual evacuation warnings leaving non-English speakers in danger. (Axelrod, 2017; Banse, 2018; Gerety, 2015; Richards, 2019). Survivors are left without resources to cope with the death of loved ones, physical injuries and emotional trauma from the chaos that wildfires have inflicted on their communities.	
Center for Biological Diversity	9/26/2022	B9-17	Health impacts from wildfires, particularly increased air pollution from fine particulates (PM2.5) in smoke, also disproportionately affect vulnerable populations, including low-income communities, people of color, children, the elderly and people with pre-existing medical conditions (Delfino et al., 2009; Hutchinson et al., 2018; Jones et al., 2020; Künzli et al., 2006; Reid et al., 2016). Increased PM2.5 levels during wildfire events have been associated with increased respiratory and cardiovascular emergency room visits and hospitalizations, which were disproportionately higher for low socioeconomic status communities and people of color (Hutchinson et al., 2018; Jones et al., 2020; Liu et al., 2017; Reid et al., 2016).	The comment is noted. See MR-4 regarding the adequacy of the wildfire evacuation analysis. Further, it is speculative to try and analyze PM2.5 emissions from an unknown future fire event without undue speculation. CEQA requires (see, for example, CEQA Guidelines Section 15064), which states, “In evaluating the significance of the environmental effect of a project, the Lead Agency shall consider direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment.” As an informational document, the Specific Plan EIR is required to study only reasonably foreseeable consequences. CEQA does not require an

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			Similarly, asthma admissions were found to have increased by 34% due to smoke exposure from the 2003 wildfires in Southern California, with elderly and child age groups being the most affected (Künzli et al., 2006). Farmworkers, who are majority people of color, often have less access to healthcare due to immigration or economic status. They are more vulnerable to the health impacts of poor air quality due to increased exposure to air pollution as they work. Yet farmworkers often have to continue working while fires burn, and smoke fills the air, or risk not getting paid (Herrera, 2018; Kardas-Nelson et al., 2020; Parshley, 2018). The DEIR fails to adequately assess and mitigate the Project's impacts to wildfire risk, including evacuation and community safety.	agency to assume an unlikely worst-case scenario in its environmental analysis.
Center for Biological Diversity	9/26/2022	B9-18	Conclusion: We are in the midst of a global extinction crisis, with species going extinct at a rate of over 1,000 times the background rate and more than one million species on track to become extinct over the coming decades (Pimm et al., 2014). We are also in the midst of a climate crisis in which intensifying climate change is contributing to increasing extreme fire weather, longer fire seasons, and more area burned annually (Abatzoglou & Williams, 2016). The County should work to safeguard the region's biodiversity, remaining wildlife habitat, and climate change resilience by preserving remaining wildlife connectivity areas, particularly where special-status species are known to occur, like the Project area. The DEIR fails to adequately assess and mitigate the Project's impacts to special-status species, sensitive habitats, wildlife connectivity, and wildfire risk. The County should recirculate a revised EIR that remedies the deficiencies identified in this letter, and recirculate it for public review and comment. Thank you for the opportunity to submit comments on the	The comment is noted. The comment does not specifically address how the DEIR is inadequate, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			DEIR. Please include the Center on your notice list for all future updates to the Project and do not hesitate to contact the Center with any questions at the email addresses listed below.	
Sonoma Ecology Center (SEC)	9/26/2022	B10-1	Comments on the draft SDC Specific Plan Significant effort has been made to develop the SDC Specific Plan in response to community and agency issues of concern. While laudable, there are several topics related to areas of our expertise, and in others cases globally, where the plan misses key opportunities, some critical, to address these concerns. Following are comments from Sonoma Ecology Center to support Sonoma County's efforts to develop an exceptional plan for this exceptional site. Appendix A: Conditions of Approval Most of the policies in the draft Specific Plan have no Conditions of Approval to implement them. This needs to be corrected. Unless Conditions of Approval enforce the Plan's intent, the EIR cannot claim that mitigating actions will occur. Because many policies are vague or unenforceable–using words like "promote," "encourage," "if feasible"--such words must be removed from the Conditions of Approval, or else the Conditions cannot be considered mitigation commitments. Conditions of Approval in the draft Plan do not provide any means to control impacts after the construction period; that is, during the decades of operation and occupancy. This needs to be corrected by adding Conditions of Approval that describe enforceable, objective standards that will apply after construction.	Thank you for your comment letter. The comment is noted. The Standard Conditions of Approval document consists of conditions required to be implemented upon development of the Proposed Plan to mitigate potential environmental impacts along with proposed policies. See also MR-1 regarding the adequacy of a self-mitigating Specific Plan.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Sonoma Ecology Center (SEC)	9/26/2022	B10-2	Similarly, many policies designed to protect ecological resources must be carried through to the actions of future residents and occupants of the property, and therefore should be required to be included in CC&Rs, as exemplified in a single policy of the draft Plan, Policy 2-26. A list of objective, enforceable items to be included in future CC&Rs (Dark Skies, pet policies, fence specifications, native and drought-tolerant landscaping, no pesticides in landscaping, etc) should be provided in the COM section of the Conditions of Approval. Protections of wetlands are insufficient in the draft Plan. In order to implement Goal 6E, wetlands must be fully documented before any construction occurs. Therefore, add to BIO-1 after the first sentence "Identifying sensitive habitats includes a jurisdictional wetland delineation and designation of wetlands in Sonoma County zoning code." BIO Conditions of Approval require two types of corrections before the Plan can claim to mitigate environmental impacts. First, additional species need to be added to the BIO Conditions of Approval, so that the Conditions cover all known occurring species, as detailed in the datasets described in our April 5, 2022 letter and reiterated in our September 26, 2022 comment on the DEIR. Second, Conditions of Approval need to mitigate impacts after construction, during occupation and use of the site. These Conditions will need to codify ongoing mitigations described in the Plan and its policies, within any areas known now or in the future to harbor protected species, such as prohibiting dogs, prohibiting ground-disturbance land management techniques such as	The comment is noted. According to Impact 3.4-3 on page 253 of the DEIR, future development under the Proposed Plan would be subject to the requirements of Clean Water Act Section 404 and 401 permitting requirements, which would limit and/or mitigate impacts from projects that would discharge pollutants or dredged or fill materials into waters of the state, including wetlands. Future development would also be subject to the CDFW Lake and Streambed Alteration Program, which would require any project that could substantially divert or obstruct the flow of; substantially change or use any material from; or deposit debris into a river, stream, or lake to agree to measures that would protect existing fish or wildlife resources. Conformance with these policies, Measure BIO-1 and the Conditions of Approval Measures BIO-15 and BIO-16 would result in less than significant impacts on wetlands from future projects. See also response to comment B8-2 and B8-18 regarding wetland policy amendments. See also response to comment B8-1 regarding special-status species. See also MR-9.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			tilling, prohibiting entry of heavy equipment such as trucks, masticators, or tractors, etc.	
Sonoma Ecology Center (SEC)	9/26/2022	B10-3	The effectiveness of mitigating provisions and policies cannot be assessed unless the Plan and the Conditions of Approval mandate a permanent monitoring program, beginning before demolition or construction begins, to detect and regularly report wildlife use patterns, abundance of protected and indicator species, streamflow, and water levels in major wetlands. Therefore, please add such a program in both the Plan (Chapters 2, 6, and potentially others) and the Conditions of Approval. Revise MOB-2 so that it implements Goals 2D and 2E, as follows: "Construction of the Highway 12 connector should shall avoid damage to biological, scenic and open space resources such as protected biological species, protected habitats such as wetlands, trees, rock outcroppings, and historic buildings to the greatest extent feasible." Western Pond Turtles (a California species of special concern) are documented to breed in the degraded wetlands that run from the northern to the southern edges of the property east of Lake Suttonfield, including the old horse corral. These wetlands were once connected to wetlands in Sonoma Valley Regional Park where Endangered Sonoma Sunshine (Blennosperma bakeri) occurs. California Clam-shrimp, an Endangered crustacean that specializes in seasonal pools, occurs in unmapped seasonal ponds near the southern proposed route for a road linkage to Hwy 12.	Comment noted. See MR-9 regarding mitigation monitoring. See also response to comments B8-16 and B8-18 regarding Highway 12 policy amendments. See response to comment B8-1 regarding special-status species. See also MR-9.
Sonoma Ecology Center (SEC)	9/26/2022	B10-4	2.1 Open Space Management Framework Goal 2-B and Table 4.3 suggest there is agriculture planned in Preserved Open Space (i.e. outside the agrihood), but such agricultural uses are not shown on any maps or limited in acreage or location by any text. Please fix this, particularly in light of known sensitive species and habitats	The comment is noted. As stated on page 94 of the DEIR, proposed Goal 2-A would preserve the open space surrounding the core campus in public ownership in perpetuity, preventing further development in undeveloped areas and ensuring ongoing stewardship in partnership with neighboring State and regional parks and

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			in many areas of the Preserved Open Space; otherwise the Plan cannot claim to implement Guiding Principle 3 to Integrate Development with Open Space Conservation.	other institutions and organizations. Agricultural activities would only occur in the historic agricultural area on the east side of the site, but nowhere else. The remainder of the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Sonoma Ecology Center (SEC)	9/26/2022	B10-5	2.2 Biological Resources and Wildlife Corridors: A. Figure 4.1-2 and other Plan maps are only partially consistent with Goal 2E and Policy 2-6 to "expand the wildlife corridor." The low/medium residential area north of the ballfields (the location of the Bane/Thompson building) is a key border with the narrowest part of the corridor, including high-value riparian habitat and access to year-round water in Sonoma Creek. To fulfill Goal 2E and Policy 2-6, this area should not be built on, and if it remains as a development area, it should have a 100' setback from Sonoma Creek or preserve all existing native trees, whichever width is greater. Also, to reduce corridor disturbance in this pinchpoint area, structures between the two Arnold Drive bridges should be removed and not replaced.	The comment is noted. Please see MR-7 regarding impacts of the Proposed Plan on wildlife movement. See also response to comment B8-3, B8-15, B8-16, and B8-19 for wildlife corridor policy amendments. The remainder of the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Sonoma Ecology Center (SEC)	9/26/2022	B10-6	B. Policy 2-8 is not enforceable as written and needs to be changed to, for example, "...the Project Sponsor will develop and execute a maintenance program…" C. Policy 2-10, as written, can not achieve its intent if its language remains vague and unenforceable. To fix this, remove "If possible".	The comment is noted; however, it is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Sonoma Ecology Center (SEC)	9/26/2022	B10-7	D. Policy 2-12 restricts development to limited trails and signage, and minimizes development of trails within wildlife and creek corridors. However, this policy's lack of specificity may impact wildlife and other biotic resources. Expand the policy such that: paths and recreational areas	The comment is noted. Please see MR-7 regarding impacts of the Proposed Plan on wildlife movement. See also response to comment B8-3, B8-15, B8-16, and B8-19 for wildlife corridor policy amendments. The remainder of the comment is related to the Specific Plan

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			shall not be placed on the northern edge of the core campus where the wildlife corridor is narrowest.	and not the adequacy of the DEIR, thus no further response is required.
Sonoma Ecology Center (SEC)	9/26/2022	B10-8	E. Policy 2-16, as written, does not fulfill Goal 2E. To fix this, clarify that the policy applies to "open space" both inside the core campus and outside it, with the exceptions of 1) fenced back yards of residences and 2) fences meant to direct movement of and reduce hazards to wildlife.	The comment is noted. Specific Plan Policy 2-16 describes fencing requirements that are focused on maintaining wildlife corridor function. The comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Sonoma Ecology Center (SEC)	9/26/2022	B10-9	F. Policies 2-25 and 2-27 (riparian corridor protections) do not fulfill Goal 2-D. a. To avoid confusion, please use language consistent with Sonoma County policy and zoning by changing "protective buffers" to "riparian corridors". b. The 50' riparian corridor protections mapped by Permit Sonoma (see map) in SDC, and copied in Policies 2-25 and 2-27, are anomalous and should be made consistent with the logic of riparian corridor widths everywhere else in Sonoma Valley; that is, where Sonoma Creek adjoins low-density land uses or open space, the corridor width is 100'. c. Riparian corridor setbacks need to be larger where green infrastructure projects are planned to reduce flooding and enhance terrestrial and aquatic wildlife habitat. Please see the Upper Sonoma Creek Restoration Vision. Where there are vertically eroding banks, these projects will pull the top of bank back, to create banks that can slow storm flows and stabilize the creek corridor. Riparian corridors in the Plan should be established from these new top-of-bank locations, which could be 50 or 100 feet or more back from the existing, vertical bank top, rather than using a generic setback width based on today's conditions. d. Please either include Asbury Creek alongside Sonoma and Hill Creeks in Policies 2-25 and 2- 27, or justify its exclusion.	The comment is noted. As noted on page 252 of the DEIR, Policy 2-25 requires inclusion of protective buffers of at least 50 feet along Sonoma and Mill creeks, as measured from the top-of-bank, to protect the sensitive communities. Section 7-14.5 of the Sonoma County Code establishes stream setbacks for structures requiring a building permit, with minimum setbacks equal to the greatest of 1) two and one-half times the height of the stream bank plus 30 feet, 2) 30 feet outward from the top of the stream bank, or 3) any distance established in the general plan and/or zoning code. Future development would be subject to these setbacks' requirements. If riparian habitat and other sensitive natural communities are present and disturbance is required, federal and State regulations would require measures to reduce, avoid, or compensate for impacts to these resources. The requirements of these regulations are implemented through the permit process as indicated in Conditions of Approval Measure BIO-14. In addition, Conditions of Approval Measure BIO-1 requires conducting specific project biological resource assessments prior to commencement of any project. With implementation of Measure BIO-1 and Conditions of Approval Measure BIO-14, impact of future development under the Proposed Plan on riparian habitat or sensitive natural

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
				communities would be less than significant. See also response to comment B8-5 and B8-9 regarding riparian area policy amendments. The remainder of the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Sonoma Ecology Center (SEC)	9/26/2022	B10-10	Policy 2-26 and Policy 6-17, which both prohibit use of pesticides in landscaping, need a Condition of Approval to implement them, that applies during operation, not just construction.	The comment is noted. See response to comment B8-14 regarding amendments to policies 2-26. The remainder of the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Sonoma Ecology Center (SEC)	9/26/2022	B10-11	H. Policy 2-28, as written, will not achieve Goal 2D. To fix this, change to "... conduct studies identifying the presence of special-status species and sensitive habitats at proposed development sites, including wetland delineation, …"	The comment is noted. See response to comments B8-2 and B8-18 regarding wetland delineation policy amendments.
Sonoma Ecology Center (SEC)	9/26/2022	B10-12	Goal 2E, to enhance and expand the wildlife corridor, cannot be implemented unless wildlife permeability extends past the current SDC boundaries. Therefore, add a policy that future owner(s) of the Preserved Open Space shall positively participate with any surrounding property owners, CalTrans, and Sonoma County TPW to improve wildlife habitat and permeability across property boundaries, up to and including the eventual construction and maintenance of a wildlife overpass or underpass across Hwy 12.	The comment is noted. Please see MR-7 regarding impacts of the Proposed Plan on wildlife movement. See also response to comment B8-3, B8-15, B8-16, and B8-19 for wildlife corridor policy amendments. The remainder of the comment is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Sonoma Ecology Center (SEC)	9/26/2022	B10-13	3. Mobility and Access Policy 3-16 "Create a multi-use creek trail running parallel to Sonoma Creek that connects to a greater Glen Ellen-Eldridge community bikeway." conflicts with Policy 2-25 to protect wildlife and other functions of riparian areas. To correct this, change Policy 3-16 to locate most of the north-south trail outside the riparian corridor setback. Trails should not occur in riparian corridors except for short	The comment is noted. At stated on page 234 of the DEIR, Proposed Plan Policy 2-25 establishes a 50-foot minimum setback from Sonoma Creek that ensures that new development would not occur in the vicinity of the area. Thus, all development would adhere to riparian setback requirements. The remainder of the comment is

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			distances (these are habitat areas first, recreation areas second). Add a policy that there shall be no new pedestrian bridges over Sonoma Creek unless built high above the riparian zone such that wildlife are not affected. SCTA has conducted studies showing that a large fraction of passenger vehicle trips in Sonoma Valley are to drop off and pick up school children. In order to fulfill Goal 3-F and Policy 3-41, add a policy to provide free bus service to and from local primary and secondary schools.	related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Sonoma Ecology Center (SEC)	9/26/2022	B10-14	4. Land Use If Goal 2E is to "Maintain and enhance the size and permeability of the Sonoma Valley Wildlife Corridor", then a map of the corridor's current size (Figure 1.6-2) is insufficient to guide land use. That map must be augmented by a map of the future, larger corridor, otherwise it is not possible to know where Policies 2-6 to 2-10, 2-12, and 2-13 "within the wildlife corridor" apply. If Goal 2E is to be achieved, special protections are needed for the narrowest, most vulnerable portion of the wildlife corridor, beyond the protections of other areas of Preserved Open Space. To accomplish this, add a new land use designation, potentially called "Corridor Pinchpoint," where no uses (in the sense of "use" in Table 4-3) are permitted. The Corridor Pinchpoint is the area bounded on the south by the ballfields, on the west by a line extending north from Manzanita, on the north by the Planning Area boundary, and on the east by a line extending north from Railroad. Change instances of "the wildlife corridor" in all Policies to "the Corridor Pinchpoint."	The comment is noted; however, it is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Sonoma Ecology Center (SEC)	9/26/2022	B10-15	Table 4-3, Permitted Uses, must remove or condition land uses that are in conflict with the Plan's Guiding Principles, Goals, and/or the stated intent of the individual land use classifications:	The comment is noted; however, it is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			● Remove Timberland conversion and Tasting Rooms as permitted or conditionally permitted uses from the Agriculture and Resource Based Land Use category of the table in the Preserved Open Space column. Change all other uses in the Agriculture and Resource Based Land Use category of the table from "Permitted" to "Conditional Use Permit" in the Preserved Open Space column. ● Change all permitted uses in the Transportation, Energy, Public Facilities Land Use category of the table from "Permitted" to "Conditional Use Permit" in the Preserved Open Space and Buffer Open Space columns.	
Sonoma Ecology Center (SEC)	9/26/2022	B10-16	The stated purpose of Preserved Open Space (p. 4-10) is not carried through to any policies or Conditions of Approval. To remedy this, add enforceable policies in chapter 4.4, including a policy to the effect that "Within Preserved Open Space, multi-benefit water resources projects shall be an acceptable use of land, where such projects protect or create habitat and recreation benefits, deliver water benefits to people and nature, and do not impede wildlife permeability.	The comment is noted. See response to comments B8-5, B8-9, and B8-18 for water-related policy amendments.
Sonoma Ecology Center (SEC)	9/26/2022	B10-17	6. Public Facilities, Services, and Infrastructure In order to implement Goal 6-E, safeguarding SDC's water supply for human and ecosystem needs, these provisions need to be added to policies in Chapter 2, potentially in Chapter 6, and in the Conditions of Approval: ● Lake Suttonfield, Fern Lake, Eldridge Marsh, and all mapped wetlands shall have development setbacks of 100' or greater. This setback is consistent with Sonoma County's policies (see table of wetland setbacks here). ● Connectivity between water features (lakes, creeks, vernal pools, intermittent streams) shall be enhanced and	The comment is noted. Development would be pursuant to all Sonoma County regulatory setback standards, including requirements outlined in the County Code and General Plan. See response to comments B8-5, B8-9, and B8-18 for water-related policy amendments.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
			maintained. Connectivity means the presence of vegetated native plant cover, absence of roads, ditches, and other barriers to water or animal movement, and absence of human presence. ● Water-related features, including swales, intermittent drainages, and seasonal waterways shall not be undergrounded, but instead shall be daylighted and enhanced as visual amenities and wildlife habitat. ● Eldridge Marsh (permanent and seasonal wetlands on the east side) shall be restored hydrologically and biologically, in part by blocking ditches that currently drain the area.	
Sonoma Ecology Center (SEC)	9/26/2022	B10-18	Policies affecting Roulette Springs fail to fulfill Goals 2D and Policy 2-21. As documented in the Sonoma Developmental Center Existing Conditions Report (PCI, 2015), this area is unique among wetlands in the region for its provision of a large, perennial, reliable source of water for people and nature. In order to fulfill Goals 2D and Policy 2-21, the policies and Conditions of Approval need to commit to proactively restoring and protecting Roulette Springs, instead of merely avoiding further damage to it and diversions from it, in order to maximize ecological benefit to wetland habitats and listed species. ● Add "and Roulette Springs" to Policy 2-21. ● Strengthen Policy 6-30 to proactively restore and protect Roulette Springs, instead of merely avoiding further damage to it, in order to maximize ecological benefit to wetland habitats and listed species.	The comment is noted. According to Impact 3.4-3 on page 253 of the DEIR, future development under the Proposed Plan would be subject to the requirements of Clean Water Act Section 404 and 401 permitting requirements, which would limit and/or mitigate impacts from projects that would discharge pollutants or dredged or fill materials into waters of the state, including wetlands. Future development would also be subject to the CDFW Lake and Streambed Alteration Program, which would require any project that could substantially divert or obstruct the flow of; substantially change or use any material from; or deposit debris into a river, stream, or lake to agree to measures that would protect existing fish or wildlife resources. Conformance with these policies, Measure BIO-1 and the Conditions of Approval Measures BIO-15 and BIO-16 would result in less than significant impacts on wetlands from future projects. See also response to comment B8-2 and B8-18 regarding wetland policy amendments.

Submitter	*Date*	*Comment Code*	*Individual Comment*	*Response*
Sonoma Ecology Center (SEC)	9/26/2022	B10-19	Chapter 7.6 Funding and Financing Mechanisms This section provides no actual funding/financing plan, just a description of many possible options. Please correct this omission by inserting a table showing the list of planned funding and financing options mechanisms, and how much funding or financing each would contribute to the total cost of implementing the Specific Plan, preferably presented in the phases of section 7.3.	The comment is noted; however, it is related to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-1	Sonoma Land Trust (SLT) provides these comments on the Draft Environmental Impact Report ("EIR") for the Sonoma Development Center Specific Plan ("Specific Plan," "Proposed Plan," or "Project"). The Sonoma Developmental Center ("SDC") property can play a pivotal role in providing much-needed affordable housing while protecting Sonoma County's ecological and recreational resources for future generations. The Specific Plan also presents a unique opportunity for California to demonstrate how redevelopment of a state-owned property can deliver community benefits such as climate resilience, affordable housing and expanded park access, while achieving priorities such as the 30x30 biodiversity conservation initiative. Because SDC is owned by the state, there is also a public trust obligation to conserve and protect the property—and especially the Sonoma Valley Wildlife Corridor—as an "ecological unit" above and beyond the specific direction provided by the 2019 legislation. Under the public trust doctrine, navigable waters, tidelands and wildlife resources are held in trust for all of the people, and the state acts as the trustee to protect these resources for present and future generations. This is acknowledged in Guiding Principles #3 and #4 of the Specific Plan. The Proposed Plan for the redevelopment of the SDC core campus will have significant and unidentified impacts to the local and regional environment—most notably to wildlife connectivity, wildfire safety, hydrology and management of water resources. As discussed in detail in Attachment A and in the analysis provided by biology, transportation, wildfire, and hydrology experts (Attachments B, C, D, E, and F),2 the EIR fails to adequately inform decisionmakers and the public about the numerous environmental impacts of the SDC Specific Plan. Instead the EIR defers both the required	Thank you for your comment letter. The comment is noted. Specific comments are responded to in the responses that follow.

Commenter	Date	Letter	Comment	Response
			analysis and development of mitigation measures to the future, which violates the basic requirements of the California Environmental Quality Act (CEQA).	
Sonoma Land Trust	9/26/2022	B11-2	The detailed comments of SLT focus on the additional analysis and evidence needed to fulfill CEQA's primary responsibility of fully disclosing the environmental consequences of this large-scale development project that will significantly alter the landscape of the Sonoma Valley. The attempt to use the concept of a "self-mitigating" Specific Plan avoids the responsibility of analyzing the impacts first to understand what needs to be mitigated, before jumping to the next step of determining what measures are necessary and effective to reduce impacts to less than significant. Put simply the EIR fails to "show its work" and connect the dots between the Project's significant impacts and the vague (and mostly deferred) mitigation measures contained in the Specific Plan.	The comment is noted. Please see MR-1 and MR-9.
Sonoma Land Trust	9/26/2022	B11-3	The incredible environmental values and assets of SDC—and the site's history and legacy of care—require an equally exceptional EIR and Specific Plan. These will be the guiding documents for decades to come, and the rush to meet an unrealistic deadline for approval of the EIR and Project that does not enjoy strong public support is unnecessary. SLT suggests an approach that will allow the County to still move forward in a timely manner to meet Project objectives, satisfy the 2019 legislation related to the disposition and future use of SDC, and improve and correct flaws in the environmental documents. This approach meets CEQA requirements, improves consistency with the County's General Plan and fulfills Guiding Principle #5 to promote sustainable development practices in building and landscape design. SLT recommends that the Planning Commission and Board of Supervisors decline	These are comments on the approval sequence and process, and commenter's desire to see analysis conducted after selection of a Master Developer, and not on the EIR, and are noted. See also MR-8.

Commenter	Date	Letter	Comment	Response
			to certify this EIR and instead direct staff to use the historic preservation alternative as the starting place for a new and revised preferred project, and a revised Specific Plan and EIR that addresses the flaws identified in the Attachments to this letter. We recommend that the historic preservation alternative be revised to start with an affordable housing project of 200+/- homes (Phase 1), and to allow for future development phases consistent with whichever proposal the California Department of General Services (DGS) selects as the winning bid pursuant to their surplus property sale process for the SDC core campus. The EIR acknowledges that the County and public have no accurate estimate of how much development will actually occur at SDC, because we don't know which proposal DGS will select to enter into an Exclusive Negotiating Agreement for the sale of the campus. As the EIR states on page 77: "...development of most of the properties in the Planning Area would be implemented through the market-driven decisions that the selected buyer(s) would make for their properties, and no development rights or entitlements are specifically conferred with the Proposed Plan. Furthermore, given that the majority of future development under the Proposed Plan is residential, varying levels of density bonuses are available under the State depending on the level of affordable housing provided. Thus, it is difficult to project the exact amount and location of future development that may result." According to the schedule released by DGS, a buyer will be selected in late October, which gives Permit Sonoma, the public and the decision makers an opportunity to focus on a real-world proposal that will drive "the exact amount and location of future development." This will also resolve the problem of	

Commenter	Date	Letter	Comment	Response
			speculating about financial feasibility and making unfounded assumptions on how much and what type of housing needs to be built on the site to subsidize the affordable housing mandates.	
Sonoma Land Trust	9/26/2022	B11-4	Importantly, the historic preservation alternative also requires significant modification to expand the wildlife corridor, riparian and open space protections and setbacks. SLT's top priority is ensuring that the Specific Plan furthers Guiding Principle #3. Therefore, the revised historic preservation alternative must include and meet the following specific performance standards: • Provide sufficient setbacks from all creeks designed to protect water quality and quantity, instream and riparian habitat, and wildlife connectivity • Provide a sufficient buffer that reduces the current footprint of the north side of the SDC campus adjacent to Sonoma Creek to allow wildlife to safely travel through the Sonoma Valley Wildlife Corridor • Ensure human activities and improvements at SDC do not impair wildlife's use • Ensure new roads and increased traffic do not create a danger to wildlife • Ensure new development does not create new sources of light, glare, or noise that would impair wildlife's use of the Corridor • Ensure new development does not increase the risk of wildfires that would harm the natural and built environments • Ensure runoff from new impermeable development does not result in erosion or contamination of creeks and riparian areas.	Commenter would like to improvements to the Historic Preservation Alternative. These are noted. The listed improvements do not pertain to the significant adverse impacts of the Project or the alternatives.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-5	These comments provide the Sonoma Land Trust's input on the Draft Environmental Impact Report ("EIR") for the Sonoma Development Center Specific Plan ("Specific Plan,""Proposed Plan," or the "Project"). As discussed below and in the analysis that follows provided by biology, transportation, wildfire, and hydrology experts (Attachments B, C, D, E, and F to September 26, 2022 letter from SLT to Brian Oh),1 the EIR fails to provide a stable project or analyze the full scope of impacts that would foreseeably result from the buildout of the draft Specific Plan. Relying on the Specific Plan's goals and policies—which are replete with caveats and qualifications—the EIR treats the Specific Plan as a self-mitigating project. But the EIR does not actually do the analysis or present the substantial evidence necessary to support that conclusion. Nor does the EIR incorporate the purported self-mitigating aspects of the Specific Plan into a formal mitigation monitoring and reporting program, which program is required under CEQA to ensure that a project's mitigating elements are meaningful and enforceable and actually achieve their stated goals. The errors in the EIR are especially consequential in this case, given the immense specificity of the draft Specific Plan. If the draft Specific Plan is adopted, the County will know substantially where specific uses will be located and what the footprint and intensity of those uses will be. The County is relying on that specificity to streamline future environmental review of development under the Specific Plan, including by avoiding altogether future environmental review wherever possible. Specific Plan at 7-3 (indicating that certain types of development under the Specific Plan might be exempt from further	The comment is noted. Please see MR-1 and MR-9.

Commenter	Date	Letter	Comment	Response
			CEQA review and stating that the "County intends to rely on these provisions for exemptions and tiering to the maximum extent feasible"). Particularly given the County's stated objectives, it is critical that the EIR analyze fully all foreseeable impacts of all development allowed under the Specific Plan and that it mitigate those impacts found to be significant. The EIR cannot and should not defer to future environmental review the analysis of the Project's impacts and identification of mitigation.	
Sonoma Land Trust	9/26/2022	B11-6	The EIR also fails to properly include documents referenced and relied on by the EIR. For example, the DEIR references a traffic study for the Project, but fails to attach it as an appendix to the EIR. EIR at 410, Footnote 118 [references the Focused Traffic Operations Analysis for the SDC Specific Plan (W-Trans, August 2022 [actually July 6, 2022])].	The Traffic Operations Study is available at the project website at: https://www.sdcspecificplan.com/documents.
Sonoma Land Trust	9/26/2022	B11-7	Similarly, the EIR references an evacuation study for the Project site prepared by Kittelson and Associates, but fails to append this document. EIR at 506. Under well-established case-law, the lead agency is required to present all relevant reports relied upon to prepare the EIR as part of the document. As described below, the current EIR fails to adequately inform decisionmakers and the public about the environmental impacts of the SDC Specific Plan. The final EIR must be significantly revised to include all necessary evidence, analysis, and mitigation if it is to comply with CEQA.	The study by Kittelson & Associates relates to analysis conducted for wildfire evacuation, which is presented within the body of the Draft EIR. This section of the EIR was prepared by Kittelson & Associates; no separate standalone study or report was prepared and therefore all relevant reports are provided. See also MR-4.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-8	The EIR fails to provide an accurate, stable, and finite project description. • The Project Description does not provide a clear description of the amount of development allowed under the Specific Plan. The EIR also does not include an accurate representation of the amount of development that is identified in the Draft Specific Plan. Table 4-2 in the Specific Plan includes a range of housing units permitted in the various districts of the SDC with a maximum of 1,210 units. The table notes that a +/- 10% deviation in each district is allowed subject to approval by the Community Development Director, which could lead to a maximum of 1,331 units (1,210+121). A footnote to Table 4-2 notes that "While the base housing unit range for each district is represented as a range, the total base number of units built across all districts should equal the total shown in the table" (emphasis added). However, there is no further detail describing how this unit count would be implemented and any lesser number (e.g. 733) enforced when each district has a range of unit allotments. Furthermore, the Specific Plan at 4-12 acknowledges that developers would be able to use State and County density bonuses for inclusionary housing and notes an additional 200 market rate units. However neither the Specific Plan nor the EIR explain how that number was developed. Furthermore, the Specific Plan identifies another planned 100-unit affordable housing project that is anticipated to be developed (with County involvement)	The Project Description is stable and has been consistently referenced throughout the document. Table 4-2 of the Draft Specific Plan that the commenter references provides a range of housing units within each district of SDC; it is not the intent of the Specific Plan that the maximum to end of the range would be achieved in every district. The last sentence of the page with the table notes that "… the SDC site is anticipated to have around 1,000 total housing units at buildout." A footnote has been added to Table 4-2 of the Specific Plan, as follows. "This table provides a range for the total number of housing units within each Specific Plan district to provide implementation flexibility. It is not anticipated that development would be built to the maximum of the range in every district. The total number of housing units anticipated under the Specific Plan is 1,000." The comment states that, "The Specific Plan could accommodate at least 1,331 units before density bonus allowances and sets no upper limit on the number of units allowed, while the EIR analyzes a maximum of 1,000 units." First, as explained in the previous paragraph, the 1,000 housing units allowed in the EIR are inclusive of anticipated density bonuses. Approximately 283 affordable units are included within the 1,000 units, as explained in the Draft Specific Plan page 4-12. Should developers choose to provide additional affordable housing units beyond the Specific Plan inclusionary requirements (which are already higher than the County inclusionary requirements), they can seek additional density bonuses, which may result in the total of 1,000 housing units to be exceeded. Various density bonuses are available

Commenter	Date	Letter	Comment	Response
			on the SDC site. According to current State density bonus law, a 100% affordable project could seek a density bonus of up to 80%, which could lead to an additional 80 units beyond the 100 identified. The Specific Plan could accommodate at least 1,331 units before density bonus allowances and sets no upper limit on the number of units allowed, while the EIR analyzes a maximum of 1,000 units (EIR Table 2.5-1).	under State law. The Density Bonus is a State mandate. A developer who meets the requirements of State law is entitled to receive the density bonus as a matter of right. This would be true anywhere in Sonoma County like elsewhere in the state, and not just at SDC. Density bonuses under State law are available for affordable housing, seniors, foster youth/disabled veterans/homeless, and college students, among others. Should developers seek density bonuses that would cause the number of total housing units to exceed 1,000 or alterations in the non-residential land use program, the County at that time would need to determine whether and what level of additional environmental review is required.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-9	While the Project Description residential unit count is different than the units identified in the Specific Plan, there are also sections within the EIR that cite statistics with unclear sources, leading to cloudy and unsupportable conclusions. The Project Description notes the development of 1,000 residential units and a future population of 2,400 persons (average size of 2.4 persons per household). This is in contrast with the average household size in Sonoma County of 2.6 persons per household as identified in the EIR at 369 (Population and Housing section). What is the data point to suggest that the average household size at SDC would be lower than the County-wide average? This discrepancy of 200 persons is not reflected in any of the analyses that rely on population, such as Public Service and Recreation, Utilities and Service Systems, Air Quality and Greenhouse Gas Emissions.	The commenter asks why an average of 2.4 persons per household was used, when the overall average countywide household size is larger. According to the State Department of Finance (see Report E-5), Sonoma County's countywide average household size on January 1, 2022 was 2.5, a slight decrease from the average household size of 2.6 in 2020. The countywide housing stock as of January 2022 was 74.2 percent single family, which typically house larger households than multifamily units. Given that the housing type mix at SDC is anticipated to be split evenly between single family (attached and detached) and multifamily, with nearly half of the multifamily units anticipated to be for seniors, an average household size of 2.4 provides a conservatively high estimate of population that would result. For residential land uses/population, the Sonoma County Transportation Authority modeling input is housing units, not population, so a change in household size assumption would have no impact of transportation modeling results. For assumptions regarding various analyses, see response to next comment below.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-10	Compounding the confusion over accurate unit counts and the accuracy of analyses, some of the impact sections reference different numbers than the Project Description, resulting in an unstable project description and confusion about key elements of the Project. EIR at 429 (Land Use and Transportation Network Assumptions) states that "the analysis presented in this section is based on an assumption that implementation of the Proposed Plan would result in 1,000 residential units with State and County density bonuses, including 435 single family units, 345 multifamily units, and 220 senior housing units." But neither the EIR Project Description nor the Specific Plan indicates that the 1,000 residential units would be inclusive of State and County density bonuses. Nor does the EIR Project Description or Specific Plan identify the split between single family and multi-family units or provide for senior housing units. Where did these assumptions come from? How can they be relied upon for the Transportation analysis? Other sections that made assumptions regarding the split between units types include Population and Housing, Public Service and Recreation, Utilities and Service Systems. In the Public Services and Recreation section, Table 3.13-4 at p.402 (Student Generation Rates) analyzes 500 single family units and 280 affordable/apartment units (780 in total) to conclude a total new student population number. Not only is this assumption of the number of unit types not in the Project Description	The EIR analysis impacts resulting from 1,000 housing units (in addition to non-residential development), which is the total number of market-rate and affordable units. This information is spelled out in the Draft Specific Plan (page 4-12): The base number of units allowed is 733, with a base of 550 market rate units allowed, roughly split between multifamily and single-family types. With inclusionary housing requirements of 25%, at least 183 additional affordable units will be produced. Developers will additionally be able to use State and County density bonuses for inclusionary housing, which, as of 2022, could lead to approximately an additional 200 market-rate units. With Sonoma County's additional planned affordable housing development of around 100 housing units, the SDC site is anticipated to have around 1,000 total housing units at buildout. Please see Table 4-4 of projected development in the Specific Plan. The Specific Plan does not specify a percentage or maximum or minimum amount of senior housing at the site. Based on market analysis previously conducted for SDC, 220 housing units are assumed to be for seniors; these are reflected as part of the overall multifamily totals. The Draft EIR notes (page 370), "Based on buildout projections developed for the Proposed Plan, the SDC site is expected to house 2,400 people in 1,000 housing units. Specifically, the population will include 1,872 non-seniors in 780 housing units and 528 seniors in 220 housing units. Further, intentional consideration will be incorporated into new development to support housing opportunities for individuals with

Commenter	Date	Letter	Comment	Response
			(what is the source?), but it is also a different unit split assumption than what is used in the Transportation section. Beyond transportation, what unit assumptions were used for the projected Water Demand Estimates (EIR Table 3.15-1) or the analyses for wastewater, solid waste generation, etc.? Calculations for these utilities are based on different use factors for different unit types, but the data tables do not reference the unit counts assumed and because of the lack of information in the Project Description, there is no clarity or validity to the information.	developmental disabilities." The commenter seeks information on what assumptions or use factors were used for various purposes, and asserts that different housing units counts and unit type mixes have been used in various analyses. This assertion is incorrect. The Draft EIR uses a consistent 1,000 housing unit count throughout, with unit mix described previously. More specifically, assumptions for the topics mentioned are as follows: • Water Supply. Appendix D: Water Supply Assessment (WSA) Table 1 shows the variety of land use assumptions in calculating water demands, including 1,000 housing units. • Wastewater Demand. Table 3.15-2 of the Draft EIR states that the wastewater demand is calculated based on Proposed Plan buildout water use estimates in the WSA with a 10% allowance for inflows and infiltration. • Solid Waste. Solid waste demand is based on countywide per capita factors as described in detail on page 487 of the Draft EIR, and as stated on that page, based on SDC population of 2,400. These per capita waste generation rates account for waste generation from all uses, not just residential. Because at buildout SDC is far fewer jobs relative to population compared to the county as a whole (Sonoma County has 0.49 jobs per resident presently whereas SDC is projected to have 0.38), the waste generation analysis is conservative. • School Student Generation. Student generation was calculated from the 780 non-senior units, consistent with information on pages 80 and 370 in the Draft EIR. • Transportation. The transportation analysis uses 1,000 housing units and 900 jobs.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-11	EIR at 77 states “While the project buildout projection reflects a reasonably foreseeable maximum amount of development for the Planning Area through 2040, it is not intended as a development prediction or cap that would restrict development in any of the five subareas. Rather, the Proposed Plan allows for flexibility in the quantity and profile of future development within and between subareas, as long as it conforms to the policies and standards, including permitted densities and FARs, in the Specific Plan” (emphasis added). This statement is problematic in that neither the Specific Plan nor the EIR identify what the maximum development potential for the Specific Plan would be at the permitted densities and FARs of each land use district. Therefore it is impossible to know the actual maximum buildout envisioned by the Specific Plan. Also, what five subareas does this this statement refer to?	The comment states that the EIR analysis is “problematic” because the Specific Plan and the EIR are based on a “reasonably foreseeable maximum amount of development in the Planning Area” rather than a “maximum development potential”. The Draft EIR follows well laid CEQA requirements in conducting the analysis. CEQA Guidelines Section 15064 states, “In evaluating the significance of the environmental effect of a project, the Lead Agency shall consider direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment.” The population and jobs calculated represent the high end (approximately 80% of the maximum permitted densities/intensities). Furthermore, the Specific Plan outlines 1,000 housing units as the probable maximum development resulting under assumptions outlined. In a hypothetical situation where a developer provides more than the (already higher than the County required minimum elsewhere) minimum affordable housing and qualifies for and develops additional affordable housing, the additional affordable housing resulting would not be inconsistent with the Specific Plan, as that is a right to a developer available under State law. Therefore, the EIR includes language stating that amount of reasonable probable development anticipated should not be considered a “cap”. As an informational document, the Specific Plan EIR is required to study only reasonably foreseeable consequences. CEQA does not require an agency to assume an unlikely worst-case scenario in its environmental analysis. See page 4 of the DEIR for a description of subareas.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-12	Since the overall development capacity permitted by the Specific Plan is unclear, thesubsequent analyses that rely on the unit count presented in the Project Description aretherefore inaccurate. The unit counts identified in the Specific Plan and EIR areinconsistent and call into question analyses completed for the many of the impact areas,including the transportation section (VMT assessment), air quality and greenhouse gasemissions calculations, noise analysis, wildfire/emergency evacuation analysis, biologicalresources assessment, and utility needs assessment, among others. The failure toaccurately describe the overall development capacity of the Project is a serious andpervasive deficiency, as it renders faulty the EIR's environmental impact analyses as well impacts. As a result of the understatement of development potential, the EIR understates the true impacts of the Project.	The comment is noted. Please see Table 4-4 of projected development in the Specific Plan.
Sonoma Land Trust	9/26/2022	B11-13	CEQA requires that the EIR analyze all elements of the project. But the EIR's Project Description omits key elements, preventing the reader from fully understanding the full scope of the Project and resulting in an EIR that fails to accurately assesses the impacts of the Project. These deficiencies include the following: o The Specific Plan will be adopted along with amendments to the Sonoma County General Plan and Zoning Code, however details of the amendments and proposed zoning are not identified in the Project Description.	The comment is noted. The Project Description indicates that the project includes a General Plan and Zoning Ordinance amendment in addition to the Specific Plan. The General Plan and Zoning Ordinance amendments are to add a General Plan land use designation and zoning designation for the Specific Plan and do not create impacts not studied or described in the DEIR.
Sonoma Land Trust	9/26/2022	B11-14	A portion of the Core Campus west of Arnold Drive is part of the Sonoma State Home Historic District and includes two individually contributing historic resources—the Sonoma House and the Main Building,	See Figure 4.3-1 in the Draft Specific Plan. Detailed square footage of all buildings is in Draft Specific Plan, Appendix B: Inventory of Buildings and Historic Status

Commenter	Date	Letter	Comment	Response
			which is a National Historic Landmark. The Project Description identifies the total square footage of existing building square footage that will be retained for adaptive reuse (EIR at Table 2.5-3), but does not identify where the buildings are. Which buildings will remain and which buildings will be demolished?	
Sonoma Land Trust	9/26/2022	B11-15	What has been assumed for duration of site work, building demolition, and construction of new buildings as well as reuse of existing facilities? What is the phasing plan for the buildout of the Project? The Specific Plan provides only one concrete policy for phasing (Policy 4-3, which requires completion of at least 10,000 square feet of retail businesses and at least 200 housing units west of Arnold Drive before beginning construction of any housing east of Arnold Drive). But given that buildout will occur over a nearly 20 year period, phasing is critical and can ensure additional future construction occurs only if it will not result in additional significant environmental impacts.	Buildout of the Specific Plan will happen over 20 years. Section 7.4: Recommended Phasing provides information on likely phasing. This information was used for the assumptions for duration of site work, building demolition, and construction of new buildings in the DEIR. The section notes that this is recommended phasing, and actual phasing will depend on market conditions and the project developers.
Sonoma Land Trust	9/26/2022	B11-16	EIR at 59 notes “The site will have a system of distributed energy resources (DERs) that will generate electricity on-site, which could include solar, wind, geothermal, and methane gas co-generation, a process that captures and burns the potent methane gases that are emitted from solid waste, such as from landfills, wastewater treatment plants, dairies, and other facilities.” There is no land use	Figure 4.1-1 of the Draft Specific Plan shows location of utility buildings, and Table 4-3 shows districts where renewable energy facilities are permitted. Policy 6-19 of the Specific Plan gives examples of on-site co-generation, stating “… such as solar, wind, geothermal, biomass, and methane gas co-generation”. There is no specific requirement that any one of these types of energy generation be built, and if impacts from any specific generation facility will create new significant environmental

Commenter	Date	Letter	Comment	Response
			district in the Specific Plan that would allow a methane gas co-generation facility at SDC, so it is unclear where such a facility could be located. The Specific Plan and EIR contain a "Utilities" land use classification, but a gas co-generation facility is not identified in this category and there are no areas on EIR Figure 2.4-1 (Proposed Land Uses) that are designated "Utilities". Where would this facility be located? Where are the impacts of a new methane co-generation facility analyzed? They do not appear to be addressed in any other sections of the EIR.	impacts, those would need to be evaluated in subsequent environmental reviews.
Sonoma Land Trust	9/26/2022	B11-17	Likewise, the Project Description and Utilities classifications omit geothermal, even though the SDC property has geothermal wells, which are not identified in the Specific Plan or EIR.	The comment is noted. The Project Description on page 59 mentions the site will have geothermal energy resources. Page 283 of the DEIR mentions natural geothermal influences in the area.
Sonoma Land Trust	9/26/2022	B11-18	There are existing uses outside of the Core Campus (in the agricultural area between the Core Campus and Hwy 12 and the current recreational uses on the west side of the SDC). Were they included in the baseline/existing conditions? What assumptions have been made regarding their continued operation and/or expansion of these uses?	The comment is noted. Existing uses outside the Core Campus area are included in the baseline/existing conditions of the DEIR. For example, the Project Description on page 53 states that there are some existing recreational uses in the Planning Area, including Camp Via and the Ropes Course in the western portion of the Planning Area. See Policy 2-1 regarding the future use of the preserved open space outside the core campus.
Sonoma Land Trust	9/26/2022	B11-19	The EIR repeatedly identifies the Core Campus as the focus of future development, but future uses and any improvements outside the core campus must be identified and analyzed as well – especially as they relate to impacts on sensitive resources. Since the General Plan	The comment is noted. See response to comment B11-18 regarding uses in the area outside the Core Campus and B11-13 regarding General Plan and Zoning Ordinance amendments.

Commenter	Date	Letter	Comment	Response
			amendment(s) and proposed rezoning(s) for the SDC site in its entirety is unknown, the permitted uses in areas outside the Core Campus is unclear. What land use changes are contemplated for areas outside of the Core Campus? What zoning, specific plan, and general plan land use designations will apply to SDC property outside of the Core Campus?	
Sonoma Land Trust	9/26/2022	B11-20	The EIR does not fully describe the intensity and distribution of future residential and non-residential development. EIR Figure 2.4-1 identifies the location of future land use designations, but the Project Description should provide a summary table that identifies proposed land use districts, amount of land (acreage) with that designation, and the maximum development potential in that district (non-residential square foot and residential units). Without this information, it is not clear how residential units and non-residential square footage will be distributed throughout the site and what impacts that distribution might have. How many acres are identified in each land use designation? What is the maximum development potential for each land use category based on the acreage and allowed density (for both residential units and non-residential square footage)? How do the units and square footage overlay on the land use map provide a sense of development distribution throughout the Core Campus? How	The comment is noted. Please see Project Buildout on page 77 of the DEIR and Figures 2.4-1 and 2.4-2. Additionally, Section 2.4.3.1 provides land use classifications and the associated density/intensity standards

Commenter	Date	Letter	Comment	Response
			much development is allowed in more sensitive areas east of Sonoma Creek? How can the public and decisionmakers understand the actual impacts and correctly identify different areas and subareas if the boundaries are to be determined?	
Sonoma Land Trust	9/26/2022	B11-21	EIR at 51 states “Appendix A of the Specific Plan contains a Standard Conditions of Approval document that shall consist of conditions required to be implemented upon development of the Proposed Plan to mitigate potential environmental impacts. In addition, the Proposed Plan includes amendments to the County’s General Plan and Zoning Code.” Will all of the policies and standard conditions of approval that comprise mitigation to project impacts be adopted in a reporting program of some sort? How will the policies and standard conditions be enacted and implemented as effectively and with as much accountability as mitigation measures?	The comment is noted. Please see MR-1 and MR-9.
Sonoma Land Trust	9/26/2022	B11-22	EIR at 82 states that “the Proposed Plan would require the following approvalsand discretionary and ministerial actions by the County of Sonoma: Adoption of ordinances, guidelines, programs, and other mechanisms for implementation of the Proposed Plan.” This is a very vague description of a long list of future actions that will need to be taken to ensure the successful implementation of the Specific Plan (and the policies/programs that are serving as mitigation for project impacts).	The comment is noted. Please see MR-1 and MR-9. See response to comment B11-13 regarding General Plan and Zoning Ordinance amendments

Commenter	Date	Letter	Comment	Response
			CEQA Guidelines Section 15124(d) requires that the Project Description contain a "list of permits and other approvals required to implement the project," so this section should be more detailed and clear. What specific ordinances, programs, and other implementation mechanisms are proposed for adoption? What amendments to the Zoning Code and/or General Plan are contemplated with the adoption of the Specific Plan? What other County policy documents might be impacted/amended as a result of the Specific Plan?	
Sonoma Land Trust	9/26/2022	B11-23	The comments presented below refer to and build on comments prepared by Prunuske Chatham, Inc. ("PCI Comments") and Pathways for Wildlife ("Pathways Comments") on the EIR and Specific Plan, attached below as Attachments B and C to Sonoma Land Trust's September 26, 2022 letter to Brian Oh. The County must respond to these comments and the comments in Attachments B and C. The EIR fails to adequately analyze or mitigate the Project's impacts on biological resources. The EIR's analysis both understates the severity of the potential harm to biological resources within and adjacent to the proposed Project site and neglects to identify sufficient mitigation to minimize these impacts. What little analysis is present is not supported by data or substantial evidence. Given that analysis and mitigation of such impacts are at the heart of CEQA, the EIR must remedy these deficiencies to comply with CEQA. The "programmatic" nature of the proposed EIR is no excuse for a lack of detailed analysis. The EIR must provide an in-depth analysis of the Project, looking at effects as specifically and comprehensively as possible. Because it looks at the big	The comment is noted. Please see MR-1 and MR-9. The DEIR sufficiently analyzes impacts on biological resources. Chapter 3.4 assesses potential environmental impacts on existing biological resources. and Section 5.2.4 addresses cumulative impacts regarding the same. See Chapter 6 List of Preparers on page 611 of the DEIR. Multiple firms that specialize this work have completed the DEIR pursuant to CEQA requirements.

Commenter	Date	Letter	Comment	Response
			picture, a program level EIR must provide more exhaustive consideration of effects and alternatives than an EIR for an individual action, and must consider cumulative impacts that might be slighted by a case-by-case analysis. Further, it is only at this early stage of the redevelopment of SDC that the County can design wide-ranging measures to mitigate County-wide environmental impacts. A "program" or "first tier" EIR is not a device to be used for deferring the analysis of significant environmental impacts. It is instead an opportunity to analyze impacts common to a series of smaller projects, in order to avoid repetitious analyses. Thus, it is particularly important that the EIR for the Project provide detailed and comprehensive analysis of the existing conditions and the full range of development proposed by the Specific Plan, rather than deferring such analysis to when specific development is proposed at a later time. Meaningful analysis of impacts now would help inform the design and details of the Specific Plan to best minimize environmental impacts.	
Sonoma Land Trust	9/26/2022	B11-24	The EIR fails to address Executive Order N-82-20, which establishes the state's goal to conserve at least 30 percent of California's land and coastal waters by 2030 with a particular focus on protecting and enhancing wildlife corridors. o The Specific Plan proposes to permanently conserve approximately 755 acres of contiguous open space outside the Core Campus. How does this open space preservation fit within the State's goals under Executive Order N-82-20? o The Sonoma Valley Wildlife Corridor encompasses over 10,000 acres of land stretching from Sonoma Mountain east across Sonoma	The comment is noted. By permanently preserving all open space outside the Core Campus as noted in the DEIR, the Proposed Plan would comply with the goals of the Executive Order. See also MR-7 regarding impacts on wildlife movement. The Proposed Plan would be required to comply with all relevant federal, State, regional and local regulations. Such regulations are outlined in the Regulatory Setting section starting on page 203 of the DEIR. Further, the Draft Specific Plan outlines numerous policies for the conservation of biodiversity resources at the site. This is outlined in the Biological Resources Impact Analysis starting on page 235 of the DEIR. The remainder of the comment relates to the Specific Plan and not the

Commenter	Date	Letter	Comment	Response
			Valley to the Mayacamas Mountains. It is a key linkage in a larger corridor from coastal Marin County to eastern Napa County. SDC lies at the heart of the Corridor. Since the 1990s, the Sonoma Valley Wildlife Corridor has been recognized as an area of significant wildlife presence and movement. The critical linkages and wildlife use have been well established by the scientific community.2 Maintaining and enhancing the permeability of the Corridor and the ability of wildlife to use and disperse through SDC is therefore critical to meeting the Project's sustainability and open space conservation guiding principles and to ensure the viability and efficacy of other conserved lands in the Corridor throughout Sonoma County. E.g., EIR at 65 (Guiding Principle 3: "Integrate Development with Open Space Conservation. Promote a sustainable, climate-resilient community surrounded by preserved open space and parkland that protects natural resources, fosters environmental stewardship, and maintains and enhances the permeability of the Sonoma Valley Wildlife Corridor for safe wildlife movement throughout the site. Support responsible use of open space as a recreation resource for the community.") (emphasis added). Given its recognized role in wildlife migration, how does the Specific Plan ensure protection and enhancement of the Sonoma Valley Wildlife	adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			Corridor pursuant to the Specific Plan's guiding principles and Executive Order N-82-20? o How would the Wildlife Corridor contribute to or impact the overall effect of land conservation efforts under Executive Order N-82-20? o Why does the EIR not address Executive Order N-82-20 or analyze the Project's consistency with a mandate for conservation of biodiversity resources on stateowned property? o Is the Specific Plan consistent with Executive Order N-82-20? o Will the Specific Plan impact the State's ability to meaningfully conserve at least 30 percent of California's land and coastal waters by 2030 in Sonoma County? How will the Specific Plan impact the effectiveness of conservation efforts under Executive Order N-82-20?	
Sonoma Land Trust	9/26/2022	B11-25	There are significant information gaps regarding wildlife use at SDC that must be resolved to understand the scope of impacts from the proposed redevelopment. Obtaining this information will be critical to informing protection areas, buffer sizes, levels and location of development, and appropriate best management practices or improvements to avoid or minimize Project impacts. See generally PCI Comments; Pathways Comments. o For example, the EIR indicates that no site survey was completed to determine the presence or location of special-status or other species. The EIR cannot determine the impacts of development under the Specific Plan—the locations and footprints of which are known—until such survey is completed. E.g., PCI	The comment is noted. The FEIR incorporates data shared by the Sonoma Ecology Center - see responses to letter B8. As noted on page 236 of the DEIR, no new field studies were conducted for the preparation of this EIR, because existing resources contained information on pertinent aspects of biological resources in the Planning Area at level of detail appropriate for a program level environmental assessment. Future project specific detailed biological surveys will be necessary to confirm presence or absence of sensitive resources on future development sites. Cumulative impacts related to biological resources are discussed in Chapter 5: CEQA Required Conclusions. See also response to comment B11-90 and B11-128.

Commenter	Date	Letter	Comment	Response
			Comments at 13. The EIR should also make use of existing data sources, such as the species observation list previously shared by the Sonoma Ecology Center, which the EIR inexplicably ignores. o Similarly, the EIR does not include data regarding use of the Sonoma Valley Wildlife Corridor by special-status species or other wildlife. Pathways Comments at 10-11.The study proposal that Pathways for Wildlife prepared for Sonoma Land Trust, which was included in Sonoma Land Trust's comments on the Notice of Preparation, is representative of the vetted and scientifically proven methodology for conducting wildlife connectivity studies. This type of study is necessary to be able to determine and analyze the Project's impacts to Wildlife Corridor. The Sonoma Land Trust had offered to partner with the County and State to conduct this study so that this information would be available and could be used as part of the EIR, but their offer was not accepted prior to release of these documents.	
Sonoma Land Trust	9/26/2022	B11-26	The County must first identify the information gaps that need to be filled in order to determine the impacts of the Project. For example, a detailed study is needed to establish a baseline of wildlife use on SDC prior to redevelopment. What other information gaps need to be filled in order to determine the impacts of the Project? • How will the phased build-out of the Project induce or modify impacts to biological resources? • Would the impacts to biological resources be different if the Project were phased differently? • How would the impacts to biological resources vary if	The comment is noted. There are no significant information gaps. No new field studies were conducted for the preparation of this EIR, because existing resources contained information on pertinent aspects of biological resources in the Planning Area at level of detail appropriate for a program level environmental assessment. See MR-3 and response to comment B11-25. Construction and operational activity impacts of the Proposed Plan were analyzed under the Biological Resources Impact Analysis starting on page 235 of the DEIR pursuant to CEQA requirements. Regarding the wildlife corridor and performance standards see MR-7 and MR-9. Proposed policies and Standard

Commenter	Date	Letter	Comment	Response
			only a portion of the Project were built out? • How will the County determine whether redevelopment of SDC increases interference with wildlife movement or use within the property or across the larger corridor? What metrics will the County use to gauge impacts to wildlife movement? Which species will be analyzed? What specific performance standards must development meet to ensure that the Wildlife Corridor remains permeable and viable as development is phased in? • How will the County ensure that SDC redevelopment does not result in a reduction of wildlife species diversity? • How will the County ensure that SDC redevelopment does not result in a reduction of wildlife species abundance?	Conditions of Approval would ensure that impacts to biological resources are less than significant.
Sonoma Land Trust	9/26/2022	B11-27	The EIR acknowledges that wildlife and their habitat may be considered sensitive to noise and other operational impacts. E.g., EIR at 337-338. The Specific Plan proposes more than 1,000 units of residential development in addition to commercial and visitor serving development. By contrast, in recent years, the human activity at SDC has been considerably reduced. Even before facility closure, the site only supported approximately 415 clients living there, 470,000 sf of client housing, 49,000 sf staff housing, and 643,400 sf offices, shops, etc. California Department of Developmental Services. (2012). Sonoma Developmental Center Building Use Survey. Department of Developmental Services. October 2012.	Construction and operational activity impacts of the Proposed Plan were analyzed under the Biological Resources Impact Analysis starting on page 235 of the DEIR pursuant to CEQA requirements. Regarding the wildlife corridor and performance standards see MR-7 and MR-9. Proposed policies and Standard Conditions of Approval would ensure that impacts to biological resources are less than significant. Regarding noise impacts, see response to comments B11-225 and B11-227.

Commenter	Date	Letter	Comment	Response
			o Do the impacts identified by the EIR scale in a linear fashion based on the amount of development, the number of residents, and the extent of human activity at operation? o How did or will the County quantify the change in magnitude of operational impacts by virtue of the significant increase in population and operational activities under the Specific Plan as compared to a recent baseline?	
Sonoma Land Trust	9/26/2022	B11-28	The EIR fails to identify a consistent baseline against which the Project is evaluated. Selection of an appropriate baseline is particularly important in this case because the SDC property has been gradually vacated since the 1960s, as facility operations wound down and the facility ultimately closed in 2018.3 In the meantime, development of the surrounding area has proceeded with reduced assumptions about the level of human activity at SDC—for example, evacuation capacity of roadways, levels of sewer service, water use, and recreation. Further, SDC's historic operations are not a reliable benchmark for the intensity of the proposed Project, as the former institutional use did not have the same level of impacts as proposed residential and commercial development. SDC residents did not drive cars and the employees operated in shifts, reducing traffic and other impacts. Estimates of this Project's impacts should therefore be made based on comparisons to recent, rather than historic, site occupation and use.	The comment is noted. While there is no direct perfect comparison for new residents at the SDC site, the historical numbers are provided to give contextual reference to the fact that the site has been previously developed and has served as a home to a substantial population of residents and employees previously. The baseline used for impact analysis in the DEIR is 2022 unless otherwise noted.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-29	With respect to biological resources, the EIR fails to adequately describe the baseline condition of the Sonoma Valley Wildlife Corridor. o The EIR provides no data regarding actual use of the Wildlife Corridor by individual species. o The EIR does not analyze whether or how the gradual reduction in human activity at SDC since the 1960s has changed the operational characteristics of the Wildlife Corridor. o The EIR does not provide data or analysis to show whether or how increasing human activity in the Core Campus in excess of historic levels will impact wildlife movements within and through the Wildlife Corridor.	The comment is noted. The DEIR adequately describes current conditions of the wildlife corridor on page 235 of the DEIR. Special-status species in the area are noted in Tables 3.4-1 to 3.4-3. See MR-7 and response to comment B11-224 regarding impacts on wildlife movement. See response to comment B11-28 regarding the baseline used.
Sonoma Land Trust	9/26/2022	B11-30	The EIR acknowledges that wildlife and their habitats may be sensitive to noise impacts. EIR at 337-338. However, the EIR fails to analyze or mitigate for noise impacts to these specific sensitive receptors. o The EIR relies on quantitative thresholds from the CEQA guidelines, but it fails to analyze or explain whether these thresholds are applicable to wildlife or habitat receptors. EIR at 345-346. o The EIR's vibration threshold only contains standards for human receivers and structures. EIR at 346. It is silent as to what constitutes a significant impact to wildlife or habitat. o The Specific Plan policies that "address noise" ignore wildlife and habitat receptors.	The comment is noted. As described in the Impact Analysis starting on page 349 of the DEIR, compliance with regulatory requirements and implementation of proposed policies and Standard Conditions of Approval would mitigate impacts on noise-sensitive receivers to a less that significant level. Since wildlife is considered a noise-sensitive receptor as stated on page 337 of the DEIR, the significance thresholds pursuant to CEQA incorporate wildlife into the Noise Impact Analysis. Measures HAZ-1 and HAZ-2 develop standards that protect noise-sensitive receivers which would inherently include wildlife. Further, Policy 2-11 implements "dark skies" standards which would mitigate light impacts on wildlife. Regarding noise impacts, see also response to comments B11-225 and B11-227.

Commenter	Date	Letter	Comment	Response
			§ Policy HAZ-1 defines "noise-sensitive receiver" as "residences, schools, day care facilities, hospitals, nursing homes, long term medical or mental care facilities, places or worship, libraries and museums, transient lodging, and office building interiors." EIR at 347. § Policy HAZ-1 does not impose standards for nighttime construction noise that are designed to reduce impacts to wildlife or habitat. EIR at 347-348. § Policy HAZ-2 establishes quantitative vibration standards only with respect to humans and structures. Policy HAZ-2 does not establish quantitative vibration standards designed to reduce impacts to wildlife or habitat. EIR at 348-349. Notwithstanding that the Specific Plan defines "noise-sensitive receiver" to exclude wildlife or habitat, the EIR concludes that construction noise impacts to "noise-sensitive receivers, such as Special Status species and their habitat … would be less than significant" because, inter alia, nighttime construction noise would be subject to the Sonoma County General Plan 2020 noise standards. EIR at 349-350. This conclusion is unsupported and is contradicted by the Specific Plan. Per Policy HAZ-1, nighttime construction noise is only subject to the Sonoma County General Plan 2020 Table NE-2 standards "If construction activities occur … within 0.5 miles of a noise-sensitive receiver (residences, schools, day care facilities,	

Commenter	Date	Letter	Comment	Response
			hospitals, nursing homes, long term medical or mental care facilities, places or worship, libraries and museums, transient lodging, and office building interiors).” EIR at 347. • Project-generated noise is a particular concern because noise has been shown to modify the behavior of species that are present at or are similar to those present at the SDC site. Noise can affect the spatial distribution of wildlife and can cause changes in predation and other critical behaviors. If project-generated noise were to alter the dispersal of wildlife through the Sonoma Valley Wildlife Corridor or otherwise substantially affect the behavior of special-status species or species of concern, those impacts would constitute significant impacts under the EIR’s chosen significance thresholds. See Biological Resources Criterion 1 (a significant impact is one that causes a “substantial adverse effect … on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service”); see also Biological Resources Criterion 4 (a significant impact is one that affects movement of wildlife through a wildlife corridor). The EIR must therefore analyze a range of noise-related impacts and other operational impacts in detail to ensure that those impacts will not constitute unmitigated significant impacts. o Mountain lions in particular are known to be sensitive to noise. Mountain lions	

Commenter	Date	Letter	Comment	Response
			have been documented using the Sonoma Valley Wildlife Corridor through the SDC property. Mountain lions are also a species of concern, facing significant threats in the Bay Area and around the state. The EIR does not even acknowledge the presence of mountain lions at the SDC site, let alone analyze and mitigate impacts to mountain lions. Because mountain lions are designated as a "Specially Protected Mammal" by the California Department of Fish and Wildlife, impacts to mountain lions could constitute significant project impacts under Biological Resources Criterion 1. The EIR must study and mitigate potentially significant impacts to mountain lions. o Similar considerations apply to the project's light impacts. The EIR must document wildlife dispersal through the SDC site and compare those data to the Project's various development plans in order to analyze the Project's construction and operational light impacts to biological resources.	
Sonoma Land Trust	9/26/2022	B11-31	The EIR also fails to disclose or analyze the projected impacts of the proposed Highway 12 connector road. Two options for connector roads are shown in Specific Plan Figure 3.1-1, and three types of facilities (a direct connection to Highway 12, an emergency access connection, and a pedestrian/bike connection) are all alluded to in accompanying text. These connections would have foreseeable direct, indirect, and cumulative impacts on the Project's biological resources, including	The comment is noted. Please see MR-7 regarding impacts of the Proposed Plan on wildlife movement. See also response to comment B8-3, B8-15, B8-16, B8-19, and B11-99 for wildlife corridor policy amendments. See also MR-3; individual developments, such as the Highway 12 connector, would be subject to separate CEQA review.

Commenter	Date	Letter	Comment	Response
			wetlands, drainages, and the Sonoma Valley Wildlife Corridor. How does the EIR propose to address and mitigate the impacts of these connectors?	
Sonoma Land Trust	9/26/2022	B11-32	Given intensity of proposed development and SDC's proximity to major regional parks, including Sonoma Valley Regional Park to the northeast and Jack London State Historic Park to the west, it is foreseeable that the Project's biological and other impacts will extend to and impact resources in those parks. The EIR must consider the impacts of the Project on biological resources within existing parks, including but not limited to impacts to biological resources from the increased water demand that would result from the construction, occupation, and operation of more than 1,000 residential units, a hotel, and other facilities.	The comment is noted. The Draft EIR follows well laid CEQA requirements in conducting the analysis. CEQA requires (see, for example, CEQA Guidelines Section 15064), which states, "In evaluating the significance of the environmental effect of a project, the Lead Agency shall consider direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment." As an informational document, the Specific Plan EIR is required to study only reasonably foreseeable consequences. CEQA does not require an agency to assume an unlikely worst-case scenario in its environmental analysis. See Section 5.2 for an analysis on cumulative impacts on biological resources, public services and recreation, and utilities and service systems.
Sonoma Land Trust	9/26/2022	B11-33	The EIR fails as an informational document because it does not analyze the Project's significant unmitigated environmental effects before identifying mitigation measures and analyzing their effectiveness. The County cannot condense these two steps into one or disguise mitigation actions as project features. Even if mitigation measures can be implemented as features of the Project, the EIR must evaluate the Project's true impacts without those measures in place before it can propose, analyze, and adopt needed	The comment is noted. See MR-1. The DEIR adequately describes baseline conditions pursuant to CEQA requirements. As noted on page 236 of the DEIR, no new field studies were conducted for the preparation of this EIR, because existing resources contained information on pertinent aspects of biological resources in the Planning Area at level of detail appropriate for a program level environmental assessment. Future project specific detailed biological surveys will be necessary to confirm presence or absence of sensitive resources on future development sites. See response to comments B8-2

Commenter	Date	Letter	Comment	Response
			mitigation. The EIR here skips this crucial step and fails to connect the dots between the Project's impacts and selected "mitigation." As a result, decisionmakers and the public do not know what the Project's unmitigated impacts would be or how the cited policies and conditions would purport to mitigate those impacts. o The EIR fails to describe fully the environmental setting of the Project. An EIR's description of a project's environmental setting crucially provides the baseline physical conditions by which a Lead Agency determines whether an impact is significant. Here, the EIR fails to accurately portray the site's underlying environmental conditions and therefore undercuts the legitimacy of the environmental impact analysis. § For example, the EIR judges impacts to biological resources primarily by estimating impacts to special-status plants and wildlife. EIR 221-251. But the EIR does not include any observational data regarding the presence or absence of these species. Id. • The EIR relies exclusively on the California Natural Diversity Database to "identify special-status species with the potential to occur in the SDC area." EIR at 221 (emphasis added). By definition, the species identified in the EIR may not occur in the SDC area. Likewise, as the EIR admits, the EIR's identification of	and B8-18 regarding wetland delineation policy amendments. See also MR-3 and MR-9.

Commenter	Date	Letter	Comment	Response
			special-status species may be under-inclusive. Id. ("Lack of information in the CNDDB and other reports … does not imply that the species does not occur… This lack of information may reflect a lack of Project or reporting more than absence of specialstatus species. Thus, there may be additional occurrences of special-status species within this area that have not yet been surveyed and/or mapped."). • Surveys for sensitive plant and animal species are entirely absent. • Instead, the EIR improperly defers critical studies and surveys until after project approval. • The EIR cannot identify what the impacts to specific special-status species will be or how significant those impacts will be, because the EIR cannot state with any degree of certainty whether or to what degree those species are present in the areas planned for development. • The EIR cannot remedy its lack of analysis by punting to "[f]uture project specific biological surveys [that] will be necessary to confirm presence or absence of sensitive resources on future development sites." EIR at 237. The Specific Plan is incredibly detailed. It shows specifically where different types of development will be located within the Core Campus	

Commenter	Date	Letter	Comment	Response
			and describes in detail what each type of development will look like. E.g., EIR at 69-80. The Specific Plan breaks the Core Campus into development districts (EIR at 74) and identifies building square footage for commercial, hotel, office, public, institutional, and utility use (EIR at 80). In short, the County already knows what types of development could occur under the Specific Plan and substantially where those different types of development would occur. The EIR cannot avoid analyzing the foreseeable impacts of that development simply because more granular analysis may later be required. The EIR similarly indicates that the Project may impact wetlands and other waters. EIR at 235. However, the EIR admits that "formal wetland delineations have not been performed for the SDC and it is anticipated that additional wetlands will be mapped during future site assessments." Id. The EIR cannot analyze or explain what the impacts to wetlands will be, how significant those impacts will be, or even if development will be possible in the areas planned for development if the EIR does not know where wetlands are located on the SDC site. o The EIR improperly defers analysis of Project impacts until later stages of	

Commenter	Date	Letter	Comment	Response
			development and fails to explain how it reaches its conclusion that impacts will be less than significant.	
Sonoma Land Trust	9/26/2022	B11-34	The EIR's impact methodology violates CEQA because it does not actually disclose or analyze any particular impacts. It simply states without analysis, explanation, or substantial evidence that certain unspecified impacts may occur. Decisionmakers and the public thus lack sufficient information about the nature and scope of potential impacts to evaluate those impacts for themselves. • For example, the EIR states that "[t]wo specific projects could have the potential to impact special status species and sensitive natural communities. The proposed Highway 12 connector project would follow Sonoma Creek in a southerly direction, and then proceed east adjacent to the open space area outside the SDC core area." EIR at 241. The EIR concludes that "[w]ith implementation of Station Conditions of Approval BIO-1 through BIO-13,	The comment is noted. The DEIR methodology is pursuant to CEQA requirements for a programmatic EIR. See MR-3. The 'two specific projects' noted on page 241 of the DEIR are both related to the Highway 12 connector. See also MR-7.

Commenter	Date	Letter	Comment	Response
			potential impacts would be less than significant." Id. But at no point does the EIR disclose what potential impacts the Highway 12 connector project could have on special status species or sensitive natural communities. Decisionmakers and the public have no way of knowing whether the connector threatens habitat loss, increased mortality from vehicle strikes, or something altogether different. And without knowing what the impact is, decisionmakers cannot know what it is that Conditions of Approval BIO-1 through BIO-13 are supposed to be mitigating. Equally significant, the EIR does not disclose what the second of the "[t]wo specific projects" that threaten impacts is. Decisionmakers and the public are left to guess. o What specifically are the anticipated impacts of the Highway 12 connector? o How will Conditions of Approval BIO-1 through BIO-13 mitigate those impacts? o What is the second specific project that could impact special status species and sensitive natural communities? o What specifically are the anticipated impacts of that second project? o How will Conditions of Approval BIO-1 through BIO-	

Commenter	Date	Letter	Comment	Response
			13 mitigate those impacts?	
Sonoma Land Trust	9/26/2022	B11-35	The EIR also states that "stream restoration and bridge maintenance projects are expected within aquatic features, [so] direct impacts would occur." EIR at 252. But the EIR fails to elaborate about what those "direct impacts" might include. o What specific impacts are anticipated from stream restoration and bridge maintenance projects? o How frequently are such projects anticipated to occur and at what locations? • The EIR states that the Project would not have a substantial adverse effect on state or federally protected wetlands in part because no new ground-disturbing activities would occur during Project operation. But the EIR does not discuss or analyze potential operational impacts to wetlands from recreation or other non-construction activities during Project operation. EIR at 254. o The Specific Plan proposes using known wetlands for recreational purposes. E.g., Specific Plan at 2-2 ("Designating an area at Suttonfield Lake for off-leash dogs and water recreation…"). What are the specific anticipated impacts from recreational uses and off-leash dog use at Suttonfield Lake?	The comment is noted. Please see response to comment B9-7. Policy 2-14 would prohibit all unleashed outdoor cats, and restrict off-leash dogs and other domestic animals to private fenced yards and designated areas to mitigate impacts to a less than significant level.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-36	The EIR states that "[i]mplementation of the Proposed Plan would have a significant impact on migratory species, corridors, or nursery sites if the siting, construction, or operation of development allowed under the Proposed Plan would impede on or remove migratory corridors or nursery sites." EIR at 255. The EIR then concludes that the Project would not impede migratory corridors or nursery sites. Id. But the EIR never defines what level of imposition rises to the level of a significant impact. Id. The EIR states that "recreational trails, in or near habitats that include wildlife corridors … are considered to be uses consistent with open space management and are not considered substantial impacts to the wildlife corridor functionality of the site." Id. But the EIR's conclusory statements provide no data or analysis about the impact of recreational trails or other uses on wildlife behavior, especially if over 2000 new residents and 900 employees significantly expand public use and recreation. The EIR's conclusions are not supported by substantial evidence. • The EIR next concludes that the "Proposed plan does not conflict with local ordinances, therefore, impacts related to	The comment is noted. See MR-3 and MR-7. See response to comment B11-25 and B8-1. As noted on page 257, future projects under the Proposed Plan would conform with all local policies and ordinances. This includes any regulatory regional or local requirements, such as the Sonoma County Code.

Commenter	Date	Letter	Comment	Response
			conflict with local policies or ordinances would be less than significant." EIR at 257. However, the EIR does not identify specific local policies or ordinances against which the Project was analyzed. It simply states that the "[f]uture projects under the Proposed Plan would conform with local policies and ordinances including the Sonoma County Tree Protection Ordinance and the Sonoma County General Plan." Id. The EIR's so-called "analysis" fails to mention other local rules and policies that the EIR identified as applicable to the Project, including the County Heritage or Landmark Tree Ordinance or the Valley Oak Habitat Combining District (EIR at 210). Nor does the Biological Resources section discuss or analyze the Project's consistency with Measure K, through which Sonoma County residents renewed protections for community separators and protected tens of thousands of acres of open space and agricultural land from subdivision and sprawl. EIR at 207-212. Without substantial evidence of consistency—or at least a more complete accounting of applicable policies and regulations—the EIR's consistency determination is just a conclusory statement.	

Commenter	Date	Letter	Comment	Response
			See EIR at 257. Decisionmakers and the public cannot independently verify the Project's consistency with local rules and regulations, and the EIR fails as an informational document.	
Sonoma Land Trust	9/26/2022	B11-37	The EIR does not explain why its selected significance criteria are relevant or appropriate. • The EIR identifies six significance criteria for impacts to biological resources, but fails to explain why these criteria were selected. EIR at 236. The EIR neither discloses the origin of these criteria nor provides data or analysis to support their use as significance thresholds under CEQA. Due to this lack of evidence, decisionmakers and the public cannot meaningfully gauge whether the EIR's significance criteria are adequate markers of the Project's environmental impacts. • How did the County select its chosen significance criteria? • Why were other significance criteria not considered?	The comment is noted. Biological Resource significance thresholds criteria are directly from CEQA Guidelines.
Sonoma Land Trust	9/26/2022	B11-38	The EIR's approach to mitigation presents two issues. First, the EIR evades responsibility for developing, enforcing, and monitoring mitigation measures by incorporating its chosen mitigation directly into the Specific Plan. The EIR cannot disclose the Project's "unmitigated" impacts because, under the EIR's approach,	The comment is noted. See MR-1, MR-3, and MR-9. See also response to comment B8-1 and B10-9. Impacts from hazards and hazardous materials, fire risk, noise and vibration, and lighting are analyzed in sections 3.1, 3.8, 3.16, and 3.11 pursuant to CEQA threshold requirements.

Commenter	Date	Letter	Comment	Response
			no impacts have gone unmitigated. Second, the purported mitigation that County incorporates in the Specific Plan punts to uncertain future actions and thus defers the analysis and development of any meaningful mitigation to a later date. By incorporating deferred mitigation into the Specific Plan, the EIR cannot meaningfully analyze what mitigation may be appropriate or how effective that mitigation may be. In so doing, the EIR denies decisionmakers and the public the opportunity to fully understand the Project's impacts and improperly delegates the County's legal responsibility to mitigate those impacts. The EIR relies on Specific Plan policies and Conditions of Approval to avoid, reduce, or mitigate the Project's potentially significant impacts. The EIR must therefore treat these policies and conditions as formal mitigation measures. It must analyze fully the effectiveness of the mitigation against specific identified impacts and must include the mitigation measures in a Mitigation Monitoring and Reporting Program. • The EIR's conclusions as to the effectiveness of mitigating policies and conditions are not supported by analysis or substantial evidence. They are simply a means by which the EIR avoids identifying or analyzing the Project's unmitigated impacts, as required by CEQA. This approach fails to disclose	

Commenter	Date	Letter	Comment	Response
			unmitigated impacts and fails to support the County's chosen mitigation. o For example, the EIR concludes that with the implementation of Specific Plan Policies 2-6 through 2- 26 and Conditions of Approval BIO-1 through BIO-13, "the impact of future development under the Proposed Plan on species identified as candidate, sensitive, or special- status species would be less than significant." EIR at 242. But the EIR neither identifies specific impacts that the Project will have on specific candidate, sensitive, or special-status species, nor explains how or to what degree the cited policies and conditions would reduce those impacts. EIR at 241-251. § What analysis supports the County's conclusion that Specific Plan Policies 2-6 through 2-26 and Conditions of Approval BIO-1 through BIO-13 would reduce impacts to special-status species to less-than-significant levels? § How can the County conclude that the cited policies and conditions will reduce impacts if it has not yet identified and analyzed those specific impacts or the impacted species? § How does the County anticipate the cited policies and conditions would reduce impacts to specialstatus species? o Similarly, the EIR asserts that "implementation of policies	

Commenter	Date	Letter	Comment	Response
			2-25, 2-27, 2-29, and 2-30 would ensure impacts to riparian resources [from the proposed highway connector project] would be less than significant." EIR at 252. But again, the EIR fails to identify what specific impacts the connector road would have or indicate how and to what degree the cited policies would mitigate those impacts. o The EIR further asserts that the "implementation of applicable policies" would render "the operational impact on riparian habitat and other sensitive activities … less than significant." EIR at 252. The EIR asserts that applicable policies would restrict access by humans and domestic animals to specific areas and would reduce the trampling or degradation of riparian habitat. But the EIR is silent about other potential and foreseeable impacts, such as litter, fire risk, noise, lighting, and vibration.	
Sonoma Land Trust	9/26/2022	B11-39	To the extent the Specific Plan policies and Conditions of Approval cited in the EIR could mitigate for the Project's impacts, that mitigation is impermissibly deferred. • For example, Condition of Approval BIO-14 improperly relies on existing regulatory programs and the permitting processes of other agencies to "[a]void, minimize, or mitigate for impacts to aquatic communities." EIR at 252. In so doing, the County delegates its	The comment is noted. Please see MR-1, MR-3 and MR-9.

Commenter	Date	Letter	Comment	Response
			legal responsibility to assess and mitigate Project impacts to "the Army Corps, RWQCB, [or] CDFW." Condition of Approval BIO-14 defers to the issuer of any required permit(s) to design appropriate mitigation and provides no clear benchmark or performance standard(s) that that mitigation must meet. Unless the County is the permitting agency, Condition of Approval BIO-14 does not clearly provide for County oversight of this process. Such delegation of authority to analyze and mitigate environmental impacts is improper. • Similarly, Condition of Approval BIO-16 requires the Project Sponsor to develop a habitat mitigation plan subject to approval by the agency or agencies with oversight over any impacted aquatic resource. EIR at 254. That Condition defers to the habitat mitigation plan—and therefore the Project Sponsor(s) and other agencies—to analyze the scope and effect of the impact to aquatic resources and to design appropriate mitigation. Here, too, the County improperly delegates its legal responsibility to future developers and regulators and fails to provide concrete performance standards for resulting mitigation. Analysis	

Commenter	Date	Letter	Comment	Response
			of impacts and mitigation cannot be deferred to a later date but must be performed prior to project approval. Nor may a lead agency satisfy CEQA by approving a project subject to conditions requiring the applicant to prepare future studies and mitigation measures, because in so doing the agency would be improperly delegating its legal responsibility to assess a project's environmental impact. Instead, the lead agency itself must prepare or contract for the preparation of impact assessments that reflect the agency's independent judgement. Where the finalization of mitigation is deferred, the EIR must explain why it cannot be finalized now and must establish performance standards for such mitigation that will ensure the impact will be reduced to a lessthan-significant level. How does the EIR here meet these requirements? § The EIR's conclusions that impacts to biological resources are insignificant is unsupported by either meaningful analysis or substantial evidence.	
Sonoma Land Trust	9/26/2022	B11-40	Even if the EIR could mitigate impacts through Specific Plan policies and conditions of approval, the policies and conditions identified in the EIR are not sufficient to avoid potentially significant impacts.	The comment is noted. See response to comment B8-1 and response to comment B11-25 and B11-26.

Commenter	Date	Letter	Comment	Response
			o The EIR failed to conduct field studies or survey plants and wildlife at the SDC site. EIR at 221, 236. The EIR therefore admits that there may be special-status plants and wildlife present on site that are not accounted for in the EIR's list of special-status species. EIR at 221. However, the EIR concludes that "[i]mplementation of the Proposed Plan would not have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species" because future development will comply with standard conditions of approval that target special-status species. EIR at 241-251 (BIO-2 [special-status bats], BIO-3 [American badger], BIO-4 [nesting raptors], BIO-5 [burrowing owl], BIO-6 [northern spotted owl], BIO-7 [tricolored blackbird], BIO-8 [special status nesting birds], BIO-9 [western pond turtle], BIO-10 [foothill yellow-legged frog, red-bellied newt, and California giant salamander], BIO-11 [California red-legged frog], BIO-12 [California freshwater shrimp and listed salmonids], BIO-13 [special-status plants]. Even if these conditions of approval were sufficient to address the named special-status species, they would not address impacts to candidate, sensitive, or special-status mammals, reptiles, or amphibians that may be present in the SDC area but which may not be captured in the EIR's list of special-status	

Commenter	Date	Letter	Comment	Response
			species. See EIR at 221. The County simply cannot know, and EIR cannot analyze, whether and to what degree the Project may impact as-yet unidentified special-status species until the County conducts appropriate surveys.	
Sonoma Land Trust	9/26/2022	B11-41	The EIR's analysis and mitigating policies and conditions focus only on construction impacts. See, e.g., Conditions of Approval BIO-1 through BIO-14. But operational impacts could be equally if not more significant. § For example, significantly increased recreational uses from thousands of new residents and workers near the Wildlife Corridor or Suttonfield Lake could have potentially significant impacts to wildlife movement, wetlands, or special-status species by locating hikers and pets near critical habitat. The EIR generally assumes these impacts are less than significant because recreational uses are broadly consistent with open space management principles. But consistency with open space management principles does not necessarily mean that these uses would not negatively and significantly impact habitat or wildlife behavior. Increased visitor use along trails across SDC may alter behaviors and cause some species to avoid those areas. § Increased vehicular traffic that results from the development would also	The comment is noted. The DEIR Impact Analysis on Biological Resources also accounts for operational activities, see section 3.4.3.4, and it was determined that these impacts are less than significant. See also MR-3.

Commenter	Date	Letter	Comment	Response
			likely increase human-wildlife interactions. Wildlife are already documented to traverse Highway 12. How will development under the Specific Plan contribute to and mitigate the risk of vehicular collusions? How will increased traffic change wildlife behavior in the Sonoma Valley Wildlife Corridor and throughout the SDC site? The EIR cannot presently answer these questions because it has not analyzed the operational impacts of the Project on wildlife. § The surveys and related work discussed in Conditions of Approval BIO-1 through BIO-14 only apply when development is occurring. They do not continue to apply during Project operation and thus cannot mitigate operational impacts that are driven simply by the presence of humans and human activity. The EIR must analyze and mitigate operational impacts in addition to construction impacts.	
Sonoma Land Trust	9/26/2022	B11-42	The EIR relies on policies and conditions that are vague and unenforceable. The EIR fails to show how these vague and unenforceable policies and conditions could definitively avoid or mitigate potential significant impacts to biological resources. § Specific Plan Policy 2-7: Prohibit lights within the wildlife corridor and along the creek corridor. • This policy prohibits lights from being physically	The comment is noted. Please see MR-1, MR-3 and MR-9. Impacts on biological resources were determined to be less than significant with compliance to federal, State, regional, and local regulations as well as proposed policies and Standard Conditions of Approval.

Commenter	Date	Letter	Comment	Response
			located within the wildlife corridor and along the creek corridor, but it does not clearly prohibit light intrusion into the wildlife corridor or the creek corridor from lights located outside the corridors. Without prohibiting light intrusion, the EIR cannot show that project lighting will not impact biological resources in the wildlife and creek corridors. § Specific Plan Policy 2-8: Maintain wildlife crossing structures by periodically checking for and clearing debris, vegetation overgrowth, and other blockages from culvert and bridge crossing structures; within the Core Campus, the Project Sponsor should develop and execute a maintenance program in collaboration with the owner and operator of the preserved parkland and open space. • This policy is vague and unenforceable. It provides only that the Project Sponsor "should develop and execute a maintenance program." There is no guarantee that a maintenance program will be developed or executed.	
Sonoma Land Trust	9/26/2022	B11-43	Specific Plan Policy 2-10: Within the wildlife corridor, limit mowing and the removal of dead plant material to the absolute minimum required for fire safety. If possible, mowing should be conducted outside the nesting	The comment is noted. Please see MR-1, MR-3 and MR-9. Impacts on biological resources were determined to be less than significant with compliance to federal, State, regional, and local regulations as well as proposed policies and Standard Conditions of Approval.

Commenter	Date	Letter	Comment	Response
			bird season, or nesting bird surveys should be constructed within 14 days of mowing. • This policy is vague and unenforceable. It states that mowing should be conducted outside the nesting bird season and that nesting bird surveys should be "constructed" within 14 days of mowing only if possible. As an initial matter, it is not clear what it means for a nesting bird survey to be "constructed." Surveys must be completed within an appropriate time of any mowing activity in order to adequately inform whether and how that mowing activity is conducted. Further, this policy provides no indication what entity will be responsible for determining whether nesting bird surveys are possible or whether it is possible to mow outside of the nesting season. o Who does the County envision will be responsible for those decisions? o What sort of oversight will the County, the Project proponent, the owner, etc. have to ensure this policy is actually complied with? o What are the impacts to nesting birds if is it not possible to avoid mowing during the nesting bird season or if it is not possible to conduct timely surveys?	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-44	Specific Plan Policy 2-15: Collaborate with local wildlife protection groups to create and distribute educational information and regulations for residents and employees to guide safe interactions with wildlife onsite. Materials should be accessible to all ages and abilities and could include posted signs, disclosures, fliers, or informational sessions, among other things. • This policy is vague and unenforceable. Materials must be accessible to all ages and abilities (not should). • How will the County gauge compliance with this policy? • How will the County enforce compliance with this policy and regulations? • Until the County identifies what regulations will be implemented, how can the County know that the regulations implemented will be sufficient to mitigate impacts to wildlife? Specific Plan Policy 2-17: Adhere to residential nighttime noise standards to the extent feasible. • This policy is vague and unenforceable. • It is not clear to which standards this Policy refers. What are the standards with which the County envisions compliance? • Who determines whether and when it is feasible to adhere to residential nighttime noise standards? • How often does the County anticipate that it will not	The comment is noted. Please see MR-1, MR-3 and MR-9. Impacts on biological resources were determined to be less than significant with compliance to federal, State, regional, and local regulations as well as proposed policies and Standard Conditions of Approval. Noise standards that the Proposed Plan will comply to are defined in the County General Plan. See Standard Conditions of Approval regarding compliance with noise standards and response to B11-30. See also B11-96 regarding preservation of existing trees.

Commenter	Date	Letter	Comment	Response
			be feasible to adhere to residential nighttime noise standards? Under what circumstances does the County anticipate that it would not be feasible to adhere to residential nighttime noise standards? • What are the activities for which the County anticipates that it may not be feasible to adhere to residential nighttime noise standards? • What additional mitigation would be required if it is not feasible to adhere to residential nighttime noise standards? Or if no further mitigation would be required, the impact would be significant and must be identified and analyzed in the EIR. What would be the impacts if the mitigation is infeasible?	
Sonoma Land Trust	9/26/2022	B11-45	Specific Plan Policy 2-21: Preserve and enhance the wetlands east of the core campus as a fire break, groundwater recharge, and habitat area. • This policy is vague and unenforceable. • This policy is not valid mitigation because it lacks clearly defined standards and is not specific enough to effectively implement or enforce. Who will determine whether wetlands are sufficiently “preserved” or “enhanced”? On what basis will those determinations be made? Specific Plan Policy 2-22: Leave standing or downed dead trees in place for wildlife habitat whenever they do not present a hazard for fire safety or	The comment is noted. Please see MR-1, MR-3 and MR-9. Impacts on biological resources were determined to be less than significant with compliance to federal, State, regional, and local regulations as well as proposed policies and Standard Conditions of Approval. See also B11-114.

Commenter	Date	Letter	Comment	Response
			recreational users, except within the managed landscape buffer. • This policy is vague and unenforceable. • This policy is not valid mitigation because it lacks clearly defined standards and is not specific enough to effectively implement or enforce. • Who determines whether dead trees present a hazard for fire safety or recreational users? • What constitutes a sufficient hazard that would authorize removal? • How frequently does the County anticipate that dead trees would constitute a hazard and would be removed pursuant to this policy? • What additional mitigation would be required if trees are removed?	
Sonoma Land Trust	9/26/2022	B11-46	Specific Plan Policy 2-25: Include protective buffers of at least 50 feet along Sonoma and Mill creeks, as measured from the top-of-bank and as shown on Figure 2.2-1: Open Space Framework, to protect wildlife habitat and species diversity, facilitate movement of stream flows and ground water recharge, improve water quality, and maintain the integrity and permeability of the Sonoma Valley Wildlife Corridor, and the ability of wildlife to use and disperse through the SDC site. Manage protective buffers so that they support continuous stands of healthy native plant	The comment is noted. Please see MR-1, MR-3 and MR-9. Impacts on biological resources were determined to be less than significant with compliance to federal, State, regional, and local regulations as well as proposed policies and Standard Conditions of Approval. See response to comment B10-9. Mill Creek runs along the southern border of the Core Campus.

Commenter	Date	Letter	Comment	Response
			communities. • The EIR does not analyze or explain why a 50-foot buffer is appropriate or sufficient to reduce impacts to creeks at SDC. Merely stating that an impact will occur is insufficient; an EIR must also provide information about how adverse the adverse impact will be. Likewise, merely stating that an impact will be mitigated is insufficient; an EIR must explain how the mitigation will avoid or reduce impacts. • A 50-foot buffer is not sufficient to reduce impacts to riparian resources. The EIR states that the riparian forest along Sonoma Creek has an average width of 150 to 300 feet—three to six times the width of the proposed buffer. Why is the required buffer so significantly smaller than the riparian resources it is meant to protect? • What and where is Mill Creek? • The 2019 Land and Water Protection Proposal (which was signed off on by Regional Parks, California Department of Fish and Wildlife, and Sonoma County Ag + Open Space calls for significantly larger buffers, including a 300-foot buffer along Sonoma Creek, a 300-foot buffer along Asbury, Mill/Hill, and	

Commenter	Date	Letter	Comment	Response
			Butler Canyon Creeks (exception for a 100-foot buffer along Mill/Hill Creek within the core campus), and a 100-foot wetland buffer. o Why did the EIR depart from this approved proposal? o On what basis does the EIR conclude that smaller buffers will protect wildlife?	
Sonoma Land Trust	9/26/2022	B11-47	Specific Plan Policy 2-26: Prohibit the use of all pesticides, rodenticides, and poisons in materials and procedures used in landscaping, construction, and site maintenance within the Planning Area. This restriction should be included in all Declarations of Covenants, Conditions and Restrictions (CC&Rs) to ensure that future homeowners are aware of the requirements (emphasis added). • This policy is vague and unenforceable. It does not guarantee that the prohibition on pesticides, rodenticides, and poisons will be included in all CC&Rs. § Specific Plan Policy 2-28: Prior to the commencement of the approval of any specific project in the Proposed Plan area, Project Sponsors shall contract a qualified biologist to conduct studies identifying the presence of special-status species and sensitive habitats at proposed development sites and ensure implementation of appropriate mitigation measures to reduce	The comment is noted. Please see MR-1, MR-3 and MR-9. Impacts on biological resources were determined to be less than significant with compliance to federal, State, regional, and local regulations as well as proposed policies and Standard Conditions of Approval.

Commenter	Date	Letter	Comment	Response
			impacts to sensitive habitat or habitat function to a less than significant level. • This policy improperly defers analysis of impacts and mitigation that must be conducted now in this EIR. Analysis of impacts cannot be deferred to a later date but must be performed prior to project approval. Conducting thorough analysis at this stage is the only way decision-makers and the public can have sufficient information about impacts and mitigation to be able to evaluate the impacts of a proposed project for themselves. The needed analysis could then inform the location of various uses and development within the Sonoma Development Center and allow consideration of alternatives that minimize biological impacts. By deferring analysis of Project impacts and mitigation through implementation of the Specific Plan, the EIR fails to provide sufficient information to the public and decisionmakers and therefore fails as an informational document.	
Sonoma Land Trust	9/26/2022	B11-48	The comments presented below reference comments prepared by Neal Liddicoat, Griffin Cove Transportation Consulting, PLLC ("GCTC") on the EIR and Specific Plan, attached below as Attachment D to Sonoma Land Trust's September 26, 2022 letter to Brian Oh.	The comment is noted. See MR-9, MR-6, and MR-7. See also response to comment B8-3, B8-15, B8-16, and B8-19 for wildlife corridor policy amendments.

Commenter	Date	Letter	Comment	Response
			• The Specific Plan and its EIR include goals and objectives for this Project that include a focus on non-motorized modes of transportation within and between the Project area and local communities (e.g., Specific Plan at 3-2 and DEIR at 6. However, the proposed site maps do not demonstrate any such connections. Creating walkable and bikeable connections to Glen Ellen (including Eldridge) will be critical to encouraging nonmotorized forms of transportation. How will Project design ensure connections would be implemented to meet the Project's stated goals with respect to sustainability and community character? • The Project requires some new road development—even if only for emergency access—and will result in substantial increases in traffic volumes. Increased traffic through the property on Arnold Drive will put tremendous pressure on wildlife. Additionally, development of new roadways (e.g., on the east side of SDC) will impair existing ecological connections across the Sonoma Valley Wildlife Corridor. The EIR fails to address the impact of increased traffic on wildlife. • Wildlife movement within SDC and across the Corridor is already constrained. Currently, there are only two options for wildlife to move east-west across the core campus without having to cross the Arnold Drive roadway: along Sonoma Creek or along Hill Creek. Along the eastern edge of SDC, safe wildlife crossing of Highway 12 is limited to three culverts on Butler Creek and its	

Commenter	Date	Letter	Comment	Response
			tributaries. These small crossings under Highway 12 are the most critical locations for wildlife moving east-west across Highway 12 both within SDC and on nearby lands. High levels of wildlife movement have been documented at all three of the culverted crossings. The increased traffic and development of the Project will further constrain wildlifes' east-west movement opportunities, resulting in will have significant impacts on wildlife. How will Project design ensure safe wildlife crossings are retained? • The Project, including the Specific Plan policies, fail to ensure that new road construction, increased traffic volumes, and traffic speeds on SDC do not increase interference with wildlife movement and use within the property or across the larger corridor or result in increased road mortality. Development and human activities should be limited near the crossing structures. To help mitigate these impact, the Project design should: o limit new road, driveway, and trail construction, especially outside the core campus area o If new roads are constructed or old roads upgraded, incorporate crossing structures to accommodate wildlife o Install speed bumps and wildlife crossing signage at critical junctures	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-49	The EIR's transportation analysis presents a description of the Project, including a specific breakdown of housing unit types, that is inconsistent with both the EIR Project Description and with the description of the project in the Specific Plan document. GCTC at p. 2. The transportation analysis assumes a maximum of 1000 residential units, but assigns a specific breakdown of uses (i.e., 435 single family units, 345 multi-family units, and 220 senior residential units). GCTC Report at 1. Different types of housing typically result in different amounts of trip generation and VMT. Neither the Specific Plan nor the DEIR specify this particular breakdown of uses. On what basis does the EIR base the assumption of different types of residential units? • The EIR bases its analysis of VMT on a model completed by MTC. EIR at 433. However, the EIR uses the average VMT per capita for the entire nine county Bay Area for comparison of the Project's VMT. This comparison is inappropriate because in rural areas without established mass transit and limited alternative transportation options, the VMT is likely to be higher. The EIR analysis should have used average VMT figures for the County, or preferably, for a sub-area that includes all of the towns in the vicinity of the Project. • The EIR assumes the existing VMT is 59,654 and the proposed Project would result in a VMT of 60,285 in 2040. DEIR at 183. The EIR provides no explanation regarding how these figures were derived. Given that the SDC campus	The comment is noted. The commenter states that the EIR incorrectly bases its VMT analysis on the MTC model. This statement is incorrect; the transportation VMT analysis uses the Sonoma County SCTM19 travel demand model and uses methodologies and significance thresholds that are consistent with State requirements. The MTC model was only used to establish the regional employee VMT significance threshold, which OPR guidance states is the appropriate geographic area for development in unincorporated County areas. See also B3-15, B11-247, B11-248, B11-249, and B11-250.

Commenter	Date	Letter	Comment	Response
			is largely unoccupied, it appears that the existing VMT figure is artificially inflated, which skews the VMT analysis. The EIR's assumed VMT calculation suggests that the total VMT will only increase by 631. Without accounting for non-residential uses (e.g., office, commercial, etc.) the VMT for the 1,000 residential units would amount to an increase in VMT of 0.631 per dwelling unit, which is not realistic. If we consider the non-residential uses, the incremental increase in project-related VMT is even lower. In addition, the air quality section of the EIR indicates that the Project-related population will increase by 2,500 people for the residential portion of the Project. The Transportation section states that ". . . residential uses in the Plan area with implementation of the Proposed Plan would on average generate 15.2 VMT per capita . . ." EIR at 445. The population increase of 2,500 multiplied by 15.2 VMT per capita would result in 38,000 VMT, which is far greater than the total increase of 631 claimed in the EIR. This calculation only considers residential uses so the actual VMT would be far greater. Therefore, the EIR's VMT calculation as presented is simply not credible. Moreover, the EIR admits that the Specific Plan policies cannot be guaranteed to reduce significant VMT impacts so the correct conclusion regarding this impact after mitigation is that it would remain significant. EIR at 35.	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-50	The EIR does not provide a transportation analysis of the proposed Project without assuming the construction of the new Hwy 12 connector. Since the feasibility of this road has not been determined, what are the LOS and VMT impacts without the new connector? • The EIR presents a flawed analysis of the Project's consistency with applicable plans. o The EIR acknowledges that the Sonoma County General Plan objectives require traffic operation standards of level-of-service ("LOS") C on roadway segments and LOS D at intersections. EIR at 443. The EIR concedes that the Project may exceed the established LOS standards. Id. Even though LOS is no longer used for evaluating a project's traffic impacts, when the general plan includes LOS standards, LOS does need to be considered when evaluating a project's consistency with the general plan. o Instead of estimating Project-related traffic and evaluating the Project's consistency with County LOS standards, the EIR concludes, absent any evidence, that the Project would be consistent with LOS targets established in the General Plan. EIR at 444. As discussed below, this conclusion appears to be erroneous. GCTC at p. 2. o The EIR references a traffic impact analysis prepared for the Project, but fails to include it in the EIR. GCTC at p. 2. Specifically, the EIR references the Focused	The comment is noted. VMT impacts are still significant without the Highway 12 connector. See the VMT analysis of the Historic Preservation Alternative on page 569. See MR-6.

Commenter	Date	Letter	Comment	Response
			Traffic Operations Analysis for the SDC Specific Plan (W-Trans, August 2022). EIR at 410, Footnote 118. The focused traffic study revealed that under future conditions with implementation of the SDC Specific Plan, two intersections are projected to operate unacceptably if no modifications to the current roadway configurations are made. GCTC at 2 and 3. The intersection at Arnold Drive/Harney Street would operate unacceptably at LOS F during the p.m. peak hour and the future new intersection on SR 12 at the new SDC Connector Road would have unacceptable LOS E operation on the stop-controlled connector road approach. Id. The study also revealed that at buildout of Project, the segment of SR 12 between Arnold Drive and Trinity Road and the segment of Arnold Drive between SDC and Madrone Roadwould would continue to operate below the County's standard at LOS D. GCTC at 3. Although these road segments are also identified as falling short of the County LOS standard without the Project, no mitigation measures were proposed to allow operation at an acceptable LOS. In any event, it is clear that these two roadway segments will fail to meet the County LOS standard upon completion of the Project, thereby violating the General Plan objectives. Id. The information necessary to address conformance with General Plan Objective CT-4.1 and CT-4.2 exists, but was not	

Commenter	Date	Letter	Comment	Response
			included within the DEIR, which would have allowed public review. Although the focused traffic study identifies improvements to would remedy LOS deficiencies, no assurance is provided that those measures would be implemented. GCTC at 3. Why does the EIR not disclose this study or its contents? The County must make this traffic report available to the public.	
Sonoma Land Trust	9/26/2022	B11-51	The EIR underestimates Project trip generation. o The EIR employs the SCTM19 travel demand forecasting model used by the Sonoma County Transportation Authority ("SCTA") to estimate the Project's trip generation. However, the EIR fails to disclose the specific trip generation factors employed in the trip generation model. As a result, it is impossible for document reviewers to understand or evaluate the accuracy of those factors or the resulting trip generation estimates. GCTC at p. 3. What specific trip generation factors were used? What is the substantial evidence to support those factors? o Traffic impact analyses frequently evaluate trip generation using the Institute of Transportation Engineers ("ITE") document Trip Generation Manual. An estimate of trip generation based on the ITE Manual information (hereto referred to as the "ITE estimate") versus the estimate documented in the EIR provides perspective on the credibility of the EIR Project's transportation analysis. GCTC at p. 3. For purposes of comparison, the ITE estimate considers two	The comment is noted. See response to comments B11-246, B11-247, B11-248, B11-249, and B11-250.

Commenter	Date	Letter	Comment	Response
			scenarios: one uses the Project plan described in the EIR transportation section and one considers the maximum residential development scenario described in the Specific Plan document. Id. Using industry-accepted procedures and conservative assumptions, both ITE estimate results indicate a substantially higher trip generation than disclosed in the EIR. GCTC Letter, Table 1 at p. 5. o For the first ITE estimate using the EIR Project plan, the trip generation estimate shows 6,556 residential trips and 5,697 non-residential daily trips for a total of estimated trip generation of 12, 253. GCTC at p. 5 and 6. This denotes a difference of approximately 114 percent more trips than the EIR estimate of 5,736. GCTC letter at p. 5 and EIR at 440. Although a small difference between model-based trip generation and ITE trip rates is expected, a difference of this magnitude brings into question the validity of the EIR's analysis. Id. o For the second ITE estimate using the maximum residential development scenario described in the Specific Plan document, the trip generation breakdown shows 8,593 residential trips and 5,697 non-residential trips for a total of estimated trip generation of 14,290, which is an even larger difference than the EIR estimate. GCTC at p.6. o The ITE analysis presented in the GCTC letter reveals that the EIR substantially	

Commenter	Date	Letter	Comment	Response
			underestimates the Project's trip generation. This faulty analysis implicates the EIR's vehicle miles travelled ("VMT"). GCTC at p. 7. Trip increases described in the GCTC letter will similarly translate to roughly equivalent increases in VMT. Id. and EIR at 447. Although the EIR already concludes that VMT impacts would be significant and unavoidable, the EIR's failure to accurately estimate trips results in a failure to disclose the extent and severity of those impacts, which is impermissible under CEQA.	
Sonoma Land Trust	9/26/2022	B11-52	The EIR substantially overestimates internal trips. o The EIR's transportation analysis assumes that 24.4 percent (approximately 1,398 of the Project's total 5,736 daily trips) of Project-generated trips would never leave the project site ("internal trips"). EIR at 440 and GCTC at p. 7. However, here too, the EIR is overly optimistic and over estimates the internal trips. Even where job opportunities and other amenities exist within the Specific Plan area, residents will still commute to existing jobs and drive off site to nearby communities. There is no guarantee that people who live on site will work there. GCTC employed three different methods to estimate internal trips at the SDC site. GCTC at pps. 7 and 8. Under each of the methods, GCTC found internal trip values ranging from 6.5 to 8.8 percent, all substantially lower that the 24.4 percent value used in the EIR analysis. GCTC at p. 8.	The comment is noted. See response to comments B11-246, B11-247, B11-248, B11-249, and B11-250.

Commenter	Date	Letter	Comment	Response
			Consequently, the DEIR analysis has substantially overstated the number of internal trips and grossly underestimated the number of external trips. Id. In this way, the EIR failed to accurately assess the off-site transportation-related impacts of the Project. Id. o The EIR's underestimate of the number of external trips, leads to similarly understated Project-related VMT, which serves as basis for determining the significance of the Project's transportation impact. In short, the Project's transportation impact has been greatly understated due to a failure to provide an accurate estimate of the volume of traffic resulting from the Project. See, GCTC Table 3 at p. 9. This failure to accurately estimate traffic impacts in turn implicates the air quality and greenhouse gas analyses, noise analysis, wildfire/emergency evacuation analysis, and biological resources assessment, among others.	
Sonoma Land Trust	9/26/2022	B11-53	The EIR presents a flawed Project traffic assignment. o The EIR presents a flawed analysis of projected traffic volumes for the three road segments that provide access to the Project site: Arnold Drive north of the site, Arnold Drive south of the site, and the proposed Highway 12 connector. GCTC letter at p. 9. Despite the fact that the EIR omitted some of the data related to Project existing traffic volumes, GCTC was able to derive the Project traffic	The comment is noted. See response to comments B11-246, B11-247, B11-248, B11-249, and B11-250.

Commenter	Date	Letter	Comment	Response
			assignment on each roadway segment. Id. In each scenario analyzed in the EIR, the volume of project trips assigned to regional access roads falls substantially short of the 4,338 external trips claimed in the EIR. GCTC at p. 9 and Table 4 at p. 10. In the analyses implementing the Highway 12 connector, the volume of traffic on Arnold Drive north of the site is shown to be reduced upon completion of the Project, which seems highly unlikely. Id. Although some variability in these types of analyses can sometimes occur, none of the factors that would contribute to such variability (such as the presence of alternative routes that allows for redirecting traffic to less congested routes) apply at the Project site. GCTC at p. 10.Therefore, substantial evidence fails to support the EIR's analysis and conclusions, and the EIR fails to accurately account for the full volume of Project-related traffic. • The EIR's vehicle- miles travelled analysis is inaccurate and misleading. o The EIR's VMT analysis is equally concerning and is flawed for several reasons. GCTC at 11. First, the VMT analysis assumes a 15 percent reduction in VMT based on transportation demand management ("TDM") trip reductions. Id. However, the EIR provides no support for its assumption regarding a 15 percent trip reduction. Id. Even the EIR admits that "the ability for individual development projects to achieve a 15 percent reduction	

Commenter	Date	Letter	Comment	Response
			in VMT is uncertain." EIR at 447. The GCTC analysis suggests that the VMT would be substantially greater than disclosed. GCTC at 11. Second, the employment VMT figures (also called "Home-Work VMT per Worker") presented by the EIR are highly questionable. Id. Specifically, the planning area baseline average (7.1), the countywide baseline average (12.4), and the regional baseline average (16.9) for home-based commute VMT per worker are all higher than the EIR value assigned for home-based commute VMT. Id. The EIR's finding that the Project's homebased commute VMT would be 4.8 is approximately 67 percent of the corresponding value for the Planning Area, 39 percent of the Countywide value, and only 28 percent of the Bay Area Region value. Id. This unexplained discrepancy, along with the aforementioned flaws in the analysis raises serious concerns about the EIR's credibility. GCTC at p.12. o The EIR relies on Specific Plan Policy 3-41 to reduce the Project's VMT impact. GCTC at p.12. This policy requires all development to reduce vehicle trips by 15 percent below rates listed in the ITE Trip Generation Manual using TDM strategies. Id. and Specific Plan at p. 3-12. However, as the GCTC letter explains, this policy does not make sense given that the Project's proposed trip generation is already so low. Id. In other words, if the Project's trip	

Commenter	Date	Letter	Comment	Response
			generation estimate is to be believed, the Project trip rate is already substantially less than 15 percent below ITE trip rates. Therefore, unless the Project's trip generation estimate is corrected, Specific Plan Policy 3-41 is meaningless. GCTC at p.13.	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-54	CEQA requires EIRs to include all feasible mitigation to reduce a significant impact to an insignificant level even where an impact is significant and unavoidable. Here, the EIR fails to identify mitigation measures that would reduce the Project's traffic impacts. These include measures found in the California Air Pollution Control Officers Association ("CAPCOA") report "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity, Public Draft, August 2021, found at https://www.airquality.org/ClimateChange/Documents/Handbook%20Public%20Draft_2021-Aug.pdf. Some of these measures could include, for example: MM T-7: Bus Shelter for Existing/Planned Transit Service - Bus or streetcar service provides headways of one hour or less for stops within one-quarter mile; project provides safe and convenient bicycle/pedestrian access to transit stop(s) and provides essential transit stop improvements (i.e., shelters, route information, benches, and lighting). MMT-31: Orient Project Toward Transit, Bicycle, or Pedestrian Facility MM T-38: Implement Preferential Parking Permit Program. (For electric vehicle and other alternative fuel vehicles.) MM T-39: Implement School Bus Program MM T-40: Implement a School Pool Program MM T-42: Provide Electric Shuttles MMT-47: Required Project Contributions to Transportation Infrastructure Improvement MM E-23: Use Microgrids and Energy Storage	The comment is noted. The commenter states that the EIR fails to identify all feasible mitigation measures related to VMT impacts, citing several VMT mitigation strategies found in the California Air Pollution Control Officers Association (CAPCOA) report "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity," Public Draft, August 2021. The assertion that the DEIR fails to identify feasible measures is incorrect. The County chose to address VMT mitigation through Specific Plan Policies 3-41 and 3-42, which require individual developments occurring with the Specific Plan to achieve reductions in vehicle trips and VMT through implementation of TDM strategies and establishment of a TMA to oversee areawide VMT reduction programs. Both individual developments and the TMA are expected to rely heavily on the data contained in the CAPCOA publication cited by the commenter (or more appropriately, to more recent versions of the CAPCOA report). The selection of TDM strategies will vary by individual development project and the TMA, and will likely evolve over time to maximize effectiveness, as described on DEIR pages 448-449. This approach was intentionally chosen as a VMT reduction strategy rather than attempting to speculatively predict which measures (including those identified by CAPCOA) may or may not be relevant during the span of the proposed Specific Plan. Many key VMT reduction strategies related to physical infrastructure and reducing automobile travel that are cited by the commenters have also already been incorporated as Specific Plan policies.

Commenter	Date	Letter	Comment	Response
			• In sum, the EIR's transportation analysis is flawed. Particular deficiencies were identified with respect to the volume of traffic associated with the Project, how much of that traffic will be captured internally, the assignment of that traffic to the stud y area roads, and the validity of the estimate of Project-related vehicle-miles traveled. GCTC at 13. These failures implicate the validity of the conclusions presented in the EIR. Id. • The errors and omissions in the Transportation analysis implicate the EIR's analyses of other topics, including air quality and greenhouse gas emission impacts.	Following are responses to CAPCOA measures cited by the commenter (note that the commenter appears to have mis-numbered and combined some CAPCOA measures so the following list is organized by topic). Measure cited by commenter: • Bus shelters for existing/planned transit service • Provide safe and convenient bicycle/pedestrian access to transit stops • Provide essential transit stop improvements • Orient project toward transit, bicycle, or pedestrian facility • Measures would be implemented by development in the Specific Plan area • Bus service with headways of one hour or less • Subsidization of fare-free service or service expansions could be a strategy used by the TMA if funding allows • Implement preferential parking permit program • Implement school bus program • Implement a school pool program • Provide electric shuttles • Required project contributions to transportation improvements Specific Plan Policy 3-23 calls for adding an additional bus stop in the campus; Policies 3-24 and 3-25 call for providing transit shelters, seating, and lighting among other amenities including real-time system updates and arrival times; Policies 3-12, 3-13, 3-15, 3-16, and 3-21 collectively call for the establishment of new pedestrian and bicycle connections including to transit along the Arnold

Commenter	Date	Letter	Comment	Response
				Drive corridor. Specific Plan Policy 3-22 calls for the County to work with Sonoma County Transit to expand transit service and extending the fare-free Route 32 shuttle to the site. The Sonoma Valley Unified School District already provides bus service to students who live beyond walking distance, though if this practice were discontinued in the future, implementing of a school bus or shuttle would remain a viable TDM strategy that the TMA could utilize. Policy 3-22 calls for extension of the Route 32 shuttle to the Specific Plan area; electrification of shuttles has no effect on transportation VMT. Policy 3-22 calls for extension of the Route 32 shuttle to the Specific Plan area; electrification of shuttles has no effect on transportation VMT. Development projects will be required by the County to contribute to improvements; the County would be responsible for completing Arnold Drive complete streets improvements and path connections (see Specific Plan section 7.6) which form a key component of VMT reduction strategies related to non-auto travel. Specific Plan Policies 3-27, 3-28, 3-29, and 3-31 require parking management strategies that will reduce VMT; preferential parking permit programs could be incorporated as a component of these strategies.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-55	The comments presented below reference comments on the EIR and Specific Plan prepared by Alexandra Syphard, Senior research ecologist specializing in wildfire science and fire ecology, Conservation Biology Institute ("Syphard Letter"), attached as Attachment E to Sonoma Land Trust's September 26, 2022 letter to Brian Oh. • The EIR fails to adequately analyze Project-related impacts related to evacuation during a wildfire. The EIR references an evacuation analysis prepared by Kittelson & Associates that is not included in the EIR or its Appendices and is not available anywhere on the SDC Specific Plan website. The County must make this report available to the public. o The EIR fails to adequately describe the baseline conditions relevant to evacuation. In past fires, Highway 12 became so congested that it took hours to drive even short distances. The evaluation of project-related wildfire evacuation impacts lacks adequate information. For example, the EIR fails to provide details related to implementation of the proposed vegetated fuel buffers, their size, how they would be managed, and how they would be maintained. o In addition, it defies logic that the evacuation of more than 2,000 cars (and potentially 3,000 or more depending on the number of housing units and number of jobs) during a wildfire would increase travel time during an evacuation by fewer than 15 seconds. The EIR fails to provide the basis for this conclusion or	The comment is noted. All outputs from the evacuation analysis are included under Impact 3.16-1 of the DEIR. Also, see responses to letter C109. Specifically, see response to comment C109-5. See also MR-1, MR-3, and MR-9.

Commenter	Date	Letter	Comment	Response
			provide or even summarize the evacuation analysis prepared by Kittelson & Associates. In addition, the unstable project description and the flawed transportation analysis add to the uncertainty regarding the number of proposed housing units and the corresponding amount of increased traffic, which will exacerbate fire risk and the ability to safely evacuate.	
Sonoma Land Trust	9/26/2022	B11-56	The EIR fails to adequately evaluate project-related wildfire risk. o It is common knowledge that fire is an ever-present danger in Sonoma County. Decades of fire suppression, a changing climate, the epidemic of dead and dying trees, combined with a record drought equate to a recipe for disaster in the region. As County staff acknowledge, the combination of dense forests, heavy fuel loads, low humidity, potential for high winds, and the steep terrain can rapidly turn even small fires into lethal, major disasters. EIR at 500 and 501. • The environmental destruction wrought by wildfires is exacerbated by development in the Wildland-Urban Interface, which unwisely places people and structures directly in the line of fire. o Here, not only is the proposed Project located within the Wildland-Urban Interface, it is surrounded by lands designated as moderate, high, or very-high fire hazard severity zones ("FHSZ"). EIR Figure 3.16-2 Fire Constraints. o As the EIR recognizes, the site's natural vegetation	The comment is noted. See responses to letter C109. Specifically, see responses to comments C109-7, C109-9, and B3-25. See also MR-1, MR-3, and MR-9.

Commenter	Date	Letter	Comment	Response
			and slopes are conducive to the rapid spread of wildland fires as was the case during the Sonoma Complex fires in 2017. EIR at 502. • As the EIR acknowledges regarding wildfire ignition risk, " the majority—95 percent— are caused by human activity." EIR at 500. o Increased housing density, the location, and the pattern of development drives wildfire risk. Syphard et al. 2013. Isolated or remote clusters of development, such as the one proposed here, are particularly vulnerable (Syphard et al. 2016). o This is especially true when the housing is surrounded by high FHSZs.	
Sonoma Land Trust	9/26/2022	B11-57	It is well established that most human-caused wildfires start near roads and housing development (Syphard and Keeley 2015 and others). Therefore, not only is the likelihood that more fires will start near the project site (that in turn increases the number of fires that could become destructive), but the increase in transportation into and out of the new development increases the likelihood of fires starting in the area. The EIR fails to address this fact. • The EIR states that impacts related to wildfire risk will only be considered significant if "the Proposed Plan risks exacerbating those existing environmental conditions." EIR at 506. The EIR lists several criteria for evaluating fire risk, but fails to evaluate the risk of having a substantial increase in population on-site and increased use of the open space. • The proposed increase in population on-site,	The comment is noted. See responses to letter C109. Specifically, see responses to comments C109-7, C109-8, and C109-15. See also MR-1, MR-3, and MR-9.

Commenter	Date	Letter	Comment	Response
			particularly at the maximum level allowed, would exacerbate fire risks for three reasons: o increased housing density o a substantial increase in vehicles on the site and o a substantial increase in use of the undeveloped open space areas. • Increased housing density and population on site, especially at the proposed low- to medium densities, would increase opportunities for fires to ignite; and there is still ample continuous vegetation in the surrounding landscape for wildfires to spread. (Syphard et al. 2007, Syphard et al. 2019, Radeloff et al. 2018). • Research shows that the location of human ignitions tends to occur closest to roads and human infrastructure (Molina et al. 2019, Chen and Jin 2022). Increased vehicles on site would increase opportunities for fires to ignite. Therefore, the addition of people coming into and out of the area because of the new development increases the likelihood of more fires starting on-site and in adjacent areas. • In addition, it is reasonable to assume that with an increased population of 2,400 people, or more, there will be a significant increase in use of open space areas, which will in turn, increase wildfire ignition risk. Therefore, the Project would exacerbate wildfire risk, especially if the site can eventually house even more people. • The EIR fails to analyze any of these factors, fails to provide evidence that the Project will not exacerbate wildfire risk, and incorrectly concludes that impacts related to wildfire risk are less-than-significant.	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-58	The EIR fails to adequately analyze project-related wildfire risk exposure of people and structures due to flooding, landslides, runoff, post-fire slope instability, or drainage changes. The Specific Plan and its EIR indicate that all proposed development would be located on the flat part of site. However, some structures located near the boundaries of the Core Campus are adjacent to steep slopes (within areas preserved as open space), which are known landslide-susceptible areas, and contain vegetative wildfire fuels. EIR at 521. • The EIR relies on Policy 2-31 to reduce risks of flooding and landslides. However, as indicated above, this policy lacks details about how fuel management would be implemented and maintained in areas susceptible to flooding and landslides. o This information is important because some types of vegetation are more prone to ignition than others. o In addition, vegetation removal could result in unintended consequences, such as exacerbating slope instability especially after a wildfire. • The EIR entirely ignores potential exposure and risk to people from flooding, runoff, or drainage changes. o As explained further in the section on hydrology and water quality below, the EIR defers all analysis related to exposing people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow. EIR at	The comment is noted. See Impact 3.16-4 on page 521 of the DEIR regarding potential secondary impacts from a wildfire. With compliance of proposed policies, implementation of the Proposed Plan would not expose people or structures to significant risks, including downslope or downstream flooding or landslides. See also MR-1, MR-3, and MR-9.

Commenter	Date	Letter	Comment	Response
			299 to 301. o The EIR presents contradictory information related to the potential for flood risk. Specifically, the EIR discloses high risk of flood hazards (EIR at 286 and 287) but defers analysis and identification of feasible mitigations until after Project approval. EIR at 300. o The EIR's approach of deferring analysis and mitigation violates CEQA.	
Sonoma Land Trust	9/26/2022	B11-59	The EIR does not adequately analyze increased fire risk to neighboring residents and wildlife o Given the increased sources of ignition associated with new development and increased traffic, how will the Project exacerbate risk of wildfire ignitions to neighboring communities, e.g., Glen Ellen, Sonoma? o How will the Project exacerbate risks to biological resources due to increased risks of wildfires?	The comment is noted. See responses to letter C109. Specifically, see responses to comments C109-8 and B3-27. See also the cumulative impacts analysis in Section 5.2 of the DEIR. As noted on page 520, construction and maintenance of associated infrastructure to reduce wildfire risk could result in subsequent environmental impacts; the specific impacts of which are not known at this time. However, any new construction of infrastructure facilities to serve the Planning Area would be located and constructed on existing urban and built-up land within the Core Campus (Goal 2-A). Environmental impacts related to construction emissions, vehicle miles traveled (VMT), and biological resources associated with construction of the proposed new facilities and SR 12 connector are accounted for in technical modeling provided in other chapters of this EIR. Further, construction and maintenance of individual infrastructure facilities would be subject to separate project-level CEQA review as applicable at the time the design is proposed in order to identify any potential project specific impacts and identify any mitigation as may be appropriate.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-60	The EIR fails to provide evidence that proposed policies and measures will reduce impacts to less than significant levels. The Project proposes vegetated fuel management buffers but fails to provide details related to buffer size, management, and maintenance. § Why is there no fuel management buffer on the north side of the development site? § How will annual grass areas be managed to reduce ignitability of the landscape? § What criteria will be applied to determine what types of trees or shrubs will be removed and what types will be retained? § What is the plan regarding maintenance of native vegetation, such as chaparral, trees, and shrubs that provide shade and humidity and may be less likely to ignite than grass? o Proposed Policy 2-31states that "shrubs and chaparral should be limited within the managed landscape buffer" (emphasis added). § How will this "limit" be established? Given that this is not a mandatory requirement, what impacts will occur if it is not? o Proposed Policy 2-34 indicates that "minimum clearance of fuels surrounding each structure will range from 4 feet to 40 feet in all directions, both horizontally and vertically" and that areas with "greater fire hazards will require greater separation between hazards." EIR at 508. o What areas of the campus have greater fire hazards	The comment is noted. See responses to letter C109. Specifically, see responses to comments C109-9 through C109-13. See also MR-1, MR-3, and MR-9.

Commenter	Date	Letter	Comment	Response
			that may require more intensive vegetation removal? What sort of shrubs and trees, and therefore wildlife habitat, would be removed under this policy? What would be the biological impacts of such removal? o What entity is responsible for ensuring that the fuel management buffers are properly implemented and maintained? o The County must provide answers to these critical questions and identify other measures for avoiding risk other than vegetation removal, such as avoiding development altogether in areas of greater fire risk.	
Sonoma Land Trust	9/26/2022	B11-61	Many of the policies relied upon to mitigate the significant increased risk of wildfires are inadequate because the measures are vague and unenforceable. o For example: SP Policy 2-42 provides for an educational campaign regarding wildfire risk to future residents. However, the EIR fails to specify the details of implementation. Who is ultimately responsible for ensuring that the policies are followed? o Who will ensure that the educational campaign referred to in Policy 2-42 is updated and continued? o How long will these policies serve to help offset the increased risk that comes with the development? • The EIR fails to identify measures that would reduce personal vehicle use through implementation of mass transit. Having thousands of people driving vehicles on roadways on the site will increase opportunities for fire	The comment is noted. See responses to comment B3-27 and C109-6. See also MR-1, MR-3, and MR-9.

Commenter	Date	Letter	Comment	Response
			ignitions. o The EIR should consider additional mitigation. For example, the Project should include on-site shuttles for the life of the Project, providing transportation for residents to and from the Project site and Eldridge area to the towns of Sonoma, Napa, Petaluma, Rohnert Park, and Santa Rosa throughout the day and evening. • All policies and best management practices should be included as measures in a Mitigation Monitoring and Reporting Plan to ensure implementation and enforceability.	
Sonoma Land Trust	9/26/2022	B11-62	The comments presented below reference comments prepared by Gregory Kamman, CBEC Eco Engineering ("CBEC") on the EIR and Specific Plan, attached below as Attachment F to Sonoma Land Trust's September 26, 2022 letter to Brian Oh. • The EIR Project Description and Project Plan fail to provide sufficient detail about land use changes to complete the necessary hydrologic and water quality assessments to evaluate the Project's hydrological impacts. Due to the lack of an adequate Project Description, the EIR determinations that potential hydrologic and water quality impacts are less than significant requiring no mitigation measures is unsupported. • Redevelopment of the SDC site has the potential to impact the hydrology of interconnected groundwater, spring, and stream systems through changes in land cover, storm water management, and water use. Impacts may include changes to the quantity,	The comment is noted. The DEIR does adequately analyze impacts to Hydrology and Water Quality pursuant to CEQA standards. See MR-1 and MR-3. See Impacts 3.9-1, 3.9-2, 3.9-3, and 3.9-5 for analysis regarding impacts on surface and groundwater quality and recharge pursuant to CEQA thresholds. See also response to comment B11-271.

Commenter	Date	Letter	Comment	Response
			quality, and timing of storm water runoff, infiltrated water available for vegetation and groundwater recharge, and the magnitude, frequency, and extent of critical low flows in steams and low water conditions in wetlands. The EIR does not adequately analyze these impacts. The EIR leaves many questions related to hydrology and water quality unanswered. For instance: o What is the extent of change in impervious surface footprint under this Project? The EIR states only that the Proposed Plan may increase the amount of impervious surfaces. EIR at 298. Even if final numbers will not be known until developers submit future development proposal, the Specific Plan provides the location and types of uses such that the EIR can estimate the changes to impervious surfaces at SDC. o How would the change in impervious surfaces impact the quantity and quality of discharge into Sonoma Creek or its tributaries? o How would proposed stormwater facilities change those processes? o What are the quantitative impacts on the recharge of groundwater aquifers that will result from the Project? o How will the change in extraction of raw water from streams, springs, and aquifers impact environmental quality, including species of concern at the SDC site and beyond compared to recent demand at SDC? o How will projected changes to patterns of temperature and precipitation, such prolonged periods of drought combined with more	

Commenter	Date	Letter	Comment	Response
			intense precipitation events affect water needs and impacts of proposed development at SDC?	
Sonoma Land Trust	9/26/2022	B11-63	The EIR cannot defer the analysis and development of mitigation measures for the Project's impacts on hydrology and water quality. The Specific Plan identifies the location, intensity, and square footage of the different land uses proposed in the Specific Plan: residential, commercial, hotel, office, public, institutional, and utility use (EIR at 80). In short, the County already knows what types of development could occur under the Specific Plan and substantially where those different types of development would occur. Yet, the EIR fails to address the following questions: o How would Project design ensure there would be no substantial increase in the magnitude, frequency, duration, or extent of low-flow events or flood events on springs, streams, and wetlands located at or downstream of the SDC property that may result from changes in land cover, storm water management, and/or the volume, rate, or duration of surface run-off from the site? o How would Project design ensure there would be no substantial degradation of water quality (as per state and local water quality standards), including pollutant load transported by storm water runoff from the site (e.g., sediment load,	The comment is noted. The DEIR does adequately analyze impacts to Hydrology and Water Quality pursuant to CEQA standards. See MR-1, MR-3, and MR-9. Pursuant to CEQA thresholds, the Proposed Plan would have less than significant impacts to hydrology and water quality with compliance to federal, State, regional, and local regulations and implementation of proposed policies and Standard Conditions of Approval.

Commenter	Date	Letter	Comment	Response
			nutrients, metals, and hydrocarbons) that may impact the extent and quality of aquatic habitats? o How would Project design ensure there would be no substantial reduction of infiltration and ground-water recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table? How would Project design ensure there would be no substantial increase in water temperatures in receiving streams resulting from runoff of warm storm water from the site? o How would Project design ensure there would be no substantial net increase in withdrawals or diversions from area springs and streams, including Roulette Springs, Hill Creek, Asbury Creek, and Sonoma Creek, within critical low-flow periods (summer, fall, drought conditions) or as annual averages? o How would Project design ensure there would be maximum possible on-site reuse of treated wastewater as water supply for landscape irrigation, groundwater recharge, or other water supply needs, to minimize environmental impacts of raw water sourcing?	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-64	The EIR fails to adequately analyze Project-related impacts tied to compliance with applicable regulations protecting water quality. EIR at 294. o Impact 3.9-1 - The EIR concludes that impacts related to implementation of the Proposed Plan would not violate any federal, state, or local water quality standards or waste discharge requirements. EIR at 29 and 294. However, the EIR fails to actually analyze how changes in site runoff and associated erosion potential will change. § Performing the required analysis would require detailed hydrologic and hydraulic modeling that incorporates all changes in land use (i.e., impervious surfaces) and runoff estimates to determine where and by how much flow rates and erosion potential may impact receiving waterways. Best Management Practices and other measures could then be designed correctly to mitigate these impacts. Without this information, the EIR cannot adequately evaluate the impacts before and after mitigation. § The EIR bases its conclusion, in part, on implementation of proposed Policy WQ-1. However, this policy only requires consistency with existing laws and regulations. Under CEQA, merely requiring compliance with existing laws and agency regulations does not conclusively indicate	The comment is noted. See MR-1, MR-3, and MR-9. Pursuant to CEQA thresholds, the Proposed Plan would have less than significant impacts to hydrology and water quality with compliance to federal, State, regional, and local regulations and implementation of proposed policies and Standard Conditions of Approval. As noted on page 292, Impact analysis of surface water hydrology considers potential changes in the physical characteristics of water bodies, impervious surfaces, and drainage patterns throughout the Planning Area as a result of construction and operation at the site. Groundwater supply and recharge are assessed by comparing existing conditions within the site area and after implementation of the Proposed Plan. Surface water and groundwater quality is analyzed by using information on existing water quality conditions. Potential sources of contaminants associated with construction are also considered. Flooding impacts are assessed using FEMA data and historical flood information to determine the existing flood zone, specifically evaluating whether the site overlaps designated 100-year floodplains and whether it was a flood risk. CEQA does not require an analysis of how existing environmental conditions will affect a project's residents or users unless the project would exacerbate an existing environmental hazard. This analysis evaluates if construction would exacerbate existing or future flood hazards. See also response to B11-271.

Commenter	Date	Letter	Comment	Response
			that a proposed project would not have a significant and adverse impact. § The EIR also relies on implementation of as yet unspecified Best Management Practices ("BMPs"). EIR at 294. The EIR provides only a laundry list of potential BMPs with no indication or commitment regarding which ones may be implemented or what performance standards they must meet. The EIR fails to address the following questions: What BMPs would be appropriate given specific site conditions? What is the expected efficacy of each measure? What residual impacts might remain after implementation of specific BMPs?	
Sonoma Land Trust	9/26/2022	B11-65	The EIR fails to adequately analyze Project-related impacts related groundwater recharge. o Impact 3.9-2 - The EIR concludes that the project will not interfere with groundwater recharge such that it may impede sustainable groundwater management of the basin and associated potential impacts are less than significant. Id. Similar to its analysis of other hydrological impacts, the EIR fails to provide any analysis of how the proposed Project development will alter groundwater recharge. Having failed to analyze the impact, the DEIR again relies	The comment is noted. The DEIR adequately analyzes impacts to groundwater recharge. The DEIR notes on page 296 that future development at SDC would use surface water supplies from the two reservoirs, and would not be reliant on groundwater. Furthermore, development would be limited to the Core Campus area, and redevelopment of existing structures would not significantly alter the area available for recharge of the groundwater aquifer. Given existing regulations and proposed policies, the Proposed Plan would not substantially decrease groundwater supplies and would not impede sustainable groundwater management of the basin, and this impact would be less than significant. See

Commenter	Date	Letter	Comment	Response
			on compliance with existing regulations and unspecified BMPs. o The EIR has an obligation to describe any potential changes in recharge. Simply stating that unspecified BMPs that support groundwater recharge will be integrated into the Project is insufficient information to demonstrate that the measures will be effective to mitigate potential impacts.	also MR-3 and MR-9 and response to comment B11-271.
Sonoma Land Trust	9/26/2022	B11-66	The EIR fails to adequately analyze Project-related impacts related to flooding and erosion. o The Specific Plan indicates that the site is potentially vulnerable to flooding and dam inundation from a failure of the Fern and Suttonfield dams and spillways. Specific Plan at p.2-6. The EIR explains that future flood events would pose risks to structures such as bridges and culverts and that failure of the dams would exacerbate flood risks. EIR at 286 and 287. Inundation from a dam failure at Fern Lake, could flood a large portion of the Core Campus area, as well as a large area of the Eldridge community just south of the Planning Area. Suttonfield Lake is the largest dam on the site and inundation from a failure at this lake would flood areas east of Sonoma Creek. Both failures would impact proposed residential areas. o The EIR concludes that Project development would not substantially alter the	The comment is noted. The DEIR adequately analyzes impacts to flooding and erosion pursuant to CEQA requirements. The Proposed Project would be required to demonstrate compliance with regulations that include NPDES permits, San Francisco Bay MRP, the Sonoma County Code, the MS4 Phase II Permit, and the Sonoma County General Plan. Proposed policies and Standard Conditions of Approval would be implemented in order to comply with such existing regulations, resulting in less than significant impacts. See also B11-64, B11-271, MR-3, and MR-9.

Commenter	Date	Letter	Comment	Response
			existing drainage patterns or result in substantial erosion and flooding on- or offsite or contribute runoff that would exceed the capacity of existing or planned storm drain systems. EIR at 297 and 298. Here too, these conclusions are not substantiated. § The EIR fails to perform and/or present results from any hydrologic or hydraulic analyses to demonstrate to what degree the project may increase runoff rates and erosion potential from new or redeveloped plan areas. The EIR assumes that adhering to existing County regulations will reduce flooding and erosion impact; yet the DEIR fails to demonstrate that would be the case. § The EIR relies on proposed policies WQ-1 and WQ-4 regarding compliance with applicable plans which, as discussed above, is not adequate to fulfill CEQA requirements. How would these plans insure impacts were reduced to an insignificant level?	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-67	The EIR fails to adequately analyze Project impacts related to exposing people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow. EIR at 299 to 301. o This conclusion is contrary to the California Division of Safety of Dams ("DSOD") conclusions about Project dam safety presented in section 3.9.2.5 (Flooding – Flooding from Dam Failure) of the EIR. EIR at 286-287. o The EIR states, "The DSOD has classified the downstream hazard of a failure at Fern Lake as high". EIR at 286. The DEIR further states, "[T]he DSOD has classified the downstream hazard of a failure at Suttonfield Lake as extremely high." EIR at 287. These statements alone provide evidence in the record that potential flooding impacts are potentially significant and require thorough analysis. o Despite these disclosures, the EIR impermissibly defers necessary subsurface exploration, laboratory testing, and geotechnical studies of the dam sites to determine potential for failure and need for mitigations. EIR at 300. o The EIR relies on implementation of Policies WQ-2 and WQ-3 as mitigation for the significant risks associated with locating housing and businesses in the inundation zone, stating that these policies provide for	The comment is noted. The DEIR adequately analyzes impacts to flooding. The DEIR recognizes there are potentially signicant impacts related to dam failure on page 299. Due to the potential of flooding from dam failure and because there are no records of dam construction or evaluation of the stability of the dams, a geotechnical investigation will be required as well as an emergency plan. As per Proposed Policy WQ-2 and WQ-3 a geotechnical investigation should be performed on the dam sites to evaluate the potential for failure of the embankments under both static and seismic loading conditions. Possible studies include subsurface exploration, laboratory testing, and geotechnical engineering analysis. The report should evaluate the need for improvements such as spillways, subsurface drains, reconstruction of the dam embankments, and other measures to provide long-term stability of the dam embankments. Short term mitigation measures may include lowering of the water levels in the Lakes by providing spillways at lower elevations. Long term stabilization measures would likely include reconstruction of the dam embankments and installation of subsurface drainage control measures. As per Proposed Policy WQ-5, both Fern and Suttonfield lakes are currently under the responsibility of the State. Since both reservoirs at the Planning Area are classified as at least a high hazard, an Emergency Action Plan (EAP) must be implemented in accordance with the requirements from the California Water Code Sections 6160 and 6161 and Government Code Section 8589.5. When the property is transferred a new EAP must be developed to reduce the risk of loss of human life or injury, and to minimize

Commenter	Date	Letter	Comment	Response
			future geotechnical evaluations. Id. o WQ-2 states “Any potential hazard to life or property in the Planning Area shall be properly investigated by the appropriate licensed professional.” o WQ-3 states “All development that requires a geotechnical, hydrological, or environmental report shall utilize the recommendations of said report and be in compliance with regulatory agencies.” EIR at 294 [listed as standard conditions of approval]. o These proposed policies fail to mitigate potential impacts. Instead, they defer analysis and mitigation until after project approval and leave important questions unanswered. For example: On what basis is the County concluding that dam failure would not pose a significant risk to people on- and off- site? § When would the required studies be performed? § Where would the anticipated embankments and installation of subsurface drainage control measures be implemented? § What is the risk of potentially locating thousands of people on the site given the condition of the dam and the known high risk that it may fail? § How will the required Emergency Action Plan impact the proposed Project? EIR at 300. § How would potential short term mitigation measures (i.e., lowering	property damage in the event of a potential or actual emergency. See also MR-3, MR-9, and B11-271. The Proposed Project would be required to demonstrate compliance with all applicable regulations and plans that include NPDES permits and the Sonoma Valley Sub-basin groundwater sustainability plan. Thus, the impact is less than significant.

Commenter	Date	Letter	Comment	Response
			of the water levels in the Lakes through spillways at lower elevations) impact the environment on- and off-site? Id. § How would implementation of potential long term stabilization measures (i.e., reconstruction of the dam) impact the environment on- and off-site? Id. When will appropriate evaluations be performed? o Under CEQA, studies related to hazards that have the potential to increase safety risks to life and property must be performed prior to project approval. It is critical to perform such evaluations now to determine the level of risk and to include necessary mitigations, which could include changes to the Specific Plan, major repairs or fortifications of the dams, or other mitigation measures as appropriate to avoid or minimize those risks. • The EIR concludes that Project impacts related to obstructing implementation of a water quality control plan or sustainable groundwater management plan would result in lessthan- significant impacts, absent any analysis or evidence. EIR at 301. o As with all of the other hydrology impacts listed above, the EIR relies on compliance with existing policies and regulations to minimize impacts and fails to present any analysis to support its conclusion.	
Sonoma Land Trust	9/26/2022	B11-68	The comments presented below reference comments prepared by Gregory Kamman,	The comment is noted. See MR-5 and B11-272 regarding the adequacy of the water supply analysis.

Commenter	Date	Letter	Comment	Response
			CBEC Eco Engineering (“CBEC”) on the EIR and Specific Plan, attached below as Attachment F to Sonoma Land Trust’s September 26, 2022 letter to County Planner, Brian Oh. The EIR presents a flawed analysis of Project-related water demands and available supply. o The EIR asserts that the analysis of water supply and projected water demand is conservative. EIR Appendix D at pdf page 593. But this is not the case. o As an initial matter, the proposed Project water demand estimate is based on the assumption that the Project consists of 516 residential units along with nonresidential uses. EIR Appendix D Table 2 at 605. But EIR Appendix D Table 1 (at p. 602) indicates that at build-out in 2045, the Project will have constructed 1000 units plus commercial, hotel, office, public, institutional, and utility uses. And as explained above with respect to the Project Description, the number of residential units could exceed 1300. Even if allowed to build out to only 1000 residential units, the EIR underestimates water demand by 484 units or roughly half. o The EIR analysis of the availability of water supplies to meet proposed project water demands is flawed. EIR Appendix D presents the results of this analysis. Based on review of Appendix D by CBEC at 4 and 5, the analysis is faulty and fails to demonstrate there is sufficient water supply to meet the Project’s future	

Commenter	Date	Letter	Comment	Response
			(full buildout) water demands. § The EIR indicates that estimated Project water demands by the year 2045 will be 342 acre-feet per year (AFY). EIR Appendix D, Table 2 at p.14. The EIR indicates that the available reliable supply of water for the period 2030-2045 is 356 AFY. EIR Appendix D, Table 9 at p. 31. Given how close the reliable water supply (356 AFY) is to full buildout demands (342 AFY), there is little room for error in terms of future water supply management. § The EIR water supply estimate shows that the historic (1969-2007) water use (demands) for the SDC averaged 622 AFY and peaked at 1,143 AFY in 1986 (pg. 12, Appendix D). § According to the EIR, the water use estimated for full buildout (2045) of the Project is a little more than half historic SDC water demands. How can this be given that the Project proposes 1000 residential units, a hotel, commercial, and industrial uses? See, EIR Appendix D, Table 1 at p. 13. Even with conservation measures, it appears that Project water demands would be similar to, if not greater, than the historic use. o Upon review and cross-checking data and information presented in the EIR, CBEC identified several questionable results that suggest the EIR water demands are significantly underestimated. EIR Appendix D,	

Commenter	Date	Letter	Comment	Response
			Tables 1 and 2. These findings are as follows: The EIR only provides water use estimates for the proposed hotel but considers only water used by employees. EIR Appendix D Table 2 at p.16. Water use by guests staying at the proposed 100,000 square-foot hotel is not accounted for in the annual water demand estimate. Incorporating guest water use into the demand estimate could easily result in total annual Project demands that exceed available reliable supply. § CBEC identified a significant math error in the DEIR demand estimates for General Commercial, Office, Public/Industrial, and Research & Development land uses presented in EIR Appendix D, Table 2 at p.16. This is shown in Table A of CBEC's report, which merges data from Tables 1 and 2 in EIR Appendix D. When independently calculating water demands using the 2045 land use areas and Water Use Factors provided in Appendix D, the respective 2045 water demands for the General Commercial, Office, Public/Industrial, and Research & Development land uses result in values that are two orders of magnitude higher than those reported in the EIR, which results in an increased annual Project water demand of 9,846 AFY (see CBEC Letter at Table A).	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-69	The EIR's water supply evaluation is inconsistent with Sonoma County guidelines. o The Permit Sonoma website provides guidelines (8-2-1 Water Supply, Use and Conservation Assessment Guidelines) for the preparation of Water Supply Assessments. The purpose of this policy is to provide guidance to applicants and their representatives on how to prepare a Water Supply, Use, and Conservation Assessment (henceforth, the "Assessment"). The Assessment may be a standalone document, or supplemental to a hydrogeologic study, Zero Net Use report, or other water supply related report. These guidelines are intended for discretionary and ministerial projects. Discretionary projects that are dependent on groundwater or surface water will typically require an Assessment with the use permit application. The Assessment will inform the environmental review process and conditions of approval. o The authority of the Assessment falls under Sonoma County General Plan, Water Resource Element Goals WR-2 and WR-4, Objective WR-4.1, WR-4.2, and WR-4.3, and Policies WR-2c, WR-2d, WR-2e, WR-4b, and WR-4f. Therefore, the EIR Water Supply Assessment (EIR at Appendix D) should adhere to County Guidelines. Appendix A to the County's Guidelines includes water use estimates for residential, landscape, agricultural, and Commercial and Industrial uses that	The comment is noted. See MR-5 and B11-272. The Proposed Project would be required to demonstrate compliance with all applicable regulations that include the County Code and General Plan. Given that impacts on water supply are less than significant with implementation of proposed policies and Standard Conditions of Approval, secondary impacts would also be less than significant.

Commenter	Date	Letter	Comment	Response
			are greater than those factors presented in EIR Appendix D, Table 2 (see CBEC Letter Table B). Applying the Sonoma County water use estimates to Project water demand estimates results in higher residential and irrigated area water demands than presented in the EIR. Id. o CBEC's analysis, which corrects the EIR's math errors and applies the Sonoma County guidelines' water use estimates to the EIR demand estimate tables, results in a total annual Project water demand of 10,231 AFY, a values three times higher than reported reliable supply (356 AFY). This annual total demand will be even higher when hotel guest water use is considered. o Based on the aforementioned skewed water supply evaluation, how will Project water demand affect water supply for wildlife and habitat? How will it affect other resources?	
Sonoma Land Trust	9/26/2022	B11-70	In 2016, Sonoma County voters passed Measure K, which renewed critical protections for community separators throughout the County. The EIR must analyze how locating new development—particularly the high-density development proposed as the upper end of the Project description—is consistent with the County's general plan, especially if the Project requires a new road through the Glen Ellen/Agua Caliente Community Separator. This analysis must include a complete accounting of whether and how the Project would comply with Community Separator objectives and policies, which require, inter alia, that	The comment is noted. As noted on page 320 of the DEIR, the Proposed Plan includes multiple goals and policies that would support environmental protection objectives of the General Plan. The Proposed Plan includes multiple policies that encourage sustainable development principles, such as mixed-use, compact development and pedestrian- and bicycle-friendly streets within the Planning Area. The Proposed Plan would not facilitate new development in the 750 acres of preserved open space, which is located outside of Core Campus boundaries. Thus, the Proposed Plan focuses on infill development and development of underutilized and vacant areas within the Core Campus in order to

Commenter	Date	Letter	Comment	Response
			development minimize the removal of trees and mature vegetation and minimize impervious surfaces. While the EIR acknowledges that most of the SDC property is located within a local voter-approved Community Separator overlay, it fails to adequately analyze the impact of road development therein.	preserve scenic and biotic resources and avoid development within Community Separators.
Sonoma Land Trust	9/26/2022	B11-71	The EIR must clearly analyze the impact of the proposed Highway 12 connector not only on VMT, but also on each of the impact areas for which increased vehicle traffic threatens other impacts. For example, the construction of a new roadway has foreseeable impacts to biological resources through habitat degradation and interference with wildlife movement and connectivity. Similarly, use of a new roadway would increase wildfire risk by siting new human activity and ignition sources, such as vehicles, where none previously existed. A new road also induces growth by providing access to new areas and decreasing travel times. The EIR does not adequately analyze the full scope of foreseeable impacts from the proposed Highway 12 connector and therefore cannot adequately mitigate those impacts.	The comment is noted. The DEIR anlayzes the impacts of a potential Highway 12 connection thoughout it's environmental analysis. See also MR-3 and MR-7.
Sonoma Land Trust	9/26/2022	B11-72	The EIR does not adequately analyze the Project's consistent with the County's general plan, especially the policies and goals designed to protect biological resources. • The EIR fails to analyze the Project's construction	The comment is noted. See Impact 3.10-2. The DEIR anlayzes construction impacts thoughout it's environmental analysis. See also MR-3.

Commenter	Date	Letter	Comment	Response
			impacts, claiming the analysis would be speculative without more details about the development projects. However, the County has information about the proposed land use types, and square footage, and can therefore include an analysis of anticipated construction period impacts based on that information. In addition, the EIR should have included a quantitative assessment of health risk impacts.	
Sonoma Land Trust	9/26/2022	B11-73	The EIR relies on the 2017 Scoping Plan rather than the current Draft 2022 Scoping Plan. The newer plan includes incorporates the State's carbon neutrality goals and consistency with Executive Order EO B-55-18) and an updated Efficiency Threshold. The updated Scoping Plan requirements should have been considered in the EIR. The EIR calls for future geotechnical study/investigation to establish appropriate mitigations. However, the EIR fails to include performance standards for the mitigation measures. Therefore, the EIR defers both analysis and mitigation for geotechnical impacts.	The comment is noted. The DEIR uses the most recent information available at the time, which includes the 2017 Scoping Plan. Finalization of the Draft 2022 Scoping Plan is expected by the end of 2022. See also MR-9.
Sonoma Land Trust	9/26/2022	B11-74	The EIR discloses that noise along the Highway 12 Connector would increase from zero to 59 decibels. EIR at Table 3.11-9 at p. 352 and 353. However, the EIR concludes that this increase would not result in a significant impact because the increase noise level does not increase by more than 3 decibels. This is clearly an error. EIR at 353.	The comment is noted. Under the noise thresholds, a significant impact would occur if project-related traffic increases the ambient noise environment of noise-sensitive locations by 3 dBA or more if the locations are subject to noise levels in excess of 60 CNEL for exterior areas. Since the connector is 59 CNEL, this would not be a significant impact.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-75	The EIR insists that, given the extensive park and recreational opportunities that will be offered within the Planning Area, development under the Proposed Plan would not increase the use of existing neighborhood and regional. EIR at 406. However, the EIR provides no evidence that the planning area parks will meet all park needs of residences.	The comment is noted. As noted on page 403, consistent with the Quimby Act (California Government Code Section 66477), the General Plan 2020 Policy PF-2g requires dedication of land or in-lieu fees as a means of funding, park facilities. Policy PF-2c requires the use of the following standards for determination of park needs: 20 acres of regional parks per 1,000 residents countywide and five acres of local and community parks per 1,000 residents in unincorporated areas. Although the Proposed Plan would result in a population increase of about 2,400, there are approximately 12 acres of parks and recreational facilities designed into the Proposed Plan. Thus, implementation of the Proposed Plan would not exceed these use standards.
Sonoma Land Trust	9/26/2022	B11-76	The EIR identifies a number of Specific Plan policies purportedly designed to reduce impacts to cultural and historic resources. But the EIR fails to explain how these policies would actually achieve that goal. o Policy 2-47: Consider adaptively reusing Sonoma House as a museum dedicated to the history of the SDC facility, collaborating with Sonoma County, the State of California, the Glen Ellen Historical Society, and other community groups for design and programming of the space, if feasible. § This policy is vague and unenforceable. It does not require adaptive reuse of Sonoma House or set forth standards to guide whether adaptive reuse would be feasible. § Who determines whether adaptive reuse is feasible? § What benchmarks must be met for adaptive reuse to	The comment is noted. See MR-1, MR-3, and MR-9.

Commenter	Date	Letter	Comment	Response
			be feasible in this context? o Policy 2-48: Provide resources and learning opportunities for residents and visitors about all phases of the history of the site. Materials should be accessible to all ages and abilities and could include posted signs, fliers, or informational sessions, among other things. § This policy is vague and unenforceable. Resources and learning opportunities must be available to people of all ages and abilities. Policy 2-52: Require any unanticipated discovery of archeological or paleontological resources to be evaluated by a qualified archeologist or paleontologist. § This policy is vague and unenforceable. § What standards must guide the evaluation by an archeologist or paleontologist? § What additional mitigation would be required if the archeologist or paleontologist were to identify resources of cultural or historic significance? • The cultural resources analysis suffers from the same self-mitigating errors as the majority of the EIR. For example, the EIR concludes that “the impact of implementation of the Proposed Plan on individually significant historical resources would be less than significant with implementation of the proposed policies and actions referenced [in the EIR] and existing State regulations.” EIR at 295. The	

Commenter	Date	Letter	Comment	Response
			EIR must first analyze the Project's unmitigated impacts before it can propose mitigation. Otherwise, decisionmakers and the public cannot meaningfully evaluate whether, how, and to what degree the purported mitigation would actually reduce significant impacts.	
Sonoma Land Trust	9/26/2022	B11-77	The EIR states that the Project would have a significant impact to land use if development would "physically divide an established community." EIR at 317. The EIR concludes that no division would occur because the Project includes a bike path and other features to enhance connectivity around the Project site. But the EIR ignores that the development proposed under the Specific Plan would nonetheless create a physical barrier in the Sonoma Valley and the Sonoma Valley Wildlife Corridor where none currently exists. Further, in addition to creating a physical barrier, the Project would dramatically increase human activity over present levels. Even if the Project contains elements that could increase connectivity, the population increase that results from the Project would foreseeably result in less tangible barriers, such as increased traffic. The EIR must acknowledge and fully analyze how these impacts would divide Glen Ellen, including the portions of Glen Ellen on either side of the campus, and Sonoma Valley communities more broadly. • The EIR also acknowledges that "[n]ew construction has the potential to disconnect the remaining contributing resources in the Core Campus from those in Community	The comment is noted. As noted on page 318, the Proposed Plan includes features specifically aimed at enhancing connectivity within the Planning Area and improving linkages between the larger Sonoma Valley. Therefore, because the Proposed Plan would not introduce any physical barriers to the Planning Area and would generally improve connectivity for all users, including vehicles, bicyclists, and pedestrians, it would result in no impact with respect to physically dividing an existing community. The DEIR acknowledges that the Proposed Plan would cause a substantial change of a historic district, and this impact would be significant and unavoidable. The physical division of an established community typically refers to the construction of a linear feature, such as an interstate highway or railroad tracks, or removal of a means of access, such as a local bridge, that would affect mobility within an existing community or between a community and outlying area. Thus, Impact 3.10-1 does not pertain to the historic district. See MR-9.

Commenter	Date	Letter	Comment	Response
			Separator and Regional Parks lands to the east and west, consequently disrupting the feeling and character within the historic district. This would affect the cohesiveness of SSHHD's overall integrity to the point that it would no longer be eligible for listing in the NRHP, CRHR, or as a California Historic Landmark." EIR at 296. In other words, the Project would physically divide a historic district and thereby destroy its character as such. o How is this not a physical division of an established community that would constitute a significant land use impact? • As discussed in the above sections, the draft Specific Plan fails to include adequate performance standards to ensure that impacts from development will remain less than significant as the Project is built out. Particularly if the EIR is going to defer development of key mitigation—and it should not do so—the EIR and Specific Plan should adopt a phased-development model that establishes clear and robust performance standards that must be met before the next phase of proposed development can proceed. Build-out should begin with the most important phase(s) of development, namely the construction of affordable housing.	
Sonoma Land Trust	9/26/2022	B11-78	The EIR fails to adequately analyze the Project's air quality and greenhouse gas emissions. o The EIR's air quality analysis is based on a description of the Project that assumes construction of 1,000 residential units, 190,000 square	The comment is noted. The Project Description is stable. The future buildout of the Proposed Plan assumes 1,000 new total units; buildout described in the DEIR is aligned with the buildout described in the Proposed Plan. Table 3.3-7 outlines propsoed policies that support the 2017 Clean Air Plan.

Commenter	Date	Letter	Comment	Response
			feet of office use, 40,000 square feet of commercial/retail use, and 90,000 square feet of hotel, 90,000 square feet of public/institutional/utility uses. EIR at 168. As discussed above, this description is inconsistent with the other descriptions in the Specific Plan and EIR. As discussed throughout these comments, the unstable project description implicates the environmental analysis, including the analysis of impacts to air quality. The result is that by underestimating residential units, traffic, and VMT, the EIR underestimates air quality and greenhouse gas emission impacts o For example, the EIR claims that the Project would not conflict with BAAQMD's 2017 Clean Air Plan, based in part on a screening of the Project's estimated impacts against four criterion. EIR at 183. One of those criteria addresses whether the Project will result in an increase in projected VMT or vehicle trips that is less than or equal to projected population increase. Id. Given the significant underestimation of Project-related traffic and related VMT, as discussed above, the EIR's analysis of air quality impacts is also unreliable and its conclusion that the Project would be consistent with the Clean Air Plan is unsupported.	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-79	The EIR fails to adequately analyze and mitigate the Specific Plan's aesthetic impacts. o The EIR lacks support for its conclusion that development under the Specific Plan would not have a substantial adverse effect on a scenic vista (Criterion 1). § EIR at 89 states that that the SDC site is within a Historic Combining District, which is designed to "protect those structures, sites and areas that are remainders of past eras, events and persons important in local, state or national history, or which provide significant examples of architectural styles of the past, or which are unique and irreplaceable assets to the county and its communities. Alterations to existing structures and construction of new structures within historic districts shall be consistent with the historic district design guidelines adopted by the board of supervisors." § EIR at 102 notes that the current County General Plan requires the County to identify and preserve roadside landscapes that have a high visual quality as they contribute to the living environment of local residents and to the County's tourism economy. Furthermore, General Plan objectives additionally aim to provide guidelines so future land uses, development, and roadway construction are compatible with the preservation of scenic values along designated scenic corridors, of which Arnold Road is one. § The SDC's historic landscape creates a unique scenic vista along the length of Arnold Road. Some Specific Plan policies identify historic buildings and contributing buildings to be retained, however the policy language is vague and unenforceable, which results in uncertainty as to whether the resources are going to be retained or whether the scenic vista is going to be lost. For instance,	The comment is noted. Modification to any historic resources under the Proposed Plan would be subject to all applicable regulations, including the County Code and General Plan. The DEIR adequately analyzes aesthetics impacts. Figure 3.1-1 shows the scenic landscape units and corridors located within the Planning Area. State Route (SR) 12, which comprises the eastern edge of the Planning Area, is a Caltrans-designated scenic highway. Arnold Drive, which runs through the center of the SDC property, and SR 12, at the eastern edge of the site, are Scenic Corridors that provide experiences of rural environments the General Plan seeks to preserve. Up to 200 feet on either side of these roads are subject to development restrictions and design criteria. Specifically, Section 26C-222 of the County Code states that all structures shall be subject to the setbacks of thirty percent (30%) of the depth of the lot to a maximum of two hundred feet (200′) from the centerline of the road. The Proposed Plan would adhere to all General Plan and County Code requirements. In addition, the westernmost portion of the SDC site nearest to the Sonoma Mountain is designated as a Scenic Landscape Unit and is limited to agricultural or resource land use categories. Given that construction will be clustered only in the previously developed Core Campus and that new development will keep with the overall scale and development height variation of the current SDC campus, adverse effects on the scenic vistas of SR 12 on the eastern edge of the Planning Area and the scenic landscape unit on the western edge of the Planning Area would be less than significant. Further, as described under Impact 3.1-2, adherence with existing and proposed policies

Commenter	Date	Letter	Comment	Response
			Specific Plan Policy 4-23 states "Preserve and reuse the contributing resources identified in Figure 4.3- 1, to the greatest extent feasible." How can it be ensured that scenic resources including the Arnold Road historic landscape will be retained and maintained? Without firm and enforceable requirements, it cannot be concluded that the impacts to roadside landscapes and scenic vistas is less than significant. § Furthermore, the EIR does not identify a threshold of significance to determine what loss of historic/scenic resources would be acceptable and considered less than significant. Therefore, it is impossible to determine whether the policies identified in the Specific Plan are sufficient to prevent a substantial degradation to a scenic resource, which in this case is the high-quality roadside landscape of Arnold Road. § For Impact 3.1-1, EIR at 103 concludes that since "construction will be clustered only in the previously developed Core Campus and that new development will keep with the overall scale and development height variation of the current SDC campus, adverse effects on the scenic vistas of SR 12 on the eastern edge of the Planning Area and the scenic landscape unit on the western edge of the Planning Area would be less than significant." However, the EIR fails to recognize that the existing SDC campus is considered a scenic resource due to its historic significance and roadside landscape along a scenic corridor. The substantial change to the scenic resource allowed by the lax policies to protect contributing buildings will result in a substantial adverse impact and cannot be substantiated as a less than significant impact. o The EIR lacks support for its conclusion that the Specific Plan would not substantially degrade the existing visual character or quality of public views	and standards would ensure that construction of an SR 12 connector under the Proposed Plan would minimize adverse effects on a scenic vista to a less-than-significant level. See also MR-3 and MR-9. The comment includes statements that the EIR does not provide thresholds of significance for various aesthetic impacts, however, the thresholds applied to the analyses are clearly set forth in Draft EIR Section 3.1.3.1. Development under the Proposed Plan would be required to comply with applicable regulations governing scenic corridors, including the Sonoma County Code and General Plan. With adherence to existing and proposed policies and standards, vistas along Arnold Drive would not be significantly impacted, and development of an SR 12 connector under the Proposed Plan would ensure that damage to scenic resources along SR 12 would be less than significant. Further, the Specific Plan's Arnold Drive overlay would encourage development to maintain the feel and scale of the buildings and landscape along Arnold Drive, including with a variety of building types and scales, a continuous landscape setback, activity, and views into the SDC site. Existing goals and objectives in the Sonoma County General Plan 2020 aim to preserve and maintain views of the nighttime skies and visual character of urban, rural, and natural areas, while allowing for nighttime lighting levels appropriate to the use and location; specifically that development should maintain nighttime lighting levels at the minimum necessary to provide for security and safety of the use and users to preserve nighttime skies and the nighttime character of urban, rural, and natural areas; and ensure that nighttime lighting levels for new

Commenter	Date	Letter	Comment	Response
			of the site and its surroundings (Criterion 3). § Arnold Road is a known scenic corridor with a 200' buffer on either side that is subject to development restrictions and design criteria (Sonoma County General Plan 2020 Figure OSRC-1). Specific Plan Policy 5-O states that "Arnold Drive, development should maintain the feel and scale of the buildings and landscape along Arnold Drive, including with a variety of building types and scales, a continuous landscape setback, activity, and views into the SDC site" (emphasis added). While this is a laudable goal, it is also an unenforceable measure with ambiguous language ("should") and cannot be relied upon to ensure that the existing visual character will be maintained along this scenic corridor. § EIR at 106 states that "with adherence to existing and proposed policies and standards, development under the Proposed Plan would improve rather than substantially degrade the existing visual character of the site, and this impact would be less than significant." By what metric is the visual character being measured to determine that it will improve with the proposed project? § The EIR does not identify thresholds against which the proposed degradation of the visual character and quality views of the site can be assessed to come to the conclusion that the impacts will be less than significant. Therefore, this conclusion is unfounded. o The EIR lacks support for its conclusion that the Specific Plan would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area (Criterion 4) § The EIR qualitatively discusses the light and glare impacts that will result from the operation of the project (lighting from future building fixtures, building windows, automobile headlights, parking lot lighting). What are the expected impacts from security	development are designed to minimize light spillage offsite or upward into the sky. General development standards that pertain to light and glare would need to conform to County-prescribed lighting regulations provided in Section 26-82-030 of the Sonoma County Code. With adherence to existing and proposed policies and standards, development under the Proposed Plan would not substantially increase the amount of nighttime lighting or glare in the already previously developed Core Campus or surrounding open space areas. Impacts associated with light and glare would be less than significant.

Commenter	Date	Letter	Comment	Response
			lighting or other sources during the construction phases of the project? § The EIR references Specific Plan Policy 2-7, which prohibits lights within the wildlife corridor and along the creek corridor. To what sections and at what width of the creek corridor would this prohibition apply? For the purposes of enforcement of this requirement, what area is considered a "wildlife corridor?" The whole SDC area is designated a Habitat Connectivity Corridor – is that the area this policy is referring to? § The EIR references Specific Plan policies 5-32, 5-39, and 5-43, which all refer to maintaining a thick buffer of vegetation in order to buffer lights to protect wildlife within the preserved open space areas. For each of these policies, which serve as mitigation to address light and glare impacts, what are the type and/or height of needed vegetation or depth/width of the buffers to provide suitable light and glare protection to the creek corridors? The EIR or Specific Plan should contain policies or mitigation measures requiring a photometric plan or other metric by which light impacts can be assessed and should also have a policy or mitigation measure addressing maximum light standard height and spacing. § EIR at 107 concludes that "with adherence to existing and proposed policies and standards, development under the Proposed Plan would not substantially increase the amount of nighttime lighting or glare in the already previously developed Core Campus or surrounding open space areas. Impacts associated with light and glare would be less than significant." What thresholds of significance have been used to quantify this statement? What data has been collected regarding the existing light environment and the proposed light environment to be able to draw this conclusion?	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-80	The EIR fails to analyze a reasonable range of alternatives to the proposed Project. Though couched as "alternatives," each of the alternatives discussed in the EIR would inexplicably implement the draft Specific Plan policies—in other words, each alternative assumes the de facto adoption of the draft Specific Plan policies even if the draft Specific Plan is not formally adopted by the County. Additionally, with the exception of the Historic Preservation Alternative, the impacts of the proposed alternatives are substantially the same. The EIR's decision to constrain alternatives in this way is not only unsupported, but also threatens to obscure project alternatives that could actually reduce project impacts, such as alternatives with fewer residences and less commercial concentrated on a smaller development footprint. The EIR must analyze a reasonable range of alternatives, including an alternative based on the development proposal that the State ultimately chooses through its RFP process. Once the State selects a development proposal, the County will better understand the location and intensity of proposed development and will therefore be able to conduct a more thorough analysis of project impacts. • The County should decline to certify this EIR and instead direct staff to use the Historic Preservation Alternative as the starting point for a new and revised preferred project, with a revised Specific Plan and EIR that address the flaws identified in this and the following	The comment is noted. The DEIR does analyze a reasonable range of alternatives. Section 15126.6 of the CEQA Guidelines states that: An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. See also MR-2 and MR-8. The purpose of alternatives is to consider alternate ways to avoid or substantially lessen any of the significant effects of the project. (CEQA Guidelines Section 15126.6 (a).) The EIR concluded that the proposed Specific Plan would only have significant unmitigable impacts in the topics of adverse impacts to a potential historic district because of physical demolition, destruction, relocation or alteration of the district or its immediate surroundings; and related to project specific and cumulative vehicle miles traveled (VMT) impacts. The Alternatives we selected in order to consider ways to reduce or avoid those impacts, while still meeting the main project objective and the intent of the state legislation. The comment suggests that the alternatives must include an alternative based on a development proposal that the State selects, however, the State has made no such selection, and thus there is no known proposal available to study. Further, to the extent that the State selects a development proposal that is substantially different than the Specific Plan, additional CEQA review would likely be necessary

Commenter	Date	Letter	Comment	Response
			Attachments. o The Historic Preservation Alternative should be revised to start with an affordable housing project of 200+/- homes (Phase 1), and to allow for future development phases consistent with whichever proposal the California Department of General Services (DGS) selects as the winning bid pursuant to their surplus property sale process for the SDC core campus. The EIR acknowledges that the County and public have no real idea of how much development will actually occur at SDC, because we do not know which proposal DGS will select to enter into an Exclusive Negotiating Agreement for the sale of the campus. EIR at 77. Since we will know by late October who DGS has selected as the buyer, developing an alternative based on the DGS-selected proposal will give Permit Sonoma, the public, and decisionmakers an opportunity to focus on a real-world proposal that will drive "the exact amount and location of future development." EIR at 77 (emphasis added). This approach would also resolve the problem of speculating about financial feasibility and making unfounded assumptions regarding how much and what type of housing needs to be built on the site to subsidize the affordable housing mandates. o Importantly, the historic preservation alternative also requires significant modification to expand wildlife corridor, riparian and	before implementation of any such development proposal.

Commenter	Date	Letter	Comment	Response
			open space protections and setbacks. In order to further Guiding Principle #3, the revised historic preservation alternative must include and meet the following specific performance standards: § Provide sufficient setbacks from all creeks designed to protect water quality and quantity, instream and riparian habitat and wildlife connectivity § Provide a sufficient buffer that reduces the current footprint of the north side of the SDC campus adjacent to Sonoma Creek to allow wildlife to safely travel through the Sonoma Valley Wildlife Corridor § Ensure human activities and improvements at SDC do not impair wildlife's use § Ensure roads and traffic do not create a danger to wildlife § Ensure new development does not create new sources of light, glare or noise that would impair wildlife's use of the Corridor § Ensure new development does not increase the risk of wildfires that would harm the natural and built environments § Ensure runoff from new impermeable development does not result in erosion or contamination of creeks and riparian areas.	
Sonoma Land Trust	9/26/2022	B11-81	The EIR mischaracterizes and misapplies the State legislation governing the disposition and planning process for SDC. o Government Code section 14670.10.5 (the "Legislation") does not establish any	The comment is noted. See MR-2 and MR-8. See also B11-80; the Alternatives should attain most of the basic objectives of the project.

Commenter	Date	Letter	Comment	Response
			financial objectives for the redevelopment of SDC. § The EIR repeatedly states that economic viability is a stated objective of the State Legislation governing disposition of the SDC property. E.g., EIR at 527 (stating the guiding principles "seek to further the State's goals for the SDC site established in California Government Code Section 14670.10.5 for promoting housing, especially affordable housing and housing for those with development disabilities; preserving open space surrounding the Core Campus; and ensuring that development is economically viable."); EIR at 532 ("State law stipulates that the SDC Specific Plan … ensure the financial feasibility of development"); EIR at 533 (concluding an outcome would be "contrary to the economic objectives codified in State law") (citing the Legislation). Not so. The "Legislation only directs that the County consider the economic viability of future development during the planning process: "The planning process shall facilitate the disposition of the property by amending the general plan of the county and any appropriate zoning ordinances, completing any environmental review, and addressing the economic feasibility of future development." Gov. Code § 14670.10.5(c)(1). It does not require that the County ensure economic viability or even prioritize	As noted in the comment, the Legislation calls for the consideration of economic feasibility of future development. Further, the agreement between the County and State for the SDC planning effort expressly calls for "...completing a report on the economic feasibility of future development...." (Paragraph 3 of Exhibit A to the County/State Agreement.) The Agreement also calls for preparation of an Economic Market Demand Report. (Paragraph 4.C. of Exhibit A to County/State Agreement.)

Commenter	Date	Letter	Comment	Response
			economic viability. Compare id. with Gov. Code 14670.10.5(c)(3) ("shall provide for the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible") and (c)(4) ("shall require that housing be a priority in the planning process and that any housing proposal determined to be appropriate for the property shall include affordable housing"). Protection of open space and affordable housing are priorities under the Legislation; economic viability is merely a consideration. o The only objective that requires financial feasibility is the County's own guiding principle. § The County—not the State—requires that the Specific Plan "[e]nsure that the proposed plan is financially feasible and sustainable, as financial feasibility is essential to the long-term success of the project." EIR at 528. The EIR proposes to ensure financial feasibility by ensuring "that the proposed plan supports funding for necessary infrastructure improvements and historic preservation while supporting the Sonoma Valley community's needs and galvanizing regional economic growth." Id. • The County's goal to ensure long-term fiscal sustainability is a	

Commenter	Date	Letter	Comment	Response
			binary goal. A project either is feasible (i.e., capable of being completed) or it is not. A project either is sustainable or is it not. A project either pencils or it does not. Nothing directs the County to maximize economic returns or to compare the relative returns of the various alternatives. E.g., EIR at 532 (criticizing the Reduced Development Alternative as "less economically viable … than the Proposed Plan"). As discussed above, the only two Project features that must be maximized under the Legislation are open space preservation and affordable housing. See generally Gov. Code § 14670.10.5. • The County provides a clear path towards ensuring that the Project is financially feasible and sustainable by ensuring that the Project will generate enough revenue for the developer to be able to fund the necessary infrastructure improvements the site requires. • Nothing in the County's objectives or in the Legislation requires the Project to prioritize returns on investment or requires the EIR to analyze the comparative returns of the various project alternatives. Yet comparison of hypothetical and speculative returns on investment inexplicably forms a central pillar	

Commenter	Date	Letter	Comment	Response
			of the EIR's alternatives analysis. E.g., EIR at 530 (comparing the relative economic value of the No Project Low Development Alternative against the Proposed Plan), 531 (same with respect to the No Project High Development Alternative), 532 (same with respect to the Reduced Development Alternative), 533 (same with respect to the Historic Preservation Alternative). Because alternatives must be studied to reduce environmental impacts—not to maximize economic returns—this approach is not only unjustified but contrary to CEQA.	
Sonoma Land Trust	9/26/2022	B11-82	The alternatives analysis cites inconsistent assumptions to guide its analysis and justify its conclusions. Because it is unclear on which assumptions the EIR actually relies, decisionmakers and the public cannot decipher the anticipated impacts of the proposed alternatives or independently judge the EIR's analysis. o For example, on page 530, the EIR concludes that the No Project: Low Development Alternative would result in a greater number of "small-lot and townhome units" because those units "generate much higher financial returns." On page 537, the EIR removes any reference to townhomes and concludes that that same alternative would prioritize "single-family homes to maximize financial feasibility." Then on page 541, the EIR backtracks,	The comment is noted. Case law suggests that the discussion of alternatives need not be exhaustive. CEQA Section 15126.6(f) states that the alternatives in an EIR should be governed by a "rule of reason." If impacts are less than significant for an Alternative and the Proposed Plan, the DEIR need not define how much less significant impacts are. See MR-2 and MR-8. Rehabilitation and adaptive reuse at SDC is generally more expensive than new construction. See Alternatives Report, November 2021 (Updated), available at https://www.sdcspecificplan.com/documents. See Table A-5 for the residual value of residential development. New single family homes generate the greatest net value.

Commenter	Date	Letter	Comment	Response
			stating again that the No Project: Low Development Alternative "would likely have a larger proportion of small-lot single family and townhomes … to achieve financial feasibility." The EIR further muddies the water in its analysis of the Reduced Development Alternative, which the EIR concludes would exhibit "a preference for more large lot, single family homes to maximize financial feasibility." EIR at 553 (emphasis added). On page 557, the EIR further specifies that these large lot residential developments would focus "more on single-family detached residential units than other typologies." (emphasis added). Finally, in its discussion of the Historic Preservation Alternative, the EIR again states that "large lot, single-family homes" would "maximize financial feasibility." EIR at 561; see also EIR at 566 (noting that the Historic Preservation Alternative would also prioritize "singlefamily detached residential units") (emphasis added). § Even assuming that the State's chosen developer would prioritize maximizing financial returns when selecting housing typologies—and the EIR has given no justification to support that assumption—it is logically impossible for three different housing types to each provide higher returns on investment than the next. Either townhomes provide higher returns or large-lot detached single-family residences do. The	

Commenter	Date	Letter	Comment	Response
			EIR's conclusions about which housing typologies would be employed under each alternative are therefore contradictory and unsupported by substantial evidence. • Which housing typology or typologies would provide the highest financial returns? Why does the County believe it fair to assume that a developer would prioritize financial returns from housing when selecting housing typologies for this complex development, which includes multiple revenue streams and a mandatory obligation to prioritize affordable housing? § Further, even if these housing types provided similar returns on investment, the EIR does not explain why one alternative would maximize returns with townhomes while another would maximize returns with largelot detached single-family homes. The EIR needs to justify why those design choices are appropriate assumptions in order for the alternatives analysis to be meaningful. o The EIR also makes inconsistent assumptions about the impacts of increased or decreased development on the amount of construction activity that the Project will generate. Because the EIR fails to apply its assumptions consistently, decisionmakers and the public cannot rely on the analysis that is based on those	

Commenter	Date	Letter	Comment	Response
			assumptions. § For example, the analysis of the No Project: Low Development Alternative concludes that impacts to air quality and biological resources would be reduced because less residential and non-residential development would occur. EIR at 537-538 (this alternative "would result in somewhat reduced impacts on biological resources . . . because a reduced level of ground disturbance and construction activities would occur"); see also EIR at 539 (energy and greenhouse gas impacts would be "slightly less" because "construction activity would be somewhat reduced"). But this understanding that less construction results in less grading and ground disturbance does not carry uniformly through the analysis. For example, the EIR concludes that "[s]imilar impacts on cultural resources, and tribal cultural resources would result from the No Project: Low Development Alternative compared with the Proposed Plan because excavation, grading, and demolition would likely still be required for construction." EIR at 538. For similar reasons, the EIR concludes that this alternative would have "[s]imilar impacts on geology, soils, and seismicity … compared with the Proposed Plan. EIR at 540. Why would	

Commenter	Date	Letter	Comment	Response
			reduced construction activity reduce grading and ground-disturbance based impacts to one class of resources but not to another? § Similarly, notwithstanding the EIR's concession that construction-related impacts would be reduced under the No Project: Low Development Alternative, the EIR concludes that "[i]mpacts related to hazards and hazardous materials … would be similar to those of the Proposed Plan because construction would have similar risks, associated with the accidental release of hazardous materials." EIR at 540; see also EIR at 570 (applying the same assumptions to the Reduced Development and Historical Preservation alternatives). Why would less development reduce certain construction-related impacts but not others? § The EIR does not draw equivalent conclusions with respect to the No Project: High Development Alternative. In that case, the EIR notes that "[g]reater impacts on cultural resources, and tribal cultural resources would result from the No Project: High Development Alternative compared with the Proposed Plan because more development would increase excavation, grading, and demolition of existing buildings and construction requirements." EIR at 546. Likewise, the EIR concludes that "construction activity would be increased, resulting in	

Commenter	Date	Letter	Comment	Response
			slightly greater construction-related and operations GHG emissions." EIR at 547. And "[g]reater impacts on geology, soils, and seismicity would result … compared with the Proposed Plan because excavation, grading, and demolition would still be required and increased for demolition of existing buildings and construction of new residential and non-residential units." EIR at 548. It is logical that increased construction would result in increased construction-related impacts. But it is equally logical that decreased construction would result in decreased construction-related impacts. The EIR does not explain why it assumes the former to be true but not the latter. Its analysis is facially inconsistent and does not provide adequate information by which decisionmakers and the public could independently judge the relative merits of each of the alternatives.	
Sonoma Land Trust	9/26/2022	B11-83	The alternatives analysis relies on assumptions that are not justified or supported by substantial evidence. o For example, the EIR assumes without justification that key policies and conditions of approval from the Draft Specific Plan would survive and be implemented even if the Specific Plan is not adopted. § On page 538, the EIR concludes that the No Project: Low Development	The comment is noted. Case law suggests that the discussion of alternatives need not be exhaustive. CEQA Section 15126.6(f) states that the alternatives in an EIR should be governed by a "rule of reason." It is assumed that the alternatives would likely include the similar goals and policies to the Proposed Plan.

Commenter	Date	Letter	Comment	Response
			Alternative would have less than significant impacts on air quality "[w]ith implementation of the [Specific Plan] policies outlined in Section 3.3." But the No Project Alternatives assume that the Specific Plan is not adopted. EIR at 529 ("should the County not adopt the Specific Plan … the mostly likely course would be for the State to achieve its desired land use objectives through mechanisms other than the Proposed Plan"). • Why would policies and conditions of approval developed in the Specific Plan to address air quality impacts of the Specific Plan exist and be implemented if the Specific Plan is not adopted? § The EIR also assumes that the No Project: Low Development Alternative would implement "policies similar to those" in the Biological Resources Analysis. EIR at 538 ("The policies outlined in Section 3.4, as well as the biological resource protection practices identifies in the Standard Conditions of Approval are assumed to be similar in the Low Development Alternative."). • Why would policies and conditions of approval developed in the Specific Plan to address biological impacts of the Specific Plan exist and be implemented if the Specific Plan is not adopted? § The EIR assumes the same for policies related to	

Commenter	Date	Letter	Comment	Response
			Cultural, Historic, and Tribal Resources. EIR at 538 (“The relevant policies and Standard Conditions of Approval identifies in Section 3.5 are assumed to be similar in the No Project Low Development Alternative.”) • Why would policies and conditions of approval developed in the Specific Plan to address cultural, historic, and tribal cultural resource impacts of the Specific Plan exist and be implemented if the Specific Plan is not adopted? § The EIR assumes the same for policies related to Geology, Soils, and Mineral Resources. EIR at 540 (“Policies and Standard Conditions of Approval identified in Section 3.7 are assumed to be similar in this Alternative.”) • Why would policies and conditions of approval developed in the Specific Plan to address geologic impacts of the Specific Plan exist and be implemented if the Specific Plan is not adopted? § The EIR repeats these assumptions for the No Project: High Development Alternative. EIR at 546 (stating the same assumptions for policies and conditions related to air quality, biological resources, and cultural, historic, and tribal resources); EIR at 548 (stating the same for policies and conditions related to geology, soils, and mineral resources).	

Commenter	Date	Letter	Comment	Response
			• Why would policies and conditions of approval developed in the Specific Plan to address impacts of the Specific Plan exist and be implemented if the Specific Plan is not adopted? § It might be reasonable to assume that certain Specific Plan policies or conditions of approval would persist or be implemented under the Reduced Development Alternative or the Historic Preservation Alternative, since those alternatives would still result in a modified specific plan being adopted. But under the No Project Alternatives, the Specific Plan is—by definition—not adopted. EIR at 529. If the Specific Plan is not adopted, logic would dictate that the Specific Plan's policies and conditions of approval would not be implemented. The EIR needs to justify its contrary assumption why the Specific Plan's policies and conditions would be implemented in the absence of the Proposed Plan. Without that justification, the EIR's conclusions regarding the relative impacts of the various project alternatives are unsupported by reason or substantial evidence.	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-84	The EIR also fails to adequately justify the assumptions underlying the selection of the No Project Alternatives. § The No Project Alternative(s) needs to examine what would occur if the Draft Specific Plan is not approved. As the EIR acknowledges, however, determining what would happen if the Draft Specific Plan is not approved is largely speculative. See EIR at 529 ("this EIR cannot pre-judge the State's actions"). • The Legislature and the State Department of General Services "recognized the unique natural and historic resources of the [SDC] property and acknowledged that it was not the intent of the state to follow the traditional state surplus property process." Gov. Code § 14670.10.5(a)(3). The State has expressed an intent to prioritize affordable housing on the site and to protect the site's "exceptional open-space, natural resources, and wildlife habitat characteristics." Gov. Code § 14670.10.5(a)(6), (7), and (9). And the State has provided a framework by which the County may assume planning responsibility consistent with the objectives. Gov. Code § 14670.10.5(a)(8), (c). But nothing in the State Legislation requires the planning process to include any particular elements	The comment is noted. Case law suggests that the discussion of alternatives need not be exhaustive. CEQA Section 15126.6(f) states that the alternatives in an EIR should be governed by a "rule of reason." It is assumed that the alternatives would likely include the similar goals and policies to the Proposed Plan. See MR-2. While this EIR cannot pre-judge the State's actions, the EIR tries to frame these in light of the State Legislature's established land use objectives for the site, per Govt. Code Section 14670.10.5. The comment acknowledges the unknows regarding what would occur if the Specific Plan is not adopted, and also recognizes that a no project alternative that assumes continuation of the status quo is not reasonable. The comment suggests that a viable option would be a transfer of the property to another State agency, however, there has been no indication that there is any State agency interested in utilizing the site.

Commenter	Date	Letter	Comment	Response
			other than affordable housing and open space preservation. See generally Gov. Code § 14670.10.5. And equally significant, the State Legislation does not mandate that the State sell the SDC property through the planning process. See Gov. Code § 14670.10.5(c)(1) ("The director may … enter into an agreement with the county for the county to develop a specific plan for the property and to manage the land use planning process.") (emphasis added); see also Gov. Code § 14670.10.5(e)(1) ("This section shall not apply to the transfer of the property to a state agency in accordance with Section 11011."). The logical conclusion is that if the Specific Plan is not adopted, the Department of General Services could take a number of different paths, including allowing the County to develop a different specific plan for the site or transferring the property to a state agency in accordance with Section 11011. Yet the EIR concludes without explanation or justification that, if the Specific Plan is not adopted, the State would proceed with development of the site in substantial conformity with the rejected draft Specific Plan. o On what basis does the EIR conclude that this outcome is	

Commenter	Date	Letter	Comment	Response
			more likely than any other possible outcome, such as DGS transferring the property to another state agency or DGS waiting for the County to develop an alternative specific plan? o The EIR appears to rely on its claim that the current Draft Specific Plan most fully achieves the objectives outlined in the State Legislation. See EIR at 529 (concluding that "the State [would] retain[] planning control over the campus unfettered by local regulations to achieve these land use objectives" and that as a result, "the No Project Alternative would result in a palette of uses similar to those outlined in the Proposed Plan." But the only two objectives codified in the State Legislation are the mandate to prioritize affordable housing and the mandate to protect open space. See generally Gov. Code § 14670.10.5. So the State Legislation, standing alone, cannot justify the EIR's conclusion that the No Project Alternative would result in the same palette of uses as the Proposed Plan, which palette is designed to achieve the County's objectives—not the State's. Compare Gov. Code § 14670.10.5 with EIR at 527- 528. Without further justification, the EIR cannot demonstrate that its purported No Project Alternatives reflect what would actually occur if the Specific Plan is	

Commenter	Date	Letter	Comment	Response
			not adopted.	
Sonoma Land Trust	9/26/2022	B11-85	Similarly, the EIR fails to explain why the development levels in the two No Project Alternatives—which appear to be entirely arbitrary 25 percent increases and decreases in development—would be reasonably predicted to occur. • What data support the EIR's chosen housing and job count for the No Project: Low Development Alternative? • What analysis supports the EIR's chosen housing and job count for the No Project: Low Development Alternative? • What assumptions support the EIR's chosen housing and job count for the No Project: Low Development Alternative? • What data support the EIR's chosen housing and job count for the No Project: High Development Alternative? The EIR draws conclusions about the relative merits of its proposed alternatives without actually analyzing potential impacts or supporting its conclusions with substantial evidence. These failures obscure the EIR's reasoning and make it impossible for decisionmakers or the public to comprehend how the EIR draws it conclusions,	The comment is noted. Case law suggests that the discussion of alternatives need not be exhaustive. CEQA Section 15126.6(f) states that the alternatives in an EIR should be governed by a "rule of reason." It is assumed that the alternatives would likely include the similar goals and policies to the Proposed Plan. See B11-80, B11-82, and MR-2. If impacts are less than significant for an Alternative and the Proposed Plan, the DEIR need not define how much less significant impacts are. As noted on page 376, there is presently a severe shortage of housing in Sonoma County, like in much of the rest of the Bay Area. Thus, it is assumed that planned growth in other parts of the County would occur in some of these Alternative scenarios.

Commenter	Date	Letter	Comment	Response
			particularly where the EIR's conclusions appear to contradict the EIR's own limited analysis. o For example, the EIR concludes that No Project: Low Development Alternative would result in "lower financial feasibility" that the Proposed Plan. EIR at 537. But the EIR does not document or explain why the No Project: Low Development Alternative would be less financially feasible. To the contrary, the EIR states that the alternative's development mix would shift, for example by prioritizing more single-family homes, "to maximize financial feasibility." EIR at 537. § What are the specific financial drivers that influence the financial feasibility of the No Project: Low Development Alternative? § How specifically does the financial outlook of this alternative compare to that of the Proposed Project? o The EIR also states that "the No Project: Low Development Alternative would have an equivalent impact related to land use, population, and housing compared to the Proposed Plan" (EIR at 541-541), notwithstanding that the No Project: Low Development Alternative would develop "to a lesser extent and in a smaller area" (EIR at 541). § Why did the EIR conclude that impacts would be the same even though development intensity is reduced? § Why does the financial feasibility of various	

Commenter	Date	Letter	Comment	Response
			alternatives appear to vary so greatly but the impacts do not? o The EIR assumes without explanation or justification that the No Project: Low Development Alternative, the Reduced Development Alternative, and the Historic Preservation Alternative would "shift some of the planned growth in the Planning Area to other locations in the region." EIR at 543, 559, 568. § Why is the growth planned by the Draft Specific Plan assumed to be inevitable in Sonoma County? • What analysis supports the EIR's chosen housing and job count for the No Project: High Development Alternative? What assumptions support the EIR's chosen housing and job count for the No Project: High Development Alternative? The EIR draws conclusions about the relative merits of its proposed alternatives without actually analyzing potential impacts or supporting its conclusions with substantial evidence. These failures obscure the EIR's reasoning and make it impossible for decisionmakers or the public to comprehend how the EIR draws it conclusions, particularly where the EIR's conclusions appear to contradict the EIR's own limited analysis. o For example, the EIR concludes that No Project: Low Development Alternative would result in "lower financial feasibility" that the Proposed Plan. EIR at 537. But the EIR does not document or explain why the No	

Commenter	Date	Letter	Comment	Response
			Project: Low Development Alternative would be less financially feasible. To the contrary, the EIR states that the alternative's development mix would shift, for example by prioritizing more single-family homes, "to maximize financial feasibility." EIR at 537. § What are the specific financial drivers that influence the financial feasibility of the No Project: Low Development Alternative? § How specifically does the financial outlook of this alternative compare to that of the Proposed Project? o The EIR also states that "the No Project: Low Development Alternative would have an equivalent impact related to land use, population, and housing compared to the Proposed Plan" (EIR at 541-541), notwithstanding that the No Project: Low Development Alternative would develop "to a lesser extent and in a smaller area" (EIR at 541). § Why did the EIR conclude that impacts would be the same even though development intensity is reduced? § Why does the financial feasibility of various alternatives appear to vary so greatly but the impacts do not? o The EIR assumes without explanation or justification that the No Project: Low Development Alternative, the Reduced Development Alternative, and the Historic Preservation Alternative would "shift some of the planned growth in the Planning	

Commenter	Date	Letter	Comment	Response
			Area to other locations in the region." EIR at 543, 559, 568. § Why is the growth planned by the Draft Specific Plan assumed to be inevitable in Sonoma County?	
Sonoma Land Trust	9/26/2022	B11-86	The EIR concludes that the Historic Preservation Alternative "is projected to result in approximately 50 percent fewer vehicle trips than the Proposed Plan, indicating that the total VMT generated may also be roughly 50 percent lower." EIR at 569. The EIR does not cite data or analysis to support this statement. § How did the EIR reach these numbers? o The EIR states that the reduction in VMT under the Historic Preservation Alternative "would be substantial though would not necessarily translate to less residential VMT per capita, which is the efficiency metric for which a significant VMT impact was identified." EIR at 569. In light of its chosen significance threshold, the EIR cannot meaningfully compare the VMT impacts of the various alternatives unless it quantifies VMT per capita for each alternative. § What data or analysis would be needed to determine whether the substantial reduction in VMT under the Historic Preservation Alternative	The comment is noted. See MR-8 and MR-6. Transportation analysis for each of the Alternatives was conducted by W-Trans. See B11-84.

Commenter	Date	Letter	Comment	Response
			would translate to less residential VMT for capita? § Under what circumstances does a change in total VMT translate or not translate to a change in VMT per capita? § The EIR states that it is uncertain whether the reduction in VMT would translate to a reduction in VMT per capita, but nevertheless goes on to conclude that the alternative's "reductions in VMT and VMT per capita would be insufficient to avoid a significant and unavoidable VMT impact." EIR at 539. By definition the EIR cannot determine the significance of the alternative's VMT per capita impact if the EIR does not know that the alternative's VMT per capita impact is. The EIR's conclusion is therefore unsupported by analysis or substantial evidence. o The EIR does not provide a meaningful analysis of the impacts of each of the alternatives, using terms such as "largely comparable," "slightly greater," and "slightly reduced." These terms are especially inappropriate for the Historic Preservation Alternative, which is the environmentally superior alternative. The EIR incorrectly concludes that the proposed Project's impacts are "largely comparable" to reduced development alternatives. But the Historic Preservation Alternative would significantly reduce the magnitude of impacts on traffic, climate change, historic resources, noise, biological	

Commenter	Date	Letter	Comment	Response
			resources, public services and land use. o The EIR states that the Proposed Project would have "superior financial feasibility" than the alternatives. EIR at 571. But the EIR does not provide data or other substantial evidence to support that conclusion. All of the statements about financial feasibility in the alternatives analysis are conclusory and lack substantiating evidence or discussion. See EIR at 536-571.	
Sonoma Land Trust	9/26/2022	B11-87	The EIR defines the No Project Low Development alternative by a reduction in overall housing and job numbers. It then concludes that "[t]he proportion of both income-restricted affordable housing and affordable by design housing in the Low Development Alternative is projected to be less than the Proposed Plan." EIR at 542. But the EIR fails to provide supporting evidence for this projection. Id. § Why is the proportion of both income restricted affordable housing and affordable by design housing in the Low Development Alternative projected to be less than the Proposed Plan? o The EIR makes the same unsupported projections with respect to the Reduced Development Alternative and the Historic Preservation Alternative. EIR at 559, 568. § Why is the proportion of both income restricted affordable housing and affordable by design housing in the Reduced	The comment is noted. See B11-85, B11-82, and MR-8. Biological resource impacts, including wildlife movement are discussed for each of the Alternatives.

Commenter	Date	Letter	Comment	Response
			Development Alternative and the Historic Preservation Alternative projected to be less than the Proposed Plan? o Conversely, the EIR defines the No Project: High Development alternative by an increase in overall housing and job numbers. It then concludes that “[t]he proportion of both income-restricted affordable housing and affordable by design housing in the High Development Alternative is projected to be more than the Proposed Plan.” EIR at 550. again, the EIR fails to provide supporting evidence for this projection. Id. § Why is the proportion of both income restricted affordable housing and affordable by design housing in the High Development Alternative projected to be more than the Proposed Plan? o The EIR states that “[b]ased on prior alternatives modeling exercises completed for SDC in 2021, it is likely that the No Project: High Development Alternative would generate slightly more per capita VMT than the Proposed Project, though the difference would likely be negligible.” But the EIR fails to identify, cite to, or provide copies of the analysis and results from those “prior alternatives modeling exercises.” Without additional information, decisionmakers and the public cannot independently judge the strength of the EIR’s analysis or the veracity of its conclusions.	

Commenter	Date	Letter	Comment	Response
			• The alternatives analysis fails to discuss or analyze the impacts of any of the proposed alternatives to the Sonoma Valley Wildlife Corridor. o The EIR's analyses of the No Project: Low Development Alternative and the Reduced Development Alternative do not mention the wildlife corridor at all. EIR at 538 (discussing the No Project: Low Development Alternative's impact to biological resources but failing to mention or discuss the Wildlife Corridor); EIR at 554 (same with respect to the Reduced Development Alternative). Because impacts to wildlife movement—and particularly to wildlife movement within the established Sonoma Valley Wildlife Corridor—are a major issue and threshold of significance for the Project's impacts to biological resources, this omission prevents readers from understanding fully the relative consequences of each alternative. § How would the No Project: Low Development Alternative impact wildlife movement and connectivity through the Sonoma Valley Wildlife Corridor? § How would those impacts differ from the impacts the Project would have on wildlife movement and connectivity through the Sonoma Valley Wildlife Corridor? § How would the Reduced Development Alternative impact wildlife movement and connectivity through the Sonoma Valley Wildlife	

Commenter	Date	Letter	Comment	Response
			Corridor? § How would those impacts differ from the impacts the Project would have on wildlife movement and connectivity through the Sonoma Valley Wildlife Corridor? o Similarly, the EIR's analyses of the No Project: High Development Alternative and the Historic Preservation Alternative refer only to those wildlife corridors that lie (or would lie) within the Core Campus. EIR at 546 (noting that under the No Project High Development Alternative, "the area devoted to the expanded wildlife corridor may be reduced or eliminated," but not discussing impacts to the remainder of the Sonoma Valley Wildlife Corridor); EIR at 563 (same with respect to the Historic Preservation Alternative, noting "the creek corridors and the wildlife corridor will also not be expanded"). By failing to analyze the alternatives' impacts to the established Sonoma Valley Wildlife Corridor and their reliance on a new road connecting to Hwy. 12 that bisects the Corridor outside the Core Campus, the EIR obscures the true impacts of those alternatives and prevents readers from accurately comparing the alternatives. The EIR cannot reliably identify an environmentally superior alternative without first comparing the full environmental effects of each proposed alternative. § How would the No Project: High Development	

Commenter	Date	Letter	Comment	Response
			Alternative impact wildlife movement and connectivity through the Sonoma Valley Wildlife Corridor? § How would those impacts differ from the impacts the Project would have on wildlife movement and connectivity through the Sonoma Valley Wildlife Corridor? How would the Historic Preservation Alternative impact wildlife movement and connectivity through the Sonoma Valley Wildlife Corridor? § How would those impacts differ from the impacts the Project would have on wildlife movement and connectivity through the Sonoma Valley Wildlife Corridor?	
Sonoma Land Trust	9/26/2022	B11-88	The EIR states that a cumulative impact analysis "must analyze either a list of past, present, and probably future projects or a summary of projections contained in an adopted general plan or related planning document." EIR at 585. While the EIR claims that the "Proposed Project represents the cumulative development scenario for the reasonably foreseeable future in the Planning Area under the County's General Plan" and "incorporates the likely effects of surrounding regional growth," for many impacts, the EIR limits its analysis to the Plan Area rather than considering the combined effects of the Project together with the environmental impacts that are likely to occur outside the Project's Planning Area.	The comment is noted. See MR-1, MR-3, and MR-9. Cumulative impacts are properly analyzed pursuant to CEQA. The analysis of cumulative impacts need not provide the level of detail required of the analysis of impacts from the project itself, but shall "reflect the severity of the impacts and their likelihood of occurrence."(CEQA Guidelines Section 15130(b)). In order to assess cumulative impacts, an EIR must analyze either a list of past, present, and probable future projects or a summary of projections contained in an adopted general plan or related planning document. The Proposed Project represents the cumulative development scenario for the reasonably foreseeable future in the Planning Area under the County's General Plan. This future scenario incorporates the likely effects of surrounding regional growth.

Commenter	Date	Letter	Comment	Response
			o For example, the Planning Area is constrained to the SDC site. EIR at 54 (Figure 2.1-2: Planning Area Boundaries). But the Sonoma Valley Wildlife Corridor that runs through the Planning Area extends for a significant distance to the east and west, stretching from the top of Sonoma Mountain across Sonoma Creek and the valley floor to the Mayacamas Mountains to the east. Permeability of the Sonoma Valley Wildlife Corridor is important "for the movement of wildlife at a regional scale." EIR at 242. The cumulative impact boundary for impacts to the Wildlife Corridor must include the entire corridor and all projects capable of impacting the corridor if the true scope and magnitude of cumulative impacts are to be understood. Specifically, analysis of cumulative impacts on the Wildlife Corridor should encompass an area extending from the Russian River in the north to the San Pablo Bay to the south, and from the Petaluma River to the west to Napa Valley to the east. This impact boundary is necessary to capture the movements of local populations of the widest-ranging species present (i.e., mountain lions), as well as movement and dispersal among regional populations, allowing for genetic exchange, and range shifts in response to climate change over time. This boundary would include a portion of the Marin Coast-Blue Ridge Critical Wildlife Linkage identified by Penrod et al. (2013),4 but	

Commenter	Date	Letter	Comment	Response
			analysis should include all land development in the region, not only within the mapped critical corridors. The EIR's myopic focus on cumulative impacts caused by and felt within the Planning Area obscures impacts that may occur outside the Planning Area and that the Project may add to, or impacts that may occur within the Planning Area that could be cumulatively significant when impacts from projects outside the Planning Area are accounted for. The EIR must expand its cumulative impacts boundary. o The EIR does not apply a consistent cumulative impact boundary. While the introduction to the cumulatively impacts analysis indicates that the impact boundary is the Planning Area (EIR at 585), the EIR elsewhere extends the impact boundary (e.g., EIR at 589 ("The cumulative geographic context for cultural, historic, and tribal cultural resources is the County of Sonoma."). § Where the EIR does use a wider impact boundary, it is not clear whether the EIR analyzes cumulative impacts based on a specific list of projects or on projected development under the General Plan. For example, at pages 589-590 the EIR states that "[i]f the Proposed Plan, in combination with other past, present, and reasonably foreseeable projects in Sonoma County, would result in the loss of or adverse changes to multiple historic	

Commenter	Date	Letter	Comment	Response
			or cultural resources a significant cumulative impact could result." Further muddying the waters, the EIR does not specify what other projects inform its analysis. EIR at 589-590. Instead, the EIR punts to project-level environmental review and discusses only projects to be completed within the Planning Area under the Specific Plan. Id. The EIR must choose an appropriate cumulative impacts boundary for each impact, justify its choice, and analyze cumulative impacts of the Project together with other past, present and future development. See, e.g., Draft Environmental Impact Report for the Springs Specific Plan at 4.0-3 ("The cumulative setting for aesthetics is the Sonoma Valley Planning Area"), 4.0-7 ("The cumulative setting for biological resources includes the Plan area and the greater Sonoma County region."), 4.0-9 (The cumulative setting for … (climate change) comprises anthropogenic (i.e., human-made) GHG emissions sources across the globe.") § Use of the County's existing general plan for the cumulative impact analysis does not provide a meaningful analysis of cumulative impacts for the SDC Project. The County adopted its general plan more than 14 years ago in 2008, and is currently updating the general plan. The general plan's	

Commenter	Date	Letter	Comment	Response
			outdated cumulative impact analysis omits recent planned and approved projects and therefore does not provide a meaningful framework with which to gauge the Project's cumulative impacts. • Specific Plan Policy 2-28 provides that prior to the commencement of the approval of any specific project in the Proposed Plan area, Project Sponsors shall contract a qualified biologist to conduct studies identifying the presence of special-status species and sensitive habitats at proposed development sites and ensure implementation of appropriate mitigation measures to reduce impacts to sensitive habitat or habitat function to a less than significant level. This policy epitomizes improper piecemealing of environmental analysis. If development under the Specific Plan is only analyzed on a project-by-project basis, the cumulative impacts of those projects will be obscured and may not be adequately mitigated. The EIR must complete all required analysis now, at the plan-level stage, in order that decisionmakers and the public can understand the full picture of what a buildout of the draft Specific Plan would entail.	
Sonoma Land Trust	9/26/2022	B11-89	Much of the EIR relies on future, project-level environmental review to identify and mitigate potentially significant environmental impacts. See, e.g., EIR Chapter 3.4; see also EIR at 589-590 (finding that cumulative impacts to cultural, historic, and tribal cultural resources would not be cumulatively considerable due in significant part to future	The comment is noted. See MR-3 and MR-9.

Commenter	Date	Letter	Comment	Response
			project-level environmental review). But the Specific Plan states that the County intends to avoid future project-level environmental review to the greatest possible extent. Draft Specific Plan at 7-3 (“When a public agency has prepared an EIR for a specific plan, State law provides that residential, commercial, or mixed-use projects undertaken inconformity to the specific plan are exempt from CEQA, subject to certain requirements. Pursuant to Section 15152 of the CEQA Guidelines, projects will also be eligible to “tier” from the EIR … The County intend to rely on these provisions for exemptions and tiering to the maximum extent feasible.”). Furthermore, as a matter of law, residential projects consistent with a specific plan are statutorily exempt from CEQA and do not require additional environmental review. Gov’t Code § 65457. o If the County’s goal is to evade future project-level review, how can it justify relying on future project-level review to identify and mitigate the Project’s impacts? o In light of the Draft Specific Plan’s stated goal, how will the County ensure that all necessary environmental review is completed?	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-90	- The Draft EIR's analysis and discussion of potential biological impacts is limited and is insufficient to determine whether the Specific Plan's potential impacts will be significant.	The SDC Specific Plan EIR is a program EIR, presenting a comprehensive assessment of the potential impacts of the proposed SDC Specific Plan. At a programmatic level, the Specific Plan is designed to be self-mitigating and EIR include numerous policies and measures that would ensure impacts to biological resources are avoided and minimized as development takes place. The Specific Plan would preserve the entirety of the approximately 755 acres outside the Core Campus as open space, including improved open space within the Core Campus through 30-50 acres of buffer open space (including riparian, wildlife corridor, and Arnold Drive buffers). The Specific Plan would also expand the Sonoma Valley Wildlife Corridor at the pinch point close to Suttonfield Lake by removing existing buildings in the northeastern portion of the Planning Area and providing that land for wildlife movement. Additionally, the Specific Plan includes policies designed specifically to minimize the impacts to wildlife at the interface of the built and natural environment (proposed policies 2-6 through 2-26). As a programmatic analysis, the DEIR does not assess project-specific impacts of potential future projects under the proposed Plan. Future projects would be required to comply with CEQA, as applicable, including preparation of more precise, project-level analyses regarding potential impacts to biological resources. Appendix A of the Specific Plan also lays out standard conditions of approvals that would apply to all projects based on Specific Plan policies and CEQA analysis, regardless of whether subsequent environmental analysis is

Commenter	Date	Letter	Comment	Response
				conducted or not. This includes Condition of Approval (COA) Policy BIO-1, which would require a biological resource assessment be prepared for any specific project in the Proposed Plan area, including identifying the presence of special-status species and sensitive habitats at proposed development sites and ensure implementation of appropriate mitigation measures to reduce impacts to sensitive habitat or habitat function to a less than significant level (DEIR page 243). The Specific Plan approach to increase net open space, enhance existing open space areas through incorporation of proposed policies and conditions of approval, and the requirement for future projects to comply with applicable CEQA requirements supports the DEIR's analysis that potential impacts to biological resources would be less than significant.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-91	- The Draft EIR fails to discuss how proposed new roads, and significant increases in traffic and human activity and development density on the site, may affect wildlife movement or cause other significant impacts.	Refer to response to comment MR-7. When conducting analysis of potential environmental impacts, CEQA Guidelines Section 15064 (b)1 only require a Lead Agency to use "careful judgment….based to the extent possible on scientific and factual data." The determination of less than significant impacts on wildlife or to wildlife movement was made based on the fact that the wildlife corridors on the site will be protected in perpetuity, are sufficiently large to support movement from one habitat to another, and will be enhanced by removal of existing development and beneficial policies referenced in response to comment B11-90.
Sonoma Land Trust	9/26/2022	B11-92	The Draft Specific Plan and Draft EIR would permit numerous uses in "Preserved Open Space" that conflict with open space preservation goals and could cause significant impacts.	Comment incorporated. Specific Plan Policy 2-1 has been amended to state: "Ensure that land shown In Figure 2.2-1 as Preserved Open Space is dedicated or maintained as permanent public open space, and the Managed Landscape/Fire Buffer is designed and maintained for that purpose. The owner/operator of the Preserved Open Space shall prepare an open space plan, to be approved by the County to manage the rich diversity of resources on site, including habitat, vegetation, wetlands, native species, and other critical resources, balanced with recreation and wildfire protection needs. As part of the open space plan development, conduct a formal aquatic resources delineation for habitat protection, and consider delineating a cohesive system of trails and pathways that balances recreation and wildlife conservation." Incorporation of the amended policy would require future uses within open space areas to be consistent with the Specific Plan's resource protection policies (policies 2-1 through 2-26) and would involve multiple partners to further refine

Commenter	Date	Letter	Comment	Response
				open space preservation goals for “Preserved Open Space” areas.
Sonoma Land Trust	9/26/2022	B11-93	These and other issues are addressed more fully in the table below. As detailed in the table, the Draft EIR’s lack of analysis of key biological impacts prevents the EIR from identifying which impacts are likely to occur or how significant they will be. Because the EIR does not adequately analyze impacts, it cannot fully develop or analyze effective mitigation measures. Further, what little de facto mitigation the EIR does propose (via Specific Plan policies and Conditions of Approval) is insufficient to reduce impacts to biological resources to less-than-significant levels. In addition to identifying analytical issues in the EIR, our comments below pose specific questions that must be answered to fill informational gaps in the EIR and facilitate complete, scientifically sound impact analysis. PCI also observed that the Specific Plan focuses on avoiding negative impacts on natural resources and, aside from the elimination of two buildings mentioned above, does not take advantage of this key site planning opportunity to call for positive habitat improvements or	Please refer to response to comments B11-90 and MR-1.

Commenter	Date	Letter	Comment	Response
			restoration of impaired ecological values. In addition, the Biological Resources sections contain a number of errors and omissions in describing the basic ecological setting of the site. PCI's full comments and questions on biological resource aspects of the Draft Specific Plan and adequacy of the Draft EIR are provided below.	
Sonoma Land Trust	9/26/2022	B11-94	Is this map meant to show only known occurrences or all likely habitats? Pleaseclarify. Multiple special-status species previously documented as occurring or likelyto occur on the site are not shown. Are these excluded intentionally, and if so, why?For other species, only a portion of their known or likely distribution is shown. SeePCI (2018) 1 for detailed review of potential habitat on site for these species. Speciesnot shown, or not showing full distribution, in Figure 1.6-2, but previouslydocumented as occurring or likely to occur are:- Freshwater shrimp – documented on Sonoma Creek and has potential tooccur on Asbury and Hill Creeks.- Steelhead – documented in Hill Creek and potentially present in AsburyCreek, in addition to presence in Sonoma Creek.- Species of Special Concern documented on or adjacent to the site but notshown (see PCI 2018 for location information):o California giant salamandero Foothill yellow-legged frogo Pallid and Townsends big-eared batso Northern western pond turtleSpecies of Special Concern American badger has been reported on SonomaMountain and also has potential to occur. Mountain lions are a "specially protectedmammal in California" and of high local conservation concern; radio tracking by localresearchers shows extensive use of the SDC site. Note also that northern spotted owl is federally listed as threatened but not shown as such on map.	Figure 1.6-2 is not intended to show all special status species that may occur on the site, nor is it a map of potential habitat for special status species. Such mapping would exceed the requirements of CEQA and would be atypical for assessment of wildlife and plants at both the programmatic level. However, Table 3.4-2 of the DEIR includes a detailed list of species that have been documented on the site and those that have potential to occur. This table has been updated to reflect observations provided by the Sonoma Ecology Center (letter dated April 3, 2022), to include additional observations for special status species. Additionally, spotted owl is shown on the map .

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-95	This map conflicts with known data. What is the data source? It doesn't match PCI (2018) or Sonoma Veg Map data. The large wetland on east side is labeled a "vernal pool" but this wetland is not considered a vernal pool by prior work (e.g., PCI 2018). Please adjust text or explain why the feature is considered a vernal pool, given the high conservation concern for vernal pools.	Comment incorporated. Vernal pool label has been amended to "seasonal wetland." Additionally, the DEIR notes mitigations and standard conditions of approval that require projects to conduct a biological resources assessment (Policies BIO-1, BIO-14, BIO-15, BIO-16) to identify, avoid, and mitigated potential impacts to wetlands. Wetland protection policies identified in the Specific Plan and DEIR would continue to apply and would not result in changes to potential significance of impacts or analyses contained in the DEIR.
Sonoma Land Trust	9/26/2022	B11-96	This figure also omits non-native forest on core campus though it is "existing vegetation" (i.e., relevant to the map), is mapped by the Sonoma Veg Map data, and is included in Figure 2.2-1, Open Space Framework. The non-native forest should be included on this map because these trees provide habitat values, including nesting, cover, and foraging resources for birds and potential roosting habitat for bats. The potential for impacts on birds, wildlife movement, and special-status bats should be addressed in the EIR if removal of this vegetation is proposed.	Figure 1.6-3 is not intended to show all vegetation communities that may occur on the site. Such mapping would exceed the requirements of CEQA at both the programmatic level. However, Policy 2-20 has been amended to state: "Require that the project sponsor work with an arborist to develop a tree planting plan that retains existing mature healthy trees and supplements the existing tree canopy with a diverse range of native and/or low water trees that provide shade and habitat. Locate new construction and public realm improvements around existing landscaping features that are retained." Additionally, COA Policy BIO-2 would prevent potential impacts to special-status bat species and BIO-8 would avoid impacts to other special -status and non-status nesting birds.
Sonoma Land Trust	9/26/2022	B11-97	First sentence states that "the natural landscape and the site's location in the Sonoma Valley also brings fire hazards." Similar wording is used on 2-1. That statement should be omitted or clarified to explain that human infrastructure and human activity pose the most significant risks for wildfire ignition in this area (as	Comment noted. The comment does not address the adequacy of the Draft EIR; therefore, no response is required. However, the commenter's opinion is noted and forwarded to the Board of Supervisors for their consideration in making a determination whether to approve the project.

Commenter	Date	Letter	Comment	Response
			stated on page 500), and that weather patterns of the region in combination with local topography lead to high potential for the spread of wildfire throughout both natural lands and developed environments.	
Sonoma Land Trust	9/26/2022	B11-98	This figure shows “Managed Landscape/Fire Buffers” and an “Expanded Wildlife Fire Buffer.” The Managed Landscape/Fire Buffers extend into what is currently open space. How will fuel reduction practices in this zone be tailored to prevent any significant impact on wildlife movement or other habitat values? What is the proposed maximum width of this buffer? All fire buffers should be no wider than necessary to meet public safety needs in order to reduce impacts on natural resources. Potential impacts include reduced permeability for wildlife movement (due to loss of cover and foraging resources, and increased exposure to human activity), damage to sensitive plant communities (i.e., within Oregon oak woodland on the west side of campus, with potential direct removal of oaks as well as potential loss of native understory diversity, reduced oak regeneration and increased potential for weedy species establishment) and within riparian forest along Hill Creek (with potential direct removal of riparian trees as well as loss of native understory diversity, potential reduced native tree regeneration, and increases in weedy species). [See, for example, Kerns et al. (2020), Perchemlides et al. (2008), and Seavy	Refer to MR-7.

Commenter	Date	Letter	Comment	Response
			et al. (2008).] Biological Resources significance Criteria 1 through 4 indicate that these types of impact could constitute significant impacts	
Sonoma Land Trust	9/26/2022	B11-99	This figure showing "Preserved Open Space" does not show the two new potential Highway 12 connector roads that could be developed within or across open space, resulting in an incomplete illustration of the nature of the proposed open space.	Comment incorporated. Policy 2-55 has been added to state: "Ensure that any future roadways or pathways built in the open space do not introduce lighting that would adversely impact wildlife." Additionally, DEIR Policy BIO-1 requires a biological resource assessment for any new project. This assessment will identify wetlands and make recommendations for mitigation of any impacts to biological resources to a less than significant level. Refer to response to comment MR-7. In addition, Policy 2-1 has been amended to state: "Ensure that land shown In Figure 2.2-1 as Preserved Open Space is dedicated or maintained as permanent public open space, and the Managed Landscape/Fire Buffer is designed and maintained for that purpose. The owner/operator of the Preserved Open Space shall prepare an open space plan, to be approved by the County to manage the rich diversity of resources on site, including habitat, vegetation, wetlands, native species, and other critical resources, balanced with recreation and wildfire protection needs. As part of the open space plan development, conduct a formal aquatic resources delineation for habitat protection, and consider delineating a cohesive system of trails and pathways that balances recreation and wildlife conservation."
Sonoma Land Trust	9/26/2022	B11-100	Project impacts to open space cannot be fully analyzed unless this figure shows these proposed new roads and calls out locations for any of the anticipated uses, such as	Refer to response to comment B11-99.

Commenter	Date	Letter	Comment	Response
			intensive agriculture or utility development, noted in Table 4-3, that are not compatible with common understanding of the term "Preserved Open Space," which is land that is primarily undeveloped and left in a natural state, such as grasslands and open rangeland, forests, and woodlands. Locations planned for utility development or intensive agriculture (e.g. indoor crop cultivation, confined farm animal operations, row crops, vineyards, etc.) should be designated as such; otherwise, project impacts to natural resources cannot be analyzed. The Plan does include a Utilities land use type; all proposed utility developments should be shown with that label. The potential impacts of the allowable uses within the "Preserved Open Space" are not analyzed in the EIR. Until the potential impacts are analyzed, it is impossible to determine whether those impacts would be significant or whether certain Specific Plan policies could avoid or mitigate those impacts.	
Sonoma Land Trust	9/26/2022	B11-101	Second paragraph emphasizes vegetation management as a means to reduce wildfire hazard. The prime importance of designing buildings to be fire-resistant, and of use policies that limit the likelihood of ignition, should be emphasized here along with vegetation management. Vegetation removal from the natural landscape should not be the primary approach to fire risk reduction on the site, especially given its importance to wildlife habitat and wildlife movement	Specific Plan Policies 2-9 and 2-10 require fuels management to be minimized within wildlife corridors to limit disturbance to species. Additionally, Policy 2-31 has been amended to add: "Construct and maintain a managed landscape buffer along western and eastern edges of the Core Campus to aid in fire defense consisting of a shaded fuel break in wooded areas and grazed or mown grassland. Shrubs and chaparral should be limited within the managed landscape buffer. Management of this landscape buffer should aim to enhance

Commenter	Date	Letter	Comment	Response
			through the site. See comment above on page 2-4 for further discussion of potential impacts of vegetation removal on biological resources.	biodiversity, reverse weed invasion, and protect water resources."
Sonoma Land Trust	9/26/2022	B11-102	To reduce impacts of trails and recreational use on biological resources, Policy 2-4 should include the decommissioning of trails that are duplicative or causing erosion or other resource damage. The current trail system includes trails that occur close together and lead to essentially the same destinations. Since each trail and its use has a cumulative impact on natural vegetation (i.e. by direct removal and often, the facilitation of invasive plant species) and on wildlife use (by the increase in human and dog presence), decommissioning duplicative or highly erosive trails will reduce the project's recreational impacts. Some of the trails on the site are also contributing to substantial erosion, resulting in soil and vegetation loss and potential impacts to water quality downstream. The site's trail system should be reviewed for such locations to decommission or realign as well.	Specific Plan Policy 2-1 has been amended to state: "Ensure that land shown In Figure 2.2-1 as Preserved Open Space is dedicated or maintained as permanent public open space, and the Managed Landscape/Fire Buffer is designed and maintained for that purpose. The owner/operator of the Preserved Open Space shall prepare an open space plan, to be approved by the County to manage the rich diversity of resources on site, including habitat, vegetation, wetlands, native species, and other critical resources, balanced with recreation and wildfire protection needs. As part of the open space plan development, conduct a formal aquatic resources delineation for habitat protection, and consider delineating a cohesive system of trails and pathways that balances recreation and wildlife conservation. " Amendments would ensure trails are planned cohesively, which would include potential closure of duplicative trails and improvements to degraded trails.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-103	Policy 2-5 calls for setting aside a location for water recreation for people and dogs at Suttonfield Lake. Facilitating intensive dog use of the site could have significant impacts on wildlife use of the area. Dogs can affect wildlife through direct predation, harassment, scent marking resulting in wildlife avoidance, and spread of disease. Dog presence has been found to be associated with reduced habitat use by species including mountain lion, mule deer, bobcats, and small mammals such as squirrels and rabbits (Reilly et al 2017, George and Crooks 2006, Length et al. 2008); with disease transmission to gray foxes (Riley et al. 2004); and with reduced bird presence and species richness (Banks et al 2007). The potential impacts of dog use must therefore be evaluated in the EIR. Until the potential impacts analyzed, it is impossible to determine whether those impacts would be significant or whether certain Specific Plan policies could avoid or mitigate those impacts.	Specific Plan Policy 2-1 has been amended to state: "Ensure that land shown In Figure 2.2-1 as Preserved Open Space is dedicated or maintained as permanent public open space, and the Managed Landscape/Fire Buffer is designed and maintained for that purpose. The owner/operator of the Preserved Open Space shall prepare an open space plan, to be approved by the County to manage the rich diversity of resources on site, including habitat, vegetation, wetlands, native species, and other critical resources, balanced with recreation and wildfire protection needs. As part of the open space plan development, conduct a formal aquatic resources delineation for habitat protection, and consider delineating a cohesive system of trails and pathways that balances recreation and wildlife conservation." Use of open space by people and on-leash dogs is commonly accepted as a compatible use in many open space areas, which would be further addressed during development of the open space plan. While some adverse effects to wildlife may result from allowing dogs and people to access these areas as presented in Reilly et al 2017, George and Crooks 2006, Length et al. 2008, Banks et al 2007, the commenter does not provide evidence that these impacts would be significant. CEQA does not require that an analysis determines that no impact will result from a project or activity.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-104	Goal 2-D seems to be mixing the goal of conservation of habitat on site with resource conservation more globally. Please clarify. For instance, how is "sustainable food production" a means to conserving habitat on the site?	Refer to response to comment MR-3 and MR-7. In addition, Policy 2-1 has been amended to state: "Ensure that land shown In Figure 2.2-1 as Preserved Open Space is dedicated or maintained as permanent public open space, and the Managed Landscape/Fire Buffer is designed and maintained for that purpose. The owner/operator of the Preserved Open Space shall prepare an open space plan, to be approved by the County to manage the rich diversity of resources on site, including habitat, vegetation, wetlands, native species, and other critical resources, balanced with recreation and wildfire protection needs. As part of the open space plan development, conduct a formal aquatic resources delineation for habitat protection, and consider delineating a cohesive system of trails and pathways that balances recreation and wildlife conservation." Incorporation of the amended policy would require future uses within open space areas to be consistent with the Specific Plan's resource protection policies (policies 2-6 through 2-26) and would involve multiple partners to further refine open space preservation goals for "Preserved Open Space" areas. Further, DEIR Policy BIO-1 requires a biological resource assessment for any new project. This assessment will identify potential sensitive habitats and species and make recommendations for mitigation of any project-specific impacts to biological resources to a less than significant level.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-105	Policy 2-6 – This policy should also include and address the northwest corner. Figure 2.2-1 indicates a building will be removed in this location and the wildlife buffer expanded.	Comment incorporated. Policy 2-6 has been amended to state: "Remove existing development along the north edge of the Core Campus, from area shown as Open Space in Core Area in Figure 2.2-1, and re-introduce compatible native species to expand the wildlife corridor. This includes removing existing buildings Paxton, Thompson/Bane, and Residence 126 and buildings on the northeast side of campus and ensuring that new development remains within the smaller development footprint as shown in Figure 2.2-1. Ensure that the wildlife corridor is not further restricted at its narrowest point along the north side of the campus. The project sponsor shall be responsible for demolishing buildings within the expanded wildlife corridor and establishing new planting and landscaping to support expanded wildlife movement and safety, prior to Certificate of Occupancy on any redevelopment on the eastside of Arnold Dr."
Sonoma Land Trust	9/26/2022	B11-106	Policy 2-11 – This policy should incorporate the most recent guidance from the Dark Sky Association, which is that all outdoor lights have a color temperature of no more than 2200 Kelvins. [See A Values-Centered Approach to Nighttime Conservation - International Dark-Sky Association; darksky.org)] Dark Sky Standards also provide that: · All lights will use the lowest light level required minimum levels recommended by widely recognized professional standards bodies. · All residential and business outdoor lighting should be actively controlled	Comment noted. Specific Plan Policy 2-11 applies Dark Sky standards to the project design, including but not limited to measures identified in this comment.

Commenter	Date	Letter	Comment	Response
			through means such as timers and motion-sensing switches to ensure that light is available when it is needed, dimmed when possible, and turned off when not needed. Lighting can disrupt wildlife by altering night-time cover and hunting conditions, reducing an area's value and permeability to wildlife. For instance, lighting has been found to reduce use of movement corridors for mountain lions (Beier 1995), deer and mice (Bliss-Ketchum et al. 2016), and bats (Bhardwaj et al. 2020), reducing habitat connectivity for these species. This policy should incorporate the most recent Dark Sky Association guidance and	
Sonoma Land Trust	9/26/2022	B11-107	Policy 2-16 – These are valuable requirements to help address impacts of fencing on wildlife movement, but to allow for passage of wildlife above and below fencing, the Specific Plan should also require that the maximum height of the upper strand be no more than 48" (42" preferred). Since Table 4-3 permits agricultural uses within the "Preserved Open Space," this policy must make clear that these fencing standards apply throughout areas shown as Preserved Open Space in Figure 2.2-2, regardless of whether it may be also used for agricultural uses. See also comment on p. 4-14.	Specific Plan Policy 2-16 requires fencing within open space to be wildlife permeable to maintain wildlife corridor function. Maximum fence heights would be considered with regards to wildlife permeability.
Sonoma Land Trust	9/26/2022	B11-108	Policy 2-17 – The wording of this residential nighttime noise reduction policy suggests that it is optional or will not necessarily be enforced. It is therefore insufficient to reduce noise impacts on wildlife to less-	Refer to response to comment MR-3.

Commenter	Date	Letter	Comment	Response
			than-significant levels. Noise has been shown to impact wildlife usage of habitat, resulting, for example, in reduced foraging time and efficacy, and reduced nesting use, in birds (Burger and Gochfeld 2002, Stone 2000, Aubrey and Hunsaker 1997, Shannon et al. 2016). Potential noise impacts on wildlife must therefore be analyzed in the EIR.	
Sonoma Land Trust	9/26/2022	B11-109	Policy 2-19 – The planting palette for habitat restoration or general plantings withinthe open space areas should be entirely composed of locally native species; theCounty should delete "and/or low-water plant species." The planting palette forgeneral planting within the campus should also be composed of locally native species where feasible, but in ornamental landscape settings, other low-water-use plants would also be acceptable.	Specific Plan Policy 2-1 has been amended to state: "Ensure that land shown In Figure 2.2-1 as Preserved Open Space is dedicated or maintained as permanent public open space, and the Managed Landscape/Fire Buffer is designed and maintained for that purpose. The owner/operator of the Preserved Open Space shall prepare an open space plan, to be approved by the County to manage the rich diversity of resources on site, including habitat, vegetation, wetlands, native species, and other critical resources, balanced with recreation and wildfire protection needs. As part of the open space plan development, conduct a formal aquatic resources delineation for habitat protection, and consider delineating a cohesive system of trails and pathways that balances recreation and wildlife conservation." Implementation of Specific Plan policies and incorporation of the amended policy 2-1 would ensure an appropriate planting palette for habitat restoration within open space areas.
Sonoma Land Trust	9/26/2022	B11-110	Policy 2-21 - To ensure the proposed enhancements do not have a significant impact on wildlife movement and sensitive wetland habitat, this policy should require that development "Ensure that enhancements protect or	Refer to response to comments MR-7.

Commenter	Date	Letter	Comment	Response
			improve wildlife habitat values.”	
Sonoma Land Trust	9/26/2022	B11-111	Policy 2-24 – Additional bird-friendly design measures should be incorporated in order to avoid impacts to birds. Relevant additional measures include: - Minimize the overall amount of glass on building exteriors facing water features. - Avoid transparent glass skyways, walkways, or entryways, free-standing glass walls, and transparent building corners - Utilize glass/window treatments that create a visual signal or barrier to help alert birds to presence of glass. - Avoid funneling open space to a building façade. - Strategically place landscaping to reduce reflection and views of foliage inside or through glass. - Avoid or minimize up-lighting and spotlights; and turn non-emergency lighting off (such as by automatic shutoff) at night to minimize light from buildings that is visible to birds. (See also comments on Policy 2-11 regarding lighting.) See: Resource-Guide-for-Bird-safe-Building-Design.pdf (audubonportland.org)	Comment noted. Policy 2-24 requires the incorporation of bird-friendly design, which would include but not be limited to measures detailed in this comment.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-112	2-25 – Asbury Creek should be included as one of the streams requiring a setback of at least 50'. Because 50' is a minimum setback that will only protect some of the processes listed, larger buffers should be retained where they currently exist, and opportunities to expand buffers to 100' – 300' should be considered. These larger buffers will provide greater mitigation of impacts from development and human uses on wildlife movement and water quality. For example, setbacks of 100'-300' will be more effective as wildlife corridors, allow for greater natural regeneration of native trees, and provide greater water quality protection through sediment and nutrient filtration (see, for example, Hilty and Merenlender 2004, Castelle et al. 1994, and Lee et al. 2004).	Comment incorporated. No development is proposed along Asbury Creek. In addition, the Specific Plan includes policies that would ensure buffers and protection of riparian areas around creeks, including Asbury Creek. Specific Plan Policies 2-25 (protective buffer of Sonoma Creek), 2-27 (County's Municipal Code for riparian corridor protection), and 2-30 (maintain standard project protection measures for any development adjacent to riparian corridors) would ensure protection of streams and riparian resources during any adjacent ground disturbing actions. Further, DEIR Policy BIO-1 requires a biological resource assessment for any new project. This assessment will identify potential sensitive habitats and species and make recommendations for mitigation of any project-specific impacts to biological resources to a less than significant level.
Sonoma Land Trust	9/26/2022	B11-113	2-F – In order to reduce potential wildfire impacts to wildlife and habitat, the Specific Plan needs to include managing human activities and limiting ignition potential as one of its key strategies. Measures to limit human-caused ignition should be central to residential and recreational site regulations and agricultural use policies.	Policies 2-31 through 2-42 address design and management approaches to wildfire safety. The comment does not address the adequacy of the Draft EIR; therefore, no response is required. However, the commenter's opinion is noted and forwarded to the Board of Supervisors for their consideration in making a determination whether to approve the project.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-114	Policy 2-31 Fire buffers appear to encompass areas of sensitive habitat includingOregon oak woodland, valley oak woodland, and riparian forest. How will fire bufferdevelopment affect the health and quality of these sensitive vegetation types (e.g.,understory diversity, natural regeneration potential, potential incursion of weeds,increased solar exposure, etc.)? How will those impacts be mitigated? These potential impacts need to be evaluated fully in the EIR to ensure they will be less than significant.	Specific Plan Policies 2-9 and 2-10 fuels management to be minimized within wildlife corridors to limit disturbance to species. Additionally, Policy 2-31 has been amended to add: "Construct and maintain a managed landscape buffer along western and eastern edges of the Core Campus to aid in fire defense consisting of a shaded fuel break in wooded areas and grazed or mown grassland. Shrubs and chaparral should be limited within the managed landscape buffer. Management of this landscape buffer should aim to enhance biodiversity, reverse weed invasion, and protect water resources."
Sonoma Land Trust	9/26/2022	B11-115	Policy 2-32 – There seem to be some missing words in the second sentence between "Loose surface litter…shall be permitted…in order to ensure" and "the removal of trees, bushes, shrubs…". Please clarify. Retaining some surface litter is necessary to protect soil health, prevent erosion, allow for natural regeneration of native plants, and support reptiles, amphibians, and other wildlife.	Comment is noted. No change is needed.
Sonoma Land Trust	9/26/2022	B11-116	Policy 2-34 – The Fuel Separation standard provides only minimum clearance distances. Based on this guideline, all native vegetation in this zone could potentially be removed, having a significant impact on biological resources. In order to ensure that the impact of fuel management is less than significant, the Specific Plan must identify an upper limit to the amount of clearing of native vegetation, so that as much native vegetation may be retained as possible while meeting specific fuel reduction objectives. The EIR must also evaluate the	Refer to response to comment B11-114.

Commenter	Date	Letter	Comment	Response
			impacts from the implementation of these standards to ensure they will actually be less than significant or will be mitigated to less-than-significant levels.	
Sonoma Land Trust	9/26/2022	B11-117	How will the likelihood of ignition from human causes be managed? No policies currently address this essential topic.	Refer to response to comment B11-113.
Sonoma Land Trust	9/26/2022	B11-118	The Parks and Recreation land use type description includes dog parks as one use type. Limiting dog presence on the site will be necessary to avoid impacts to wildlife permeability of the site. Policy 6-4 indicates that a dog park will be provided within Core Campus, at least 200' from any creeks or wildlife corridors. This 200' limitation will be valuable in reducing impacts to wildlife. Based on the Land Use diagram (Figure 4.1-2), the Ballfields, Central Green, and one area east of the creek are the only "Park" areas more than 200' from creeks. The Park area east of the creek appears to be within existing riparian habitat along Sonoma Creek, which would not be suitable for a dog park (or any other highly developed park type). Areas within the Ballfields zone, or elsewhere within the Residential or Flex Zones on the west side of Arnold Drive, would be most suitable for a small dog park.	Comment noted. The potential dog park would be located within the Core Campus, at least 200' from any creeks or wildlife corridors. In addition, refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-119	The table indicates that agricultural crop production and agricultural processing, as well as keeping farm animals, is permitted in both "Buffer Open Space" and "Preserved Open Space." Keeping confined farm	Refer to response to comment B11-104.

Commenter	Date	Letter	Comment	Response
			animals, mushroom farming, and timberland conversion are also permitted in "Preserved Open Space." In PCI's experience, these types of activities are often incompatible with open space preservation because they often eliminate most or all natural vegetation, often involve construction of built facilities, and frequently exclude or reduce wildlife with fencing, trapping and other measures. How does the County envision these activities occurring in a manner compatible with open space preservation? How will needs to restrict cattle or other farm animal movement, within open space areas, be aligned with maintaining wildlife permeability?	
Sonoma Land Trust	9/26/2022	B11-120	The table further indicates that an array of other intensive agricultural uses, including farm retail sales, indoor crop cultivation, wholesale nursery, and tasting rooms are all permitted in "Preserved Open Space." These uses are not compatible with open space preservation because they entail built facilities and removal of natural vegetation. These uses should not be permitted in Preserved Open Space. How will the potential impacts of these permitted uses be evaluated in the future?	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-121	Similarly, outdoor recreation facilities and "rural sports and recreation" facilities are potentially permittable in Preserved Open Space. What types of facilities will these include? A clear explanation of this use type is needed to allow determination of potentially significant impacts to wildlife. Uses such as	Refer to response to comment B11-104.

Commenter	Date	Letter	Comment	Response
			Frisbee golf, zip lines, and offroad vehicle use all have potential to reduce wildlife usage via habitat damage and increased human activity levels, and must be analyzed by the EIR.	
Sonoma Land Trust	9/26/2022	B11-122	The table indicates that geothermal resource development, parking facilities, and public utility facilities may all also be located within Preserved Open Space. These are potentially extensive facilities that may also be incompatible with meaningful open space preservation because they entail removal of natural vegetation, construction of new buildings and other infrastructure, and a potentially heightened level of human presence and activity. They should not be permitted within Preserved Open Space unless greater detail can be provided in this Specific Plan, showing where they could be located, how extensive they are, allowing for analysis of impacts to wildlife and other biological resources in the EIR.	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-123	The last paragraph indicates that sycamores will line principal axes, and other primarily deciduous canopy trees will be used on other streets. The Specific Plan should prioritize the use of native trees and other native plants for landscaping where they align with the ornamental setting, because they are well-adapted to local climate, require less water and chemical inputs to thrive, and provide habitat benefits (food resources, cover, and nesting opportunities) for the greatest variety of native animal species . Valley oaks, which form an	Comment incorporated. Policy 2-20 has been amended to state: “Require that the project sponsor work with an arborist to develop a tree planting plan that retains existing mature healthy trees and supplements the existing tree canopy with a diverse range of native and/or low water trees that provide shade and habitat. Locate new construction and public realm improvements around existing landscaping features that are retained.”

Commenter	Date	Letter	Comment	Response
			important part of the core campus landscape already in the southwestern section, as well as coast live oak, should be incorporated where space allows to sustain oaks as a long-term element of the campus, help ameliorate historic losses of sensitive valley oak habitat, and support the many species of native birds, mammals, amphibians and invertebrates that rely on native oaks. This will also help meet Policy 5-1, establishing tree-lined avenues "..that complement the surrounding hills and open space landscape."	
Sonoma Land Trust	9/26/2022	B11-124	This section should include a statement specific to lighting meeting Dark Sky standards; this is mentioned only in passing in Policy 5-13 and should be made its own policy, to ensure cross-referencing with Policy 2-7. See comments on page 2-11, above, for further discussion.	Refer to response to comment B11-106.
Sonoma Land Trust	9/26/2022	B11-125	Policy 6-4 regarding a dog park: see comment on page 4-8, above.	Refer to response to comment B11-118.
Sonoma Land Trust	9/26/2022	B11-126	The baseline appears to vary between sections in the EIR. For example, it appears the Transportation section may use 2019 as baseline and the Biology Section uses a different baseline. Without a proper baseline, impact analyses cannot be evaluated. Identifying an appropriate baseline is particularly important for impacts relating to intensity of human uses and presence on the site, since the population of SDC has declined so dramatically in recent years as SDC ceased operations and closed. What	The DEIR and Specific Plan utilize best available information in development of the plan and analyses. Much of the DEIR Section 3.4 relied on biological analyses completed in 2018 (PCI 2018), which was supplemented with more recently available species occurrence information provided by the California Natural Diversity Database.

Commenter	Date	Letter	Comment	Response
			is the specific baseline condition used for each section of the EIR?	
Sonoma Land Trust	9/26/2022	B11-127	"The section describes biological resources in the Planning Area (which includes the project area for the SDC), including habitats, wetlands, critical habitat, and specialstatus species, as well as relevant federal, State, and local regulations and programs." This section does not actually address potential impacts and proposed mitigation measures needed to reduce potential impacts to less–than-significant levels. In order to fully address and mitigate potential impacts on biological resources, the EIR needs to evaluate potential construction-related and operational impacts from implementation of the Specific Plan on individual species, habitats for those species across the SDC area, natural vegetation communities, movement corridors, wetland disturbance and loss, and compliance with applicable policies use.	Refer to response to comment B11-90.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-128	This section does not mention the 50' minimum setback from streams designated by the Riparian Corridor zoning for this site. Instead, smaller setbacks are described in the first paragraph. Is the 50' minimum setback not being applied in the Plan? Reducing the width of riparian and creek setbacks could disrupt animal movement by reducing the width of animal dispersal corridors and disrupting movement through the loss of habitat, increased noise and light disturbance within the corridor, and from human or domestic animal intrusion. The EIR must evaluate the potential impacts on biological resources from a reduction in the riparian and creek setback widths and mitigate the impacts of whatever setbacks it employs to ensure that those impacts are less than significant.	The Specific Plan includes policies that would ensure buffers and protection of riparian areas around creeks, including Asbury Creek. Specific Plan Policies 2-25 (protective buffer of Sonoma Creek), 2-27 (County's Municipal Code for riparian corridor protection), and 2-30 (maintain standard project protection measures for any development adjacent to riparian corridors) would ensure protection of streams and riparian resources during any adjacent ground disturbing actions. Further, DEIR Policy BIO-1 requires a biological resource assessment for any new project. This assessment will identify potential sensitive habitats and species and make recommendations for mitigation of any project-specific impacts to biological resources to a less than significant level. Lastly, Article 65 of the Sonoma County Code is referenced describing setbacks for buildings. Article 65 will be applied throughout the implementation of the project and stream setbacks will be determined during the biological resources assessment required by BIO-1, using the criteria defined by Article 65.
Sonoma Land Trust	9/26/2022	B11-129	This states that measures shall be taken to "protect and enhance valley oaks on the project site" and such measures shall include, but not be limited to, a requirement that valley oaks shall comprise a minimum of fifty percent of the required landscape trees for the development project. But the Proposed Plan contains no such requirement. The EIR states that the Proposed Plan would have a significant impact on biological resources if, among other things, "Implementation of the Proposed Plan would … conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance" (EIR, page 257, Impact 3.4-5). In order to ensure that impacts on valley	Refer to response to comment MR-1. In addition, refer to response to comment B11-123.

Commenter	Date	Letter	Comment	Response
			oak habitat are less than significant, the Specific Plan must include a policy implementing the requirements of the Valley Oak Habitat Combining District. The policy must be added to ensure development does not conflict with the zoning requirements for the protection of valley oak habitat. The EIR must then analyze fully the impacts of that policy.	
Sonoma Land Trust	9/26/2022	B11-130	Here and on p. 221, PCI's work on the Existing Conditions Report is cited as PCI (2015). PCI's work and the report as a whole (prepared by WRT) was completed in 2018. The document is available here: https://transformsdc.files.wordpress.com/2020/01/2-cnaturallandrecreationalresourcesv3.pdf	Comment incorporated. References have been updated to PCI 2018.
Sonoma Land Trust	9/26/2022	B11-131	Second paragraph also indicates that habitat types described are from the California Wildlife Habitat Relationships System. That is incorrect. PCI (2018) and all mapping associated with it use the Manual of California Vegetation-based classification refined by the Sonoma Veg Map project, which provides the more detailed and more precise classification needed to identify potential impacts on sensitive habitat types as required by CEQA. Please correct here and on relevant maps	Comment incorporated.
Sonoma Land Trust	9/26/2022	B11-132	The large wetland on the east side of the habitat map is incorrectly labeled as vernal pool. This should be labeled seasonal wetland or wet meadow.	Comment incorporated. Figure 3.4-1 has been revised to identify as a seasonal wetland.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-133	The first line notes that redwood forest is not considered sensitive in Holland (1986); Holland (1986) is not considered a current reference for sensitive habitat designations and therefore does not constitute substantial evidence of sensitive habitat designations. In order to accurately determine sensitive habitat designations and analyze impacts to those habitats, the EIR must use current rankings by CDFW for sensitive alliances and provide that information for each of the plant communities listed. Note that rankings of G3 or S3 or lower are considered sensitive. Because the EIR failed to rely on up-to-date evidence, the EIR failed to acknowledge that redwood forest is considered a sensitive habitat. In fact, based on PCI (2018), CDFW-ranked sensitive alliances on the site include redwood forest, madrone forest, Oregon oak woodland, valley oak woodland, bigleaf maple forest, cottonwood forest, riparian deciduous forest, native grasslands, and wetlands. The EIR needs to include a map showing all sensitive vegetation types for use in analyzing impacts in the EIR so that decision-makers and the public can fully understand the scope and location of sensitive habitat types and the Project's impacts on sensitive habitat types. Valley oak woodland is of particular concern since it occurs within and adjacent to the core campus, and protections will be needed to reduce impacts to less-than-significant levels.	Specific Plan Policy 2-20 has been amended to state: "Require that the project sponsor work with an arborist to develop a tree planting plan that retains existing mature healthy trees and supplements the existing tree canopy with a diverse range of native and/or low water trees that provide shade and habitat. Locate new construction and public realm improvements around existing landscaping features that are retained." Incorporation of this policy would ensure appropriate protections for potentially sensitive vegetation within the Plan area.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-134	Vernal pools are mentioned in the title and third sentence, and on map 3.4-1. Vernal pools are highly sensitive, specialized wetland types that, if present, would need to be included in the discussion of impacts in the EIR. Mitigation measures specific to vernal pools would also be required. It should be noted that no vernal pools have been identified in prior work (PCI 2018, Sonoma Veg Map). What substantial evidence does the County have with respect to the presence of vernal pools? Please clarify.	Refer to response to comment B11-95.
Sonoma Land Trust	9/26/2022	B11-135	The EIR also fails to analyze the potential impacts on the wetlands in the area fromthe proposed Highway 12 connector or any other proposed Plan elements. The impacts analysis needs to address the direct and indirect impacts of the development on wetlands within the Specific Plan area before the EIR can conclude that any impacts would be less than significant.	Refer to response to comment MR-1. Additionally, the DEIR notes policies and standard conditions of approval that require projects to conduct a biological resources assessment (DEIR COA Policies BIO-1, BIO-14, BIO-15, BIO-16) to identify, avoid, and mitigated potential impacts to wetlands. Wetland protection policies identified in the Specific Plan and DEIR would continue to apply and would not result in changes to potential significance of impacts or analyses contained in the DEIR. In addition, Specific Plan Policy 2-28 states: "Prior to the commencement of the approval of any specific project in the Proposed Plan area, Project Sponsors shall contract a qualified biologist to conduct studies identifying the presence of special-status species and sensitive habitats at proposed development sites and ensure implementation of appropriate mitigation measures to reduce impacts to sensitive habitat or habitat function to a less than significant level."
Sonoma Land Trust	9/26/2022	B11-136	The EIR identifies Lindera benzoin as present on the site but this species is not known	Comment incorporated. Reference has been removed.

Commenter	Date	Letter	Comment	Response
			to occur in California. If the EIR intended to reference Calycanthus occidentalis, please correct.	
Sonoma Land Trust	9/26/2022	B11-137	The list includes 28 species with moderate to high potential to occur. However, the EIR fails to provide a map showing the location of the habitat necessary for the species; therefore, decision-makers and the public cannot determine what specific elements of the project may impact habitat that could support the various species listed. The EIR needs to address the potential impacts to each species on a speciesby- species basis. Without a species-by-species analysis, it is impossible to determine whether and to what degree development associated with the Proposed Plan would result in potential impacts within the habitat areas presented in Table 3.4-2: Potential Special-status Wildlife. And without full analysis, it is impossible to determine what mitigation is required to reduce those impacts to less-thansignificant levels. How will impacts to habitat impact the listed species and what mitigation measures are proposed to reduce the potential impact?	Refer to response to comments B11-90 and B11-94.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-138	The EIR also omits data about known occurrences of special status species on the Project site. For example, the entry for northern western pond turtle does not indicate that the species has been documented to occur on the site (see PCI 2018 for detail). The EIR's failure to survey the site for special status species or to include data regarding known occurrences prevents the EIR from fully identifying or mitigating possible impacts to special status species.	Comment incorporated. The list of documented special-status species and assessment of potential for special-status species to occur (Table 3.4-2 and Table 3.4-3) has been amended to include Sonoma Ecology Center provided observations for special status species. Some of the comment's designations of individual species do not meet the criteria to be considered "special status" under CEQA. However, these species will all benefit from the above-mentioned policies and would not be significantly adversely affected by future projects. The Specific Plan places a high priority on biodiversity preservation, preservation of wildlife corridors and protection of special-status species (Vision Statement; existing County, State and Federal policies; please refer to Specific Plan Goals 2-D, 2-E; Specific Plan Policies 2-6 through 2-30). Though the comment does identify some special-status species that were not identified as observed in the DEIR, all potential significant impacts to these species would be mitigated to a less than significant level with the implementation of existing Local, State and Federal policies and the specific and general policies in the DEIR.
Sonoma Land Trust	9/26/2022	B11-139	The EIR fails to address the mountain lion, which is designated as a "Specially Protected Mammal" by CDFW, is a species of high local conservation concern, and is known to use the SDC site extensively. Central Coast and Southern California populations are currently under review for listing under the California Endangered Species Act. Some of the same pressures threatening mountain lions in those areas – including habitat fragmentation – are highly relevant to	Refer to response to comment MR-7. In addition, the designation of mountain lion as a Specially Protected Mammal makes it subject to rules under California Fish and Game Code specific to actions that would intentionally take and/or result possession of a mountain lion. Its most notable use is a prohibition of recreational hunting for the species. Mountain lion is not listed on CDFW's special animal list and was not considered a special status species for the purposes of this evaluation because the project does not have potential to result

Commenter	Date	Letter	Comment	Response
			the population in the SDC region as well, especially in long-range planning for increased land development. Development of the types proposed in the Draft Specific Plan may have the potential to significantly impact mountain lion habitat and movement. It is, therefore, foreseeable that the Specific Plan could have a significant impact on mountain lions under significance Criterion 1 ("Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service") or significance Criterion 4 ("Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites"). The EIR must specifically analyze and mitigate for impacts to mountain lions to ensure any such impacts would be less than significant.	in intentional take or possession of a mountain lion and Sonoma County CEQA analysis of special status species typically do not include mountain lion. As the comment indicates, some populations are currently being assessed for listing, though the Sonoma County population is not one of these.
Sonoma Land Trust	9/26/2022	B11-140	The table identifies the potential habitat for special-status plants in the planning area, but it fails to disclose where potential impacts might overlap with areas within the Specific Plan. For example, there is no way to tell based on the EIR where the areas of potential development (including uses permitted within "Preserve Open Space" such as indoor crop cultivation and utility	Refer to response to comment B11-90 and B11-104.

Commenter	Date	Letter	Comment	Response
			development) would occur in relation to the habitat for special-status plants. Nor is it possible to discern what the potential impacts to special status plants and their habitat might be, or what specific mitigation would reduce those impacts. As drafted, substantial evidence and analysis do not support the EIR's conclusion that impacts to special status plants would be less than significant.	
Sonoma Land Trust	9/26/2022	B11-141	The EIR fails to clearly evaluate sensitive plant communities other than wetlands. The scientific community considers several other habitat types that are present at SDC to be sensitive. See PCI (2018); see also comment on p. 214 and following, above. The EIR cannot justify its conclusion that impacts on sensitive habitats will be less than significant without clearly analyzing and mitigating impacts to all relevant sensitive plant communities.	Refer to response to comment B11-90 and B11-104.
Sonoma Land Trust	9/26/2022	B11-142	Riparian corridors serve as important movement routes for many species other than steelhead, including many mammals, birds, amphibians, and reptiles. Please adjust wording. Mill and Asbury Creek serve as important corridors as well. The EIR must fully identify and analyze the impacts to all wildlife corridors on the SDC site, including Mill and Asbury Creeks.	Refer to response to comment B11-112.
Sonoma Land Trust	9/26/2022	B11-143	This section fails to provide a map of all wildlife movement corridors showing where all proposed plan development may be located in relation to the corridors and the EIR fails to identify what, specifically, the direct and	Refer to response to comment MR-7.

Commenter	Date	Letter	Comment	Response
			indirect impacts on wildlife use of the existing corridors might be under Impact 3.4-4 starting on page 254. What are the potential impacts from habitat loss or alteration, noise, light, human presence, dog presence, and fragmentation by roads that may impact wildlife use of the corridor and what mitigation measures are proposed to reduce the specific impacts? Without identifying, analyzing, and mitigating specific impacts to wildlife corridors, the EIR lacks substantial evidence or explanation to justify its conclusion that those impacts would be less than significant.	
Sonoma Land Trust	9/26/2022	B11-144	How will the proposed Class I pathway indicated on Figure 3.2-1, shown leading toward Sonoma Creek from Walnut Street, affect the wildlife corridor and sensitive riparian habitat? What measures will be in place to limit or mitigate for these impacts? Without identifying, analyzing, and mitigating specific impacts of the Class I pathway, the EIR lacks substantial evidence or explanation to justify its conclusion that those impacts would be less than significant.	Refer to response to comment B11-90.
Sonoma Land Trust	9/26/2022	B11-145	Two options for connector roads are shown in Specific Plan Figure 3.1-1, and threetypes of facilities (a direct connection to Highway 12, an emergency accessconnection, and a pedestrian/bike connection) are all alluded to in accompanyingtext. In addition, Policy 3-44 calls for development of the Sonoma Valley Trail (multiusepath) parallel to Highway 12. However, the EIR does not disclose or analyze thespecific impacts of each of those proposed options. What will be the direct, indirect, and cumulative impacts of all these elements on	Refer to response to comment MR-3 and B11-90.

Commenter	Date	Letter	Comment	Response
			biological resources, including wetlands, drainages, Butler Canyon Creek, and wildlife movement through existing undercrossings? Without identifying, analyzing, and mitigating specific impacts of the connector road(s), the EIR lacks substantial evidence or explanation to justify its conclusion that those impacts would be less than significant.	
Sonoma Land Trust	9/26/2022	B11-146	and cumulative impacts of all these elements on biological resources, including wetlands, drainages, Butler Canyon Creek, and wildlife movement through existing undercrossings? Without identifying, analyzing, and mitigating specific impacts of the connector road(s), the EIR lacks substantial evidence or explanation to justify its conclusion that those impacts would be less than significant.	Refer to response to comment MR-3 and B11-90.
Sonoma Land Trust	9/26/2022	B11-147	The EIR's chosen thresholds of significance are not sufficiently specific to enable decision-makers or the public to understand, in practical terms, what it means for the Specific Plan to have a significant or less-than-significant impact on biological resources. Further, the EIR fails to explain how the County chose or developed its significance criteria, or to justify why these specific criteria were selected while others were omitted. The EIR cannot fulfill its role as an informational document unless it provides additional information regarding its significance thresholds. For example:	Consistent with CEQA, Appendix G thresholds were applied to analyses. CEQA does not require further justification for use of these thresholds

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-148	Criterion 1. How does the EIR define substantial adverse effect for each candidate, sensitive, or special-status species present or potentially present in the Specific Plan area? What was the process used to determine if implementation of the proposed Plan will substantially affect specific species? How does this criterion address a potential change in species diversity and abundance that could occur from the implementation of the Specific Plan? How is a potential change in the quantity and quality of native habitat used by the biological resources addressed under this criterion and what is the significance threshold to evaluate impacts of a change?	Refer to response to comments MR-3 and B11-90.
Sonoma Land Trust	9/26/2022	B11-149	Criterion 2. What does the EIR evaluation consider a substantial adverse effect on riparian habitat or other sensitive natural communities? This is not articulated, and therefore, how can impacts be determined? What are the sensitive natural communities present in the planning area and within the development area, including the Highway 12 connector?	Refer to response to comments MR-3 and B11-90.
Sonoma Land Trust	9/26/2022	B11-150	Criterion 5. How is a potential conflict with policies and ordinances evaluated in terms of protected biological resources? What would constitute a significant impact and how would the impacts be mitigated to less-than-significant levels?	Refer to response to comments MR-3 and B11-90.
Sonoma Land Trust	9/26/2022	B11-151	Why was the analysis of impacts limited to a comparison against Figure 3.4-1 when there are additional resources presented in the EIR? Figures 3.2-1 through 3.2-4	Refer to response to comments MR-3, B11-90 and B11-133.

Commenter	Date	Letter	Comment	Response
			provide significantly more information for use in the analysis of impacts in the Biological Resources section. These figures illustrate locations within the planning area that support riparian forest types, evergreen and redwood forest types, and oak woodlands at a scale far more useful for impact evaluation. Portions of 3.4-1 also to be incorrect (see comment above on p. 212).	
Sonoma Land Trust	9/26/2022	B11-152	This section states that the plans' land use designations would not directly, adverselyaffect areas of natural vegetation. This conclusion is inappropriate for the"Methodology and Assumptions" section. Where is the analysis of how land usedesignations would relate to natural vegetation? For instance, how will land usetypes such as managed landscape and fire buffer affect natural vegetation? How willpermitted uses in "Preserved Open Space" such as crop production, keeping ofconfined farm animals, and wine tasting facilities (as stated in Table 4.3-1) affect natural vegetation? Without first answering these and other questions, the EIR cannot support its conclusion with analysis and substantial evidence.	Refer to response to comments MR-3, B11-90 and B11-133.
Sonoma Land Trust	9/26/2022	B11-153	The impacts of the proposed Plan's land use designations are the only aspect of the Plan evaluated in the Biological Resources Section. This approach is inconsistent with other sections of the EIR that evaluate potential impacts from construction of projects within the Specific Plan area. For instance, construction emissions are evaluated in the Air Quality section addressing potential construction emissions from a new road connection to Highway 12. The fact that the proposed Plan is	Refer to response to comments MR-3 and B11-90.

Commenter	Date	Letter	Comment	Response
			programmatic and does not include any specific development projects does not excuse the EIR from including an evaluation of any specific potential construction/development on biological resources. The potential locations of specific development types are shown on figures included in the EIR and the Specific Plan. The draft Specific Plan is, therefore, sufficiently detailed to allow analysis of at least some of these specific impacts at the programmatic stage. The EIR needs include potential impacts from construction and use of a connector to Highway 12 so that decision-makers and the public can determine now—when the County is proposing to lock in these uses—whether these uses will have significant impacts to biological resources and how those impacts could be mitigated.	
Sonoma Land Trust	9/26/2022	B11-154	How can the EIR make the conclusion that the proposed Highway 12 connector and the upgraded wastewater treatment plant would not adversely affect areas of natural vegetation? There is no analysis or substantial presented to support the conclusion. In addition, how can potential conditions of approval reduce impacts? Please articulate why BIO 1 through 14 are not considered mitigations. What are the potential impacts should the County not include the conditions of approval as proposed, and what mitigation measures would be needed to reduce impacts to lessthan significant-levels?	Refer to response to comments MR-3 and B11-90.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-155	While the methods of "intentional water and energy conservation, sustainable food productions, top-tier sustainable building practices, and aggressive waste reduction" seem like valuable strategies for general sustainability of site operations, it is not clear whether or how these methods would "promote conservation of existing habitat" on the site. Further, the EIR does not clearly evaluate the details or efficacy of any of these methods with respect to whether or how they could reduce impacts to biological resources. Please clarify and address.	Refer to response to comment MR-1 and MR-3.
Sonoma Land Trust	9/26/2022	B11-156	The policy states that the defensible space requirements of the County Fire Department should be met but not exceeded in the wildlife corridor. What are the County standards for defensible space and what are the impacts on biological resources from implementation of the defensible space requirements? The impacts should be evaluated under Impact 3.4-4 and 3.4-2 at a minimum but may also require evaluation for potential impacts on special-status plants. What mitigation measures would be needed to reduce impacts on biological resources from implementation of defensible space requirements? What could be the impact is defensible space standards must be exceeded and what mitigation would be needed if the impacts are significant?	Refer to response to comment B11-101.
Sonoma Land Trust	9/26/2022	B11-157	Policy 2-11. Dark skies standards need to apply to the private realm as well as publicsetting, and should apply all new lighting, not just for new buildings. See	Refer to response to comment B11-106. In addition, refer to response to comment MR-3 and MR-7.

Commenter	Date	Letter	Comment	Response
			comments on Specific Plan p. 2-11, above. The impacts of lighting on wildlife need to be addressed in the EIR. The EIR must evaluate how wildlife species modify their behavior as a result of increased nighttime light within wildlife corridors and other habitat and how increased light may alter nocturnal ecology within the Specific Plan area. Studies indicate increased light can disrupt foraging behavior and increase the risk of predation, increase roadkill of mammals, and disrupt dispersal movements and corridor use (Rich & Longcore eds. 2006). Nighttime light may prevent wildlife from fully using habitat available to them and light can prevent mammals from moving along wildlife corridors. Nighttime light can attract animals and result in altered wildlife movement patterns; these changes can expose prey to predators and make them more vulnerable to capture, thereby reducing species abundance and diversity in the area. See comment on Specific Plan, p. 2-11, above.	
Sonoma Land Trust	9/26/2022	B11-158	This comment provides a partial list of potential wildlife impacts from increased light; many other potential impacts may occur. The EIR must evaluate potential impacts and evaluate what level of light pollution might trigger impacts to sensitive species or species movement. How are the potential changes evaluated for the potentially affected species? Habitat modifications must be evaluated in Biology Criteria 1 and 4 to determine how the project may affect wildlife species	Refer to response to comment B11-106. In addition, refer to response to comment MR-3 and MR-7.

Commenter	Date	Letter	Comment	Response
			and how changes may affect the use of movement corridors. The analysis must identify how these potential impacts were evaluated and what mitigation measures are needed to reduce impacts to less-than-significant levels.	
Sonoma Land Trust	9/26/2022	B11-159	This fencing standard will be very important in reducing impacts to wildlife. Will this be required for all agricultural uses within the "Preserved Open Space" as well? Please state if so. If not, impacts on wildlife movement should be re-evaluated to ensure that fencing-related impacts will remain less than significant. Are there locations where fencing will not be allowed because potential impact on wildlife movement cannot be reduced to less-than-significant levels? These areas must be identified in the EIR as a means to reduce impacts to less-than-significant levels.	Refer to response to comment MR-7 and B11-181.
Sonoma Land Trust	9/26/2022	B11-160	This noise standard is vague and unenforceable. It does not include a specificcommitment to lower noise levels. Requirements to meet residential noisestandards, during both day and night, need be addressed and the impacts of notmeeting such standards needs to be evaluated. Biology Criterion 1 says a significantimpact would occur if the Project would have a substantial adverse effect on anyspecial-status species; therefore, the EIR must address the biological impactsresulting from noise and specifically address the impacts of non-attainment of noisestandards. How will increased noise impact species that communicate acousticallysuch birds and bats that use habitat at SDC? How will noise affect animal physiologyand behavior, and how would those changes impact special-status species? Theseimpacts	Refer to response to comment MR-1 and MR-3.

Commenter	Date	Letter	Comment	Response
			must be addressed in Biology Criterion 1 to understand how noise mayimpact special-status species, what noise levels would cause the impact, and whatmitigation measures would be used to reduce the impacts to less-than-significantlevels. Noise impacts on potential changes in wildlife use of corridors must beaddressed under Biology Criterion 4 to provide an understanding of how noise mayaffect movement, and what mitigation measures are proposed to reduce thepotential impacts to less-than-significant levels. How will the County determine if noise impacts occur? Without this critical information, the EIR does not have sufficient evidence to conclude that impacts to special status species would be less than significant.	
Sonoma Land Trust	9/26/2022	B11-161	Why is Asbury Creek not included as protected with a 50' buffer? What are the potential impacts to Asbury Creek from the lack of an adequate buffer? This stream provides significant habitat values and merits protection. It needs to be protected. If it will not be included within a buffer, the EIR must analyze and mitigate impacts to Asbury Creek to ensure those impacts remain less than significant.	Refer to response to comment B11-112.
Sonoma Land Trust	9/26/2022	B11-162	The EIR's summary of impacts in the Biology Section does not permit the level of granular analysis that is required to fully understand the impacts of the draft Specific Plan, particularly in light of the Specific Plan's level of detail and specificity. As such, the analysis of impacts on biological resources risks is missing key impacts that may not be analyzed fully in later environmental review.	Refer to response to comment B11-92.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-163	The first full sentence on this page states that "development is not proposed to occur within Preserved Open Space." However, this conflicts with the Specific Plan (p. 4-14 and following), which permits certain uses in that zone including tasting rooms, mushroom farms, utility development, and parking. Which is correct? If the Specific Plan is correct, the EIR must analyze the biological impacts from those permitted uses and mitigate any impacts to less-than-significant levels. Similarly, the EIR fails to explain how the Conditions of Approval would mitigate the negative impact of the Highway 12 connector on wildlife movement. Nor does the EIR disclose the potential impacts of the wastewater treatment plant, or what types of mitigation would be appropriate to reduce those impacts. Without an analysis and supporting evidence, decision-makers and the public cannot independently judge the EIR's unsupported conclusion that these impacts would be less than significant.	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-164	This sentence states that future development under the Proposed Plan could have a significant direct or indirect impact on any special-status species if it would result in removal or degradation of a species or potentially suitable habitat. But the EIR does not contain any performance standards by which one could judge whether removal or degradation of a species or potentially suitable habitat has occurred. Please define what is meant by removal and what is meant by	Refer to response to comment MR-3 and B11-90.

Commenter	Date	Letter	Comment	Response
			degradation. Does removal mean loss of one individual special-status plant or animal? Would a significant impact occur should a special-status species no longer utilize habitat following increased humananimal interactions following site development? This is only an example of how impacts may be defined and how the undefined terms of removal or degradation are problematic as used in the EIR context.	
Sonoma Land Trust	9/26/2022	B11-165	The EIR states that potentially significant impacts could occur if significant amounts of habitat loss occurs. But what constitutes "significant" amounts of habitat loss varies by species? What does the EIR consider to be significant habitat loss for the special-status species present and potentially present at the site? How will the County determine whether a significant amount of habitat loss has occurred for each species? Without this critical information, the EIR does not have sufficient evidence to conclude that impacts to special status species would be less than significant.	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-166	Why are all species lumped into a single evaluation paragraph and not discussedindividually? The impacts to special-status species will vary on a species-by-species basis and need to be analyzed individually. Without species-by-species analysis, the EIR cannot disclose what the specific impacts to each species might be or determine how those impacts should be mitigated.	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-167	Where will grading, excavation, and construction activities likely occur and what species may be affected in these locations? The Specific	Refer to response to comment B11-104.

Commenter	Date	Letter	Comment	Response
			Plan clearly identifies where development should be sited. The EIR needs to be at least as detailed as the Specific Plan in order to capture the known foreseeable impacts of the project.	
Sonoma Land Trust	9/26/2022	B11-168	What specific species could be impacted with construction of the Highway 12 connector? How can the species be impacted from this activity and what are the mitigation measures needed to reduce the potential impacts to less-than-significant levels? Once mitigation measures are identified, the EIR must address how the mitigation measures reduce the impact on a measure-by-measure basis.	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-169	How does the EIR evaluate the potential biological resource impacts of the alternatives in relation to the potential construction impacts from the proposed plan?	The comment is noted. See analysis on biological resource impacts for each of the Alternatives in Chapter 4.
Sonoma Land Trust	9/26/2022	B11-170	What specifically are the potential increased risks to special-status species from the operation of individual parts of the Proposed Plan? Individual special-status species occur in different locations around the SDC site. Some will necessarily be more affected by particular aspects of the Specific Plan depending on where the Specific Plan locates particular uses. The location of proposed uses is known based on the current draft Specific Plan. The EIR therefore needs to analyze the operational impacts of specific proposed uses on the special-status species in their vicinity before	Refer to response to comment B11-104.

Commenter	Date	Letter	Comment	Response
			it can draw any conclusions about the significance of those impacts.	
Sonoma Land Trust	9/26/2022	B11-171	What are the potential impacts from increased vehicular traffic and recreational use and to which species may these impact occur? What mitigation measures are needed to reduce these impacts? Multiple studies have found that increased vehicle traffic, increased density of human uses, and increased human activity levels, including trail development and use and dog presence, can reduce or alter habitat use by key wildlife species on SDC including mountain lions and bobcats (see for example Wilmers et al. 2021, Serieys et al. 2021, Smith et al. 2019, and Nickel et al. 2020).	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-172	Increased visitor use along trails across SDC may alter behaviors and cause some species to avoid those areas. Mitigation measures may include visitor education and requiring all visitors stay on established trails, minimize excessive noise, and keeping dogs on leash at all times. The County must identify areas where mitigation measures may not reduce impacts to less-than-significant levels and consider other means to reduce impacts, such as prohibiting dogs in areas that cannot accommodate their presence. Identification of areas where trail densities might already impact wildlife and identifying redundant trails to eliminate must be explored and analyzed in the EIR.	Refer to response to comment B11-104.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-173	What proposed plan elements have the potential to directly impact streams and thesurrounding habitats and how might this impact individual species that depend on the habitat impacted? How do the policies presented protect these resources and what are the remaining impacts following implementation of the policies? What are the mitigation measures proposed to reduce the potential impacts and how will the mitigation measure reduce the impact?	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-174	What elements of the proposed plan might result in a significant reduction in forest extent and quality and how will these potential impacts be reduced to less–thansignificant levels? How does the County define a “significant” reduction in extent and quality? Do these potential impacts vary by alternatives to the proposed plan?	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-175	What proposed plan elements in open grasslands might impact American badger and burrowing owls? Development and increased human use in open grassland that support habitat for these species may result in the loss of nesting and foraging habitat, and direct mortality. BIO-3 identifies means to avoid American badger dens during development to avoid direct mortality; however, it does not address the impacts associated with loss of habitat. BIO-5 includes relocation measures for burrowing owl; however, the EIR does not address potential impacts from loss of habitat, such as reduced population numbers and the potential for burrowing owls to avoid use of potential nesting and foraging habitat	Refer to response to comment B11-104.

Commenter	Date	Letter	Comment	Response
			located adjacent to developed areas. The EIR must evaluate impacts that result from human presence, such as loss of habitat and potential abandonment of nests resulting from human presence. How will the County determine if these impacts occur following development and how will the County protect the species? What are the mitigation measures needed to reduce the potential impacts on American badger and burrowing owl habitat loss?	
Sonoma Land Trust	9/26/2022	B11-176	The EIR states that "Outside of the developed areas, the Proposed Plan establishes dedicated open space areas. Managed open space in these areas would preserve and, in some cases, enhance the quality of sensitive habitats such as wetlands, native grasslands and oak woodlands. Several special-status wildlife and some plant species would be positively impacted by the preservation of these habitats. The open space would preserve the Sonoma Valley Wildlife Corridor and maintain its permeability for the movement of wildlife at a regional scale." .	Comment noted.
Sonoma Land Trust	9/26/2022	B11-177	How do policies reduce impacts on special-status species? The EIR makes statements without providing supporting discussion or explaining the methods used. As a result, decision-makers and the public cannot independently evaluate the adequacy of the EIR's analysis or the veracity of its conclusions.	Refer to response to comment MR-3.
Sonoma Land Trust	9/26/2022	B11-178	What are the impacts from development that the policies address and what impacts remain after the policies are all implemented? What mitigation measures are	Refer to response to comment MR-3 and B11-90.

Commenter	Date	Letter	Comment	Response
			proposed to address impacts remaining after implementation of policies? How will the County measure the efficacy of the policies and any mitigation measures?	
Sonoma Land Trust	9/26/2022	B11-179	Why are the requirements listed as conditions of approval and not as necessarymitigation measures and how does each condition of approval reduce specificimpacts? The EIR effectively admits that these requirements are needed to reduceimpacts to less-than-significant levels. The EIR needs to analyze the project'sunmitigated impacts and then identify impact-reducing policies as mitigationmeasures. It must also include those mitigation measures in a mitigation monitoringand reporting program to ensure they are effective and enforced. The approach used in the Biological Resources section failed to do this and is inexplicably inconsistent with the methodology used in other sections of the EIR.	Refer to response to comment MR-1, MR-3, MR-9, and B11-90.
Sonoma Land Trust	9/26/2022	B11-180	Conditions of Approval policies appear to relate only to the construction phase. Where is the analysis of impacts on special-status species associated with operations? How will the effects of ongoing site use and facility operation be reduced to less than significant? Without clearly defined and enforceable mitigation, the EIR provides no assurance that the operational impacts of the Specific Plan would be reduced to less-than-significant levels.	Refer to response to comment MR-3 and B11-90.
Sonoma Land Trust	9/26/2022	B11-181	The EIR fails to identify potential impacts on special-status species from dog use at Suttonfield Lake. As such, the EIR cannot determine what mitigation measures are necessary to reduce those impacts to less-than-significant levels.	Refer to response to comment B11-118.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-182	The EIR fails to identify which proposed plan elements could impact special-status bats and their habitat. What happens if the survey indicates that bats inhabit a building that is scheduled for demolition? How will the bats be evacuated from the building and how will they be prevented from reoccupying the site? How will the proposed mitigation prevent impacts?	Refer to response to comment B11-96.
Sonoma Land Trust	9/26/2022	B11-183	The EIR fails to identify which proposed plan elements could impact American badger. What are the potential impacts in open grassland? How will this mitigation prevent impacts and how will the County evaluate the efficacy of the measure?	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-184	Is BIO-4 only needed during construction? Are there any potential impacts on nesting raptors from project operations? How will the proposed mitigation prevent impacts and how will the County determine the efficacy of the measure? BIO 4 does not specify that pre-construction survey work needs to be completed by a qualified biologist. All construction-related wildlife surveys needs to be completed by a biologist. The measure defines an “active nest” as having eggs or nestlings present. Some interpretations of the Fish and Game Code include nest building as active nesting. The definition of “active nest” here needs to incorporate nest building.	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-185	The EIR fails to identify the specific potential impacts to burrowing owls. What are the potential impacts in owl habitat and what habitat do they use in the proposed	Refer to response to comment B11-104.

Commenter	Date	Letter	Comment	Response
			plan area? How will the proposed mitigation prevent impacts? BIO 5 does not specify that pre-construction survey work needs to be completed by a qualified biologist. All construction-related wildlife surveys need to be completed by a biologist. The measure defines an “active nest” as having eggs or nestlings present. Some interpretations of the Fish and Game Code include nest building as active nesting. The definition of “active nest” here needs to incorporate nest building.	
Sonoma Land Trust	9/26/2022	B11-186	The EIR fails to identify proposed plan activities that might impact northern spotted owls. What activities might occur within riparian, evergreen and/or oak forests where owls may nest? Please explain how the acquisition of a permit reduces the impact on owls to less-than-significant levels.	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-187	What is the proposed work that might occur near Fern Lake and Suttonfield Lake that might impact tricolored blackbird? How will the mitigation measure prevent impacts?	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-188	The measure defines an “active nest” as having eggs or nestlings present. Some interpretations of the Fish and Game Code include nest building as active nesting. The definition of “active nest” here needs to incorporate nest building.	Comment noted. The applied definition of active nest is standard in CEQA evaluations at the project and programmatic level, consistent with Fish and Game Code. There is no need to change the definition and no evidence is provided that such a change is warranted.
Sonoma Land Trust	9/26/2022	B11-189	The EIR fails to identify which proposed plan elements could result in direct impacts to aquatic features and result in the loss of habitat or cause harm to individuals. What will those direct impacts be and how will the	Refer to response to comment B11-135.

Commenter	Date	Letter	Comment	Response
			mitigation prevent these impacts?	
Sonoma Land Trust	9/26/2022	B11-190	Why are the measures limited to potential work within 300 feet of a channel when USFWS mandates measures to protect California red-legged frogs across CRLF habitat, not only within 300 feet of an aquatic feature? The EIR needs to identify protection measures for CRLF habitat outside 300 feet.	COA Policy BIO-11 applies the 300 foot buffer for work that will occur outside the rainy season when California red-legged frog is unlikely to be dispersing across the landscape. During this time, most California red-legged frogs are in areas near aquatic features and so the 300-foot buffer is a protective measure for frogs that may be present around those features. With the implementation of COA Policy BIO-1 for individual projects, it may be that additional protective actions would be called for.
Sonoma Land Trust	9/26/2022	B11-191	The EIR fails to identify which proposed plan elements could result in direct impacts to freshwater shrimp and salmonids and result in the loss of habitat or cause harm to individuals. How will the mitigation prevent these impacts? Why are the requirements listed not considered mitigation? What is necessary to prevent the loss of freshwater shrimp habitat and what compensatory mitigation may be necessary in the event a proposed planned element results in loss of habitat?	Refer to response to comment B11-104 and B11-135.
Sonoma Land Trust	9/26/2022	B11-192	What process will be required if a special-status plant cannot be avoided? What specific mitigation is necessary and how will that mitigation reduce the potential impact? How will the County monitor the efficacy of the mitigation?	Refer to response to comment MR-1 and MR-3.
Sonoma Land Trust	9/26/2022	B11-193	The EIR notes development would take place in previously developed portions and concludes that will limit potential for disruption to	Refer to response to comment MR-1 and MR-3.

Commenter	Date	Letter	Comment	Response
			undeveloped habitats. Where within the SDC property will riparian habitat and other sensitive natural communities be directly or indirectly impacted by implementation of the proposed plan? The EIR must support its conclusions with substantial evidence and thorough analysis.	
Sonoma Land Trust	9/26/2022	B11-194	The first full sentence states that no new building development is proposed to occur within open space areas. However, this conflicts with the Specific Plan (p. 4-14 and following), which permits uses in that zone including tasting rooms, mushroom farms, utility development, and parking. Which is correct? This section must analyze the specific impacts from all uses permitted under the Specific Plan.	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-195	The first paragraph states that "implementation of the Proposed Plan may result in the degradation or removal of riparian habitat" and that such projects will require measures to reduce, avoid, or compensate for impacts. The EIR needs to identify these impacts as potentially significant, and must design and analyze appropriate mitigation measures. At present, the EIR does nothing to ensure that these impacts would actually be mitigated to less-than-significant levels.	Refer to response to comment MR-1 and MR-3.
Sonoma Land Trust	9/26/2022	B11-196	BIO-1 though BIO-14 address special-status wildlife species. It is not clear from the EIR whether or how these policies would reduce the impact on riparian habitat or other sensitive natural communities to less-than-significant levels. The EIR needs to	Refer to response to comment B11-104 and B11-135.

Commenter	Date	Letter	Comment	Response
			explain how individual species protection measures protect riparian or sensitive natural communities in general? What are the mitigations necessary for the loss of riparian habitat?	
Sonoma Land Trust	9/26/2022	B11-197	How will development impact sensitive valley oak habitat? What will the impacts from the increased presence of people and pets be on wildlife in valley oak habitat? The EIR needs to discuss these impacts and analyze in sufficient detail how these impacts will be mitigated to less-than-significant levels.	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-198	The EIR fails to identify the specific impacts on riparian and sensitive natural communities from the two public infrastructure projects? What specifically could be impacted and which sensitive natural communities could be present in the construction area? How would BIO-1 through BIO-14, which address special-status species, reduce these impacts? What are the specific mitigations needed in the event the project results in the loss of riparian habitat or sensitive natural communities? How specifically do the policies listed reduce the impacts?	Refer to response to comment MR-1 and MR-3. In addition, the Specific Plan includes policies that would ensure buffers and protection of riparian areas around creeks, including Asbury Creek. Specific Plan Policies 2-25 (protective buffer of Sonoma Creek), 2-27 (County's Municipal Code for riparian corridor protection), and 2-30 (maintain standard project protection measures for any development adjacent to riparian corridors) would ensure protection of streams and riparian resources during any adjacent ground disturbing actions.
Sonoma Land Trust	9/26/2022	B11-199	Is there new trail construction included as part of the project? If so, the potential impacts on riparian and sensitive natural vegetation must be analyzed and mitigated.	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-200	The EIR fails to disclose the potential impact of increased vehicle trips be on individual wildlife species. This impact must be analyzed fully. At present, there is not sufficient evidence or analysis to indicate whether or	Refer to response to comment MR-1 and MR-3.

Commenter	Date	Letter	Comment	Response
			how this impact would be mitigated to a less-than-significant level.	
Sonoma Land Trust	9/26/2022	B11-201	BIO-14 is deferred mitigation. The EIR must expand on what might be included in an aquatic resources mitigation plan and describe how development of this plan will reduce impacts to less-than-significant levels. The EIR must provide clear performance standards that any future mitigation plan must meet.	Refer to response to comment MR-1 and MR-3.
Sonoma Land Trust	9/26/2022	B11-202	The analysis indicates a potentially significant impact could occur if construction impacts federally protected wetlands. This analysis improperly excludes wetlands that fall under State jurisdiction without justification. Figure 3.4-1 serves as the basis for the location of known wetlands and vernal pools (but see comments on potential errors in that figure, above). What are the proposed plan elements that could potentially cause the impact and why was this analysis not provided? It further appears the Highway 12 connectors could impact a large mapped wetland (incorrectly shown as vernal pool). These potential impacts are not analyzed in the EIR. The EIR must analyze and mitigate all foreseeable potentially significant impacts, including impacts related to the Highway 12 connector(s).	Refer to response to comment B11-99.
Sonoma Land Trust	9/26/2022	B11-203	The EIR fails to identify performance standards for its de factor proposed mitigation. What are the requirements in the permits that would mitigate impacts? Why are these measures not included as mitigation(s) in the EIR?	Refer to response to comment MR-1 and MR-3.

Commenter	Date	Letter	Comment	Response
			How, specifically, will these measures mitigate the impact?	
Sonoma Land Trust	9/26/2022	B11-204	Operation. The first sentence states that no new building development is proposedto occur within open space areas. However, this conflicts with the Specific Plan (p. 4-14 and following), which permits uses in that zone including tasting rooms,mushroom farms, utility development, and parking. Which is correct? The EIR must analyze the specific impacts from all uses permitted under the Specific Plan before it can determine whether those impacts will be significant.	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-205	The introductory paragraph does not discuss the Sonoma Valley Wildlife Corridor. The paragraph also notes there will be a significant impact on migratory species, corridors, and nursery sites; however, the impact analysis does not support this statement. The EIR states that implementation of the Proposed Plan would have a significant impact on migratory species, corridors, or nursery sites if the siting, construction, or operation of develop allowed under the Proposed Plan would impede on or remove migratory corridors or nursery sites. The EIR must define what is considered impede on and what might trigger an individual species to not fully use or stop using habitat for migration. The Proposed Plan would impact species differently.	Refer to response to comment MR-7.
Sonoma Land Trust	9/26/2022	B11-206	The EIR must evaluate how the potential impacts on individual species resulting from development identified in the Specific Plan and addressed under Impact 3.4-1 potentially alter wildlife movement and migration	Refer to response to comment MR-7.

Commenter	Date	Letter	Comment	Response
			patterns across the property and across the larger corridor. How would the introduction of light sources, noise, human activity, domestic animals, trails, new roadways and increased use of existing roadways directly and indirectly impact permeability of the wildlife corridor and alter use pattern? The EIR must identify mitigation measures for any significant impacts on migratory species, use of migration corridors, or nursery sites to less-than-significant levels?	
Sonoma Land Trust	9/26/2022	B11-207	It is an error to assume trails and use of trails would not impact wildlife movement simply because the use is consistent with open space management. Trails and trail use, especially increased use, can directly impact individual species. The EIR must analyze the specific impacts of the proposed trail and explain how those impacts will relate to wildlife movement through the SDC property. How will new trails be designed to minimize impacts to wildlife movement and prevent habitat fragmentation? What mitigation measures are needed to reduce the impacts to lessthan-significant levels?	Refer to response to comment B11-102.
Sonoma Land Trust	9/26/2022	B11-208	The EIR does not explain why the requirements of a 401 or 404 permit or CDFW authorization would fully protect fish and wildlife resources in terms of wildlife movement and wildlife corridors. The EIR must support its conclusions with analysis and substantial evidence, and the current EIR does not do so.	Refer to response to comment MR-1 and MR-3

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-209	The EIR fails to identify what specific policies would minimize impacts on wildlife migration or explain how implementation of each individual policy listed in the analysis would mitigate those impacts. The EIR states that the proposed plan preserves a majority of the site within the Sonoma Valley Wildlife Corridor. What is the impact caused on the portions of the migration corridor that are not preserved? Will access be limited and how will access impact wildlife use? What other impacts could occur and how will these impacts be mitigated? The EIR must specifically identify impacts and analyze their potential for mitigation in order to comply with CEQA.	Refer to response to comment MR-7.
Sonoma Land Trust	9/26/2022	B11-210	The EIR fails to analyze the potential wildlife migration issues associated with theincreased daily vehicle trips for each length of roadway and for each scenariopresented in Table 3.14-3: Projected Traffic Volumes in Plan Area (page 440). It appears the proposed plan would result in 13 percent more vehicular traffic than historic uses. What effect could this increase have on biological resources?	Refer to response to comment MR-7.
Sonoma Land Trust	9/26/2022	B11-211	The EIR fails to explain what specific impact(s) the implementation of the “dark skies” standards would address in terms of wildlife movement. The potential impact from increased light is not addressed in the wildlife impacts analysis. The EIR must analyze unmitigated impacts before defining mitigation measures. The EIR fails to analyze light impacts on wildlife movement or explain	Refer to response to comment MR-7 and B11-106.

Commenter	Date	Letter	Comment	Response
			why, based on substantial evidence, it believes that dark sky standards would reduce those impacts to lessthan-significant levels. What are the potential impacts on biological resources from residential housing, buildings and other facilities in terms of nighttime lighting?	
Sonoma Land Trust	9/26/2022	B11-212	The EIR fails to explain how these general policies apply specifically to the Sonoma Valley Wildlife Corridor and what potentially significant impacts these policies address. What proposed plan elements could encroach on the wildlife corridor and into existing open space, and what are the potential impacts on wildlife?	Refer to response to comment MR-7.
Sonoma Land Trust	9/26/2022	B11-213	Operation. The addition of 1,000+ housing units and 900 jobs will substantially increase the number of recreational users. The EIR fails to quantify or analyze the effect of this increase. What is the anticipated increase in recreational use? Will this increase have a significant impact on wildlife usage? How will the impacts of this greater human and pet presence on trails be mitigated?	Refer to response to comment B11-104.
Sonoma Land Trust	9/26/2022	B11-214	Similarly, the increase in housing and jobs will increase vehicle traffic. The EIR fails to analyze the effect of this increase on wildlife corridor permeability. How will the increase in vehicle traffic generated by 1000 new homes and 900 jobs affect wildlife corridor permeability? How will these impacts be mitigated? Research has found a strong negative correlation between wildlife corridor use and traffic quantity and	Refer to response to comment MR-7.

Commenter	Date	Letter	Comment	Response
			development intensity (see, for example, Charry and Jones 2009, and Smith 2019).	
Sonoma Land Trust	9/26/2022	B11-215	The EIR provides no justification for limiting restrictions on nighttime noise based on feasibility. Nor does the EIR analyze or disclose how frequently adherence to residential nighttime noise standards would be infeasible or discuss what additional impacts would occur and mitigation would be required in that case. What are the potential impacts on wildlife migration should adherence not be feasible and what are the proposed mitigation measures to reduce the impact?	Refer to response to comment MR-7.
Sonoma Land Trust	9/26/2022	B11-216	The EIR fails to identify what plans were evaluated to determine the proposed plan would not conflict with any local, regional, or state habitat conservation plan. The EIR must document its analysis and support its conclusions with substantial evidence.	The comment is noted. There are no Habitat Conservation Plans (HCPs) that apply within the Planning Area. There are no Natural Community Conservation Plans at the county level that include land within the Planning Area. See the Regulatory Setting starting of page 203 for other plans and regulations that the Proposed Plan would comply with.
Sonoma Land Trust	9/26/2022	B11-217	The proposed plan would result in significant and unavoidable impacts related to transportation (Impact 3.14-2) and historic resources (Impact 3.5-2). The biological resources impact evaluation does not address potential wildlife impacts resulting from the increased traffic; therefore, the alternatives may not adequately address potentially significant and unavoidable impacts on biological resources. Traffic volume and density of development are key factors that must be addressed in evaluating impacts to wildlife movement.	Refer to response to comment MR-7.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-218	It is unclear what the no project alternative is and how the EIR evaluates it. Itappears the no project alternative is development without a Specific Plan butfollowing the County General Plan. Does the EIR evaluate a true no action alternative(no development)? If not, why not? It appears the EIR concludes that State law requires development of the site, and this is not adequately explained in the text. Discussion of a no project alternative does not provide a complete picture without a true “no development” alternative.	The comment is noted. See MR-2. While this EIR cannot pre-judge the State’s actions, the EIR tries to frame these in light of the State Legislature’s established land use objectives for the site, per Govt. Code Section 14670.10.5 for the No Project Alternative.
Sonoma Land Trust	9/26/2022	B11-219	The EIR does not adequately explain how the impact of increased vehicle trips on individual special status species and wildlife corridor permeability would differ between the proposed buildout and its project alternatives. Different types and magnitudes of uses in different locations would likely have different impacts on individual special-status species, since special-status species are not uniformly distributed throughout the SDC site. So it is foreseeable that a given alternative could improve impacts on one special-status species while worsening impacts on another. These distinctions and impacts must be analyzed and fleshed out in the EIR in order for decision-makers and the public to fully understand the merits of each of the alternatives presented.	Refer to response to comment MR-7.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-220	The assessment for cumulative impacts on biological resources is simply a summary of the project impacts and fails to identify other projects or impacts to which the Specific Plan will add or compound impacts. What other projects in the geographical context of biological resources could have similar impacts as the proposed plan? Is there an existing cumulative impact on biological resources throughout the County and does the proposed plan have a considerable contribution to a cumulative impact on biological resources? These questions are particularly relevant to the EIR's analysis of the Sonoma Valley Wildlife Corridor, which spans a significant east-west divide and is subjected to impacts from a broad range of projects across its geographic range. The EIR must consider the Project's cumulative impacts to the wildlife corridor in light of the corridor's full geographic range.	The comment is noted. Development resulting from the Proposed Plan, as well as future development projects that could occur within the Planning Area or in the vicinity of the Planning Area, would be subject to the requirements of biological resource protection laws, including FESA, CESA, MBTA, and the California Fish and Game Code, as well as protection policies and provisions in the City's 2040 General Plan and Municipal Code. With implementation of the relevant policies and implementing actions, the Proposed Plan's contribution to cumulative biological resources impacts would be less than cumulatively considerable.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-221	Comment: The DIER states that the project will not interfere substantially with themovement of any wildlife species with an established native resident or migratory wildlifecorridors (Figure 1; EIR at 19). This conclusion is not supported by substantial evidenceand is likely incorrect. For example, there has been documented mountain lion movementthrough the Sonoma Development Center property (Figure 2). Two mountain lions inparticular, P1 and P5, have been recorded traveling through the SDC property routinelythroughout the study period and the property is part of these two mountain lions' home range (Figure 2). Mountain lions are also of particular concern when designing new development because they are uniquely threatened by human activity and encroachment into their habitat. Mountain lions are known to be sensitive to human disturbance, light, and noise (Suraci, Justin P., et al 2019, Wilmers et al. 2013). Largely as a result of increasing development pressures, local mountain lion populations in California are increasingly under threat, and some—including populations within the Bay Area—are currently under review by CA Dept. of Fish and Wildlife to be a listed species for special protection under State law (Yap, TA, JP Rose, and B Cummings. 2019). It is therefore foreseeable that the Project, which would site more than 1,000 residential units and additional commercial and recreational uses immediately adjacent to a bottleneck in the Sonoma Valley Wildlife Corridor—will impede mountain lion movement through this corridor and negatively impact the resident mountain lion population (Wilmers et al. 2013). Impeding mountain	The SDC Specific Plan EIR is a program EIR, presenting a comprehensive assessment of the potential impacts of the proposed SDC Specific Plan. At a programmatic level, the Specific Plan is designed to be self-mitigating and EIR include numerous policies and measures that would ensure impacts to biological resources are avoided and minimized as development takes place. This includes minimizing potential impacts to the Sonoma Valley Wildlife Corridor. The DEIR notes on page 235 that the overall site is of regional significance as a wildlife corridor. The Specific Plan would also expand the Sonoma Valley Wildlife Corridor at the pinch point close to Suttonfield Lake by removing existing buildings in the northeastern portion of the Planning Area and providing that land for wildlife movement. The Specific Plan would also preserve the entirety of the approximately 755 acres outside the Core Campus as open space, including improved open space within the Core Campus through 30-50 acres of buffer open space (including riparian, wildlife corridor, and Arnold Drive buffers). Additionally, the Specific Plan includes policies designed specifically to minimize the impacts to wildlife at the interface of the built and natural environment (proposed policies 2-6 through 2-26). In response to received comments on the Sonoma Valley Wildlife Corridor, Policy 2-6 has been amended to clarify: "Remove existing development along the north edge of the Core Campus, from area shown as Open Space in Core Area in Figure 2.2-1, and re-introduce compatible native species to expand the wildlife corridor. This includes removing existing buildings

Commenter	Date	Letter	Comment	Response
			lion movement would constitute significant impacts under Biological Resources significance Criteria 1 and 4. Notwithstanding this foreseeable impact, however, the EIR fails to identify or analyze the Project's impacts to mountain lions. It does not discuss how the Project's uses and associated impacts, including light and noise, would carry into the corridor and influence mountain lion behavior or other species. Nor does the EIR discuss movements of particular species, including mountain lions, through the corridor. As a result, decisionmakers and the public neither know where and how frequently mountain lions or other wildlife species occur on the SDC site or whether and to what degree the development proposed under the Specific Plan would impact their behavior. The Project's impacts to mountain lion and other species mobility could thus be significant, but decisionmakers and the public have no way to know because the EIR failed to include necessary data and studies.	Paxton, Thompson/Bane, and Residence 126 and buildings on the northeast side of campus and ensuring that new development remains within the smaller development footprint as shown in Figure 2.2-1. Ensure that the wildlife corridor is not further restricted at its narrowest point along the north side of the campus. The project sponsor shall be responsible for demolishing buildings within the expanded wildlife corridor and establishing new planting and landscaping to support expanded wildlife movement and safety, prior to Certificate of Occupancy on any redevelopment on the eastside of Arnold Dr." Additionally, Specific Plan Policies 2-9 and 2-10 require fuels management to be minimized within wildlife corridors to limit disturbance to species. Lastly, Policy 2-31 has been amended to add: "Construct and maintain a managed landscape buffer along western and eastern edges of the Core Campus to aid in fire defense consisting of a shaded fuel break in wooded areas and grazed or mown grassland. Shrubs and chaparral should be limited within the managed landscape buffer. Management of this landscape buffer should aim to enhance biodiversity, reverse weed invasion, and protect water resources." As a programmatic analysis, the DEIR does not assess project-specific impacts of potential future projects under the proposed Plan. Future projects would be required to comply with CEQA, as applicable, including preparation of more precise, project-level analyses regarding potential impacts to biological resources. Appendix A of the Specific Plan also lays out standard conditions of approvals that would apply to all projects based on Specific

Commenter	Date	Letter	Comment	Response
				Plan policies and CEQA analysis, regardless of whether subsequent environmental analysis is conducted or not. This includes Condition of Approval (COA) Policy BIO-1, which would require a biological resource assessment be prepared for any specific project in the Proposed Plan area, including identifying the presence of special-status species and sensitive habitats at proposed development sites and ensure implementation of appropriate mitigation measures to reduce impacts to sensitive habitat or habitat function to a less than significant level (DEIR page 243). The evidence presented in this comment related to two mountain lions and some common mesopredators do not reach the level of substantial evidence that would indicate that a significant impact determination is warranted. The Specific Plan approach to increase net open space, enhance protection of wildlife corridors through incorporation of proposed policies and conditions of approval, and the requirement for future projects to comply with applicable CEQA requirements supports the DEIR's analysis that potential impacts to mountain lions and associated wildlife corridors would be less than significant.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-222	In fact, there have been no wildlife connectivity studies conducted to document what wildlife species are traveling through or residing on the SDC property. See EIR at 236 ("No new field studies were conducted for the preparation of this EIR."). This type of study must be conducted to be able to analyze what the project's impacts will be to wildlife movement and resident wildlife populations, and therefore to determine whether the project's impacts would be significant or could be mitigated. See EIR at 236 (Criterion 4, providing that impacts would be significant if the project would "[i]nterfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors"). How will the FEIR resolve this issue?	As a programmatic analysis, the DEIR does not assess project-specific impacts of potential future projects under the proposed Plan. Future projects would be required to comply with CEQA, as applicable, including preparation of more precise, project-level analyses regarding potential impacts to biological resources. Appendix A of the Specific Plan also lays out standard conditions of approvals that would apply to all projects based on Specific Plan policies and CEQA analysis, regardless of whether subsequent environmental analysis is conducted or not. This includes Condition of Approval (COA) Policy BIO-1, which would require a biological resource assessment be prepared for any specific project in the Proposed Plan area, including identifying the presence of special-status species and sensitive habitats at proposed development sites and ensure implementation of appropriate mitigation measures to reduce impacts to sensitive habitat or habitat function to a less than significant level (DEIR page 243). In the DEIR, the determination of less than significant impacts to wildlife movement was supported by the Specific Plan's self-mitigating approach to increase net open space, enhance existing open space areas through incorporation of proposed policies and conditions of approval, and the requirement for future projects to comply with applicable CEQA requirements.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-223	The EIR also does not include any specific mitigation measures that would reduce impactsto mountain lion and other species mobility to less-than-significant levels. For example,while the EIR acknowledges that wildlife and their habitat may be sensitive to noiseimpacts (EIR at 337-338), and while mountain lions in particular are known to be sensitive to noise, the EIR does not include any mitigation measures that are designed to or capable of mitigating noise impacts to mountain lions to less-than-significant levels. Instead, the EIR relies on Specific Plan policies that regulate noise and vibration-based thresholds for humans and buildings. EIR at 347-349. This approach does not and cannot ensure that noise impacts to mountain lions would be sufficiently mitigated. Similarly, the de facto mitigation included in the Biological Resources section of the EIR fails to address mountain lions. For example, Conditions of Approval BIO 1 through BIO 14 ostensibly address construction impacts to special-status plants and wildlife. As discussed in the letter prepared by Prunuske Chatham, Inc., which comments are incorporated herein by reference, these conditions are not sufficiently detailed or enforceable to ensure that impacts would actually be reduced to less-than-significant levels. But even if they were sufficient for the species identified, Conditions of Approval BIO 1 through BIO 14 do not require mitigation specific to mountain lions or mountain lion activity. See EIR at 243-251. The EIR thus cannot conclude that the Project's impacts to mountain lion mobility would be	Refer to response to comment MR-1. In addition, the Specific Plan has been prepared to be fully self-mitigating, thus no mitigation measures were prepared. In lieu of mitigation measures multiple conditions of approval pertaining to biological resources (pages 243-251 of the DEIR) have been developed to help reduce impacts to species that use the wildlife corridor, including mountain lions.

Commenter	Date	Letter	Comment	Response
			less than significant because those impacts have neither been studied nor mitigated.	
Sonoma Land Trust	9/26/2022	B11-224	Comment: The SDC project will further constrain Sonoma Valley Wildlife Corridor. The landscape is already fragmented for wildlife movement Because of the existing infrastructure and roads, the wildlife corridor within the project area already constrains the corridor, resulting in a bottleneck of the linkage. Any further development or increase in people, cars, or intensity of land use would further constrain the linkage. The proposed project could ultimately sever this critical linkage and result in isolating wildlife populations, their ability to find resources like food and water, the ability to find mates, or juveniles dispersing out of their parental home range to establish their own. How does the County propose to avoid or mitigate the foreseeable constricting effects of increased human activity on the wildlife corridor?	Refer to response to comment MR-3 and MR-7. In addition, Policy 2-1 has been amended to state: "Ensure that land shown In Figure 2.2-1 as Preserved Open Space is dedicated or maintained as permanent public open space, and the Managed Landscape/Fire Buffer is designed and maintained for that purpose. The owner/operator of the Preserved Open Space shall prepare an open space plan, to be approved by the County to manage the rich diversity of resources on site, including habitat, vegetation, wetlands, native species, and other critical resources, balanced with recreation and wildfire protection needs. As part of the open space plan development, conduct a formal aquatic resources delineation for habitat protection, and consider delineating a cohesive system of trails and pathways that balances recreation and wildlife conservation." Incorporation of the amended policy would require future uses within open space areas to be consistent with the Specific Plan's resource protection policies (policies 2-6 through 2-26) and would involve multiple partners to further refine open space preservation goals for "Preserved Open Space" areas. This assessment would refine allowable uses based on meeting multiple objectives, including function as a wildlife corridor. potential sensitive habitats and species and make recommendations for mitigation of any project-specific impacts to biological resources to a less

Commenter	Date	Letter	Comment	Response
				than significant level. The commenter speculates that future development could further constrict the corridor but does not present substantial evidence to demonstrate increased human activity will alter wildlife movements in the context of the Specific Plan approach to increase net open space, enhance existing open space areas through incorporation of proposed policies and conditions of approval(refer to response to comment B11-221), expand the size of the existing wildlife corridor through removal of buildings, and the requirement for future projects to comply with applicable CEQA requirements.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-225	The proposed project will further constrict the wildlife corridor by significantly increasingthe amount and intensity of human activity in and immediately adjacent to the corridor.The Specific Plan proposes more than 1,000 units of residential development in addition tocommercial and visitor-serving development. By contrast, in recent years, the humanactivity at SDC has been considerably reduced. Even before facility closure, the site onlysupported approximately 415 clients living there, 470,000 sf of client housing, 49,000 sfstaff housing, and 643,400 sf offices, shops, etc. California Department of DevelopmentalServices. (2012). Sonoma Developmental Center Building Use Survey. Department ofDevelopmental Services. October 2012. The increase in activity from new construction andoccupation of the SDC site would therefore represent a sizeable increase in human activityencroaching on the Wildlife Corridor. Loss of habitat, increased noise and light disturbance within the Corridor, and human or domestic animal intrusion could reduce the width of animal dispersal corridors and disrupt movement through the Wildlife Corridor.	Refer to response to comment MR-7. As stated on page 55 of the DEIR, the Proposed project would protect approximately 755 acres of land that currently exists as open space, including areas that include the narrowest part of the Sonoma Valley Wildlife Corridor. The proposed Specific Plan would restore an already developed part of the site, widening a narrow portion of the Wildlife Corridor. Please refer to response to comment B11-221 for the polices described in the DEIR that will minimize impacts to wildlife through implementation of Dark Sky standards and noise restrictions.
Sonoma Land Trust	9/26/2022	B11-226	The EIR's failure to describe the already fragmented nature of the landscape results in an incomplete picture of the environmental setting of the Project and prevents decisionmakers and the public from understanding fully the consequences of the Project's impacts. Without a complete understanding of how development will further constrict the Wildlife Corridor, the EIR cannot develop adequate mitigation to reduce the Project's constricting impacts. And without targeted and enforceable mitigation, the Wildlife Corridor would predictably see an increase in potentially	Refer to response to comment MR-7. In addition, the DEIR provides multiple maps showing the current land use, habitat distribution and proposed land use. The commenter is referred to figures 3.2.2 to 3.24, and Figure 3.4.1. Narrative descriptions of habitats and current land uses are found on pages 211-220 and pages 234-235.

Commenter	Date	Letter	Comment	Response
			significant impacts from noise, light, habitat loss, and other consequences of development.	
Sonoma Land Trust	9/26/2022	B11-227	That analytical and informational gap is apparent on the face of the EIR. For example, as discussed above, the EIR admits that wildlife and their habitat may be sensitive to noise impacts. EIR at 337-338. But the EIR fails to quantify or otherwise describe how construction and operational noise might impact wildlife, including the use of the Wildlife Corridor by relevant species. The species that populate the Wildlife Corridor may respond to noise and other impacts in unique ways. For example, noise has been shown to impact wildlife usage of habitat, resulting, for example, in reduced foraging time and efficacy, and reduced nesting use, in birds (Burger and Gochfeld 2002, Stone 2000, Aubrey and Hunsaker 1997, Shannon et al. 2016). Other species may respond differently. The EIR must therefore analyze noise impacts on the Wildlife Corridor on a species-by-species basis if it is to provide a full understanding of the Project's potentially significant impacts to wildlife and wildlife mobility. The EIR does not provide that analysis. Nor does the EIR mitigate for effects to the wildlife corridor. For example, as discussed above, noise impacts are addressed based on thresholds for human and building exposure; the EIR does not contain performance standards relevant to wildlife or explain	Refer to response to comments MR-1, MR-3, and MR-7. Additionally, Specific Plan Policies 2-11 through 2-17 were prepared to generally minimize and avoid light and noise impacts to any species that move through the SDC project area.

Commenter	Date	Letter	Comment	Response
			why thresholds for human and building exposure are applicable to wildlife. See EIR at 347-349.	
Sonoma Land Trust	9/26/2022	B11-228	The EIR's remaining analysis and mitigation similarly fails to ensure that the Project's impacts on the wildlife corridor will be less than significant. For example, Conditions of Approval BIO 1 through BIO 14 require future mitigation for construction-related impacts to specific special-status species. EIR at 243-251. But none of those conditions specify what "impacts" to those special-status species might entail. EIR at 243-251. Nor do any of the conditions establish performance standards related to wildlife movement within the corridor. EIR at 243-251.	Refer to response to comments MR-1, MR-3, and MR-7. Construction and operational impacts to wildlife are described on pages 253 to 256 in the DEIR, and the finding was made that impacts would be less than significant for all significance thresholds.
Sonoma Land Trust	9/26/2022	B11-229	The fourth significance criteria chosen by the EIR requires the EIR to demonstrate that"Implementation of the Proposed Plan would not interfere substantially with themovement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites." EIR at 254-255. But the EIR does not specify what species constitute "native resident or migratory fish and wildlife species" that could be impacted. The EIR also does not explain how much interference with species' movement would constitute "substantial" interference or how the County would determine whether "substantial" interference has occurred. The EIR cannot treat the Wildlife Corridor or the species that use it as a monolith. Different species use the wildlife corridor in different ways. Different species are also	Please see response to comment B11-222.

Commenter	Date	Letter	Comment	Response
			differentially impacted by various elements of human development and activity. An impact that is insignificant for one species may be extremely significant for another. Thus, before the EIR can claim that impacts to the wildlife corridor are less than significant, the EIR must first identify the species that use the corridor and identify the specific impacts of the Project that are likely to affect those species. Vague and generalized mitigation, such as the policies referenced on pages 255 to 256 of the EIR, are not sufficient to ensure that impacts to wildlife movement in the wildlife corridor will categorically be less than significant. For example:	
Sonoma Land Trust	9/26/2022	B11-230	2-12 Restrict development in the wildlife corridor and creek corridor to limited trails/paths and informational signage, and design trail networks to minimize travel through wildlife and creek corridors. The EIR cannot assume that limiting development in the wildlife corridor to trails and paths would not significantly impact wildlife movement. Wildlife is known to respond to human activity, even when that activity is restricted to trails. For example, mountain lions are known to avoid trails where domestic dogs are present. Since the corridor is going to be significantly impacted and restricted by the proposed developments, the only habitat left will be the creeks and rivers for wildlife to travel along. Trails should be set back from creeks and the EIR must analyze the impacts of trails and trail use on surrounding wildlife. Allowing limited development could have impacts on	Page 252 of the DEIR states that access to creek corridors will be limited to designated paths in an effort to protect (minimize impacts to?) wildlife movements. Page 255 of the DEIR discloses impacts of new trails on wildlife.

Commenter	Date	Letter	Comment	Response
			the wildlife corridor, and the EIR must analyze the significance of those impacts.	
Sonoma Land Trust	9/26/2022	B11-231	2-13 Restrict access to the wildlife corridor and creek corridor to designated pedestrian paths marked with clear signage and delineated by strategic wildlife-permeable fencing. The same principles apply here. Allowing limited access could have impacts on the wildlife corridor, and the EIR must analyze the significance of those impacts.	Page 255 of the DEIR discloses impacts of new trails on wildlife.
Sonoma Land Trust	9/26/2022	B11-232	2-14 Prohibit all unleashed outdoor cats, and restrict off-leash dogs and other domesticanimals to private fenced yards and designated areas. How will this policy be enforced? Prohibiting off-leash pets is important to do but can be difficult to enforce. The EIR and Specific Plan must include an enforcement mechanism to ensure that this policy would actually reduce impacts to wildlife.	Refer to response to comment MR-1 and MR-3.
Sonoma Land Trust	9/26/2022	B11-233	2-15 Collaborate with local wildlife protection groups to create and distribute educational information and regulations for residents and employees to guide safe interactions with wildlife onsite. Materials should be accessible to all ages and abilities and could include posted signs, disclosures, fliers, or informational sessions, among other things. This policy does not clearly mitigate for any of the project's impacts and habitat loss of the wildlife corridor. What specific regulations would be developed? Until the County knows what regulations will be imposed, it cannot analyze whether those regulations would be	Please refer to response to comment MR-1.

Commenter	Date	Letter	Comment	Response
			sufficient to avoid negative interactions between people and wildlife. Further, this policy fails to specify how regulations would be enforced. Major national parks such as Yellowstone struggle with enforcement of regulations regarding interactions with wildlife despite having a full-time staff of rangers patrolling and enforcing those regulations. The EIR cannot conclude that information and regulations would reduce impacts to wildlife without providing clear standards and a mechanism for enforcement.	
Sonoma Land Trust	9/26/2022	B11-234	2-16 All fencing within the open space must be wildlife permeable, with at least 18 inches of clearance between the ground and the bottom of the fence, and shall not cross or bisect streams or otherwise discourage wildlife movement. For any barbed wire fences, a smooth bottom wire at least 18 inches above the ground must be used. The EIR and Specific Plan fail to explain how this policy would be enforced. In my professional experience, these types of guidelines are often ignored. For example, ranchers often do not adhere to fencing guidelines because of the risk that calves or smaller farm animals might get out onto the roads, which is dangerous both for the animals and for drivers. How will the County enforce these critical fencing requirements? Further, because the Specific Plan permits agricultural uses within the "Preserved Open Space," this policy must make clear that these fencing standards apply throughout areas shown as Preserved Open Space in Figure 2.2-2.	Please refer to response to comment MR-1.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-235	2-17 Adhere to residential nighttime noise standards to the extent feasible. This policy is vague and unenforceable. It states that occupants of the SDC site must adhere to residential nighttime noise standards only to the extent feasible. It does not specify who determines whether compliance is feasible or indicate how frequently compliance may not be feasible. Further, this policy does not provide for any additional mitigation that may be required if and when adhering to residential nighttime noise standards is not feasible.	Please refer to response to comment MR-1.
Sonoma Land Trust	9/26/2022	B11-236	There is simply no basis on which the EIR can conclude that this policy would reduce noise impacts to wildlife.	Please refer to response to comment MR-1.
Sonoma Land Trust	9/26/2022	B11-237	Why did the DEIR fail to analyze specific impacts to the wildlife corridor?	Refer to response to comment B11-221. The degree of specificity in the analysis is consistent with the programmatic nature of the proposed Specific Plan. The Sonoma Valley Wildlife Corridor will remain undeveloped and in some areas may be expanded through removal of existing structures.
Sonoma Land Trust	9/26/2022	B11-238	Why is there no formal mitigation set up for the impacts to the wildlife corridor? Even if the mitigating policies are baked into the Specific Plan, mitigation measures need to be included in a mitigation monitoring and reporting program to ensure they are effectively followed.	Please refer to response to comment MR-1.
Sonoma Land Trust	9/26/2022	B11-239	Why was there no study developed to determine impacts to wildlife movement within the wildlife corridor?	CEQA Guidelines 15064 indicate impacts should be evaluated on the basis of scientific and factual information “to the extent possible.” There is no CEQA requirement for new studies to evaluate the significance of impacts.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-240	Without a detailed analysis, how will the FEIR evaluate and set up mitigation for impacts to the wildlife corridor?	Please refer to response to comment B11-239.
Sonoma Land Trust	9/26/2022	B11-241	Comment: During a site visit, Pathways for Wildlife observed tracks and scat from multiplespecies, including deer, bobcat, coyote, and gray fox, throughout the main sections of theproposed development site. Yet the EIR does not disclose whether these species or othersare present at the site because the County has not conducted the necessary surveys todocument the site's biological resources. A site survey is a simple and necessary tool toconfirm the presence of special-status species and other plants and wildlife at the Project site. A survey would allow the County to identify not only whether species are present on the site, but also where those species are documented to occur.	Please refer to response to comment MR-2 and COA BIO-1.
Sonoma Land Trust	9/26/2022	B11-242	A spatial understanding of species distribution at the SDC site is key to understanding the full scope and intensity of impacts to plants and wildlife, because the impacts of development will vary based on what types of development the Specific Plan permits at different locations around SDC. While a specific development proposal has not yet been selected by the State, the Draft Specific Plan is sufficiently detailed and development plans are sufficiently congealed to know where certain types of development would be permitted under the Specific Plan. See, e.g., Draft Specific Plan Figs. 1.6-1, 3.1-1, 3.1-2, 4.1-1, and 4.1-2. Therefore, a major roadblock standing in the way of a complete understanding of the Project's impacts to biological resources is the EIR's failure to collect relevant data about	Please refer to response to comment MR-2 and COA BIO-1.

Commenter	Date	Letter	Comment	Response
			the occurrence and distribution of species at the SDC site. Until those data are collected, the EIR cannot fully analyze the Specific Plan's impacts to biological resources or intelligently mitigate for the effects. Why were simple data like these not collected and analyzed by the authors of the DEIR? Comments on the Notice of Preparation, including those by Sonoma Land Trust, identified the need for this type of data collection to support any analysis or mitigation in the EIR. In addition, prior comments identified the need for an in-depth wildlife linkage assessment to fully characterize the scope, use, and impacts to the Sonoma Valley Wildlife Corridor. The Sonoma Valley Wildlife Corridor broadly recognized as a critical and regional linkage. An analysis of the impacts of the proposed development needs to be conducted so that the EIR can identify linkage-level impacts and develop appropriate mitigation measures to reduce those impacts to less-than-significant levels. CDFW expects all DEIRs for projects that impact that impact documented wildlife corridors to include this analysis. The EIR must include surveys of biological resources so that it can fully analyze and mitigate impacts to less-than-significant levels.	
Sonoma Land Trust	9/26/2022	B11-243	Comment: Pathways for Wildlife also conducted a wildlife connectivity study along Hwy12, adjacent to the prosed development (Sonoma Valley Wildlife Corridor Road UnderpassUse Report 2013-2014). We recorded multiple species' movements under the highway on aconsistent basis throughout the study period. These species included bobcat, coyote, deer,gray fox,	Please refer to response to comment B11-222. Also refer to CEQA Guidelines Section 15064 (g). If there is disagreement among experts as to a project's environmental impacts, an EIR must be prepared.

Commenter	Date	Letter	Comment	Response
			mountain lion, raccoon, skunk, and opossum. This study illustrated theimportance of the wildlife movement with the Sonoma Valley Floor and documented thatthe highway is currently permeable for wildlife movement. However, no equivalent studywas prepared for or included the DEIR. There is no actual analysis of wildlife movement inthe DEIR, and therefore there is no evidence on which to base the EIR's so-called "analysis"of impacts. See EIR at 254-257 (concluding that impacts to wildlife movement would beless than significant without studying or fully describing how wildlife actually moves through or around the SDC site). In order to understand how the Project will impact wildlife movement, the DEIR first needs to study and analyze how wildlife actually use the SDC property. Only after comparing actual wildlife movement against the Specific Plan's development proposal can the EIR begin to determine what the specific impacts and magnitude of impacts to wildlife movement will occur as a result of that development. A thorough study is therefore a predicate to impact analysis or mitigation. The final EIR must incorporate all relevant studies and data.	
Sonoma Land Trust	9/26/2022	B11-244	The EIR's conclusion that the proposed project will not impact wildlife movement is completely unsupported and false as there is no data or documentation to support an assumption of that magnitude. An adequate wildlife connectivity study needs to be conducted to mitigate the project's impacts and to ensure that they are less than significant. The study proposal that Pathways for Wildlife prepared for Sonoma Land Trust, which was included in Sonoma Land Trust's	Please refer to response to comment B11-243.

Commenter	Date	Letter	Comment	Response
			comments on the Notice of Preparation and which is reproduced as Attachment 2 to this letter, is representative of the vetted and scientifically proven methodology for conducting wildlife connectivity studies to be able to analyze any types of development impacts on a wildlife corridor. This type of study is necessary to be able to determine and analyze the impacts to wildlife corridor by the proposed project (Safe Passages, Beier, P. & Loe. S. 1992, Forman, R. T. 2012).	
Sonoma Land Trust	9/26/2022	B11-245	Finally, the DEIR is clear that important riparian corridors run through the SDC project area. Why was there no study or analysis of wildlife movement within these important riparian corridors? How will the FEIR avoid or mitigate impacts to these key riparian corridors in light of the current absence of data about wildlife movement in those corridors?	Please refer to response to comment B11-243.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-246	Flawed Analysis of Plan Consistency – Impact 3.14.4.5 (DEIR p. 443) addresses the issue of potential Project-related conflicts with "a program, plan, ordinance, or policy addressing the circulation system." Among the plans considered here is the Sonoma County General Plan 2020. The DEIR states that: Objectives CT-4.1 and CT-4.2 of the Sonoma County General Plan pertain to upholding vehicle level of service standards. As individual development projects occurring within the Proposed Plan complete traffic impact studies as required by the Sonoma County Department of Transportation and Public Works (DTPW), the potential exists for identification of locations where LOS [Level of Service] targets would be exceeded. The General Plan objectives referenced here require operation at LOS C on roadway segments (except where exceptions have been adopted) and LOS D at intersections. Attachment 1 contains an excerpt from the General Plan, including the figure illustrating where LOS exceptions have been approved. The DEIR (p. 444) goes on to state: . . . while traffic congestion effects of the Proposed Plan or development of individual sites within the Planning Area may not comply with the LOS targets established in Sonoma County General Plan Objectives CT-4.1 and CT-4.2, for the purposes of the Proposed Plan's CEQA assessment this would not be considered an adverse environmental impact. We believe this conclusion is erroneous. In fact, we believe that the failure to conform to level of	The commenter states that the DEIR transportation analysis is flawed because the proposed Specific Plan would be inconsistent with the traffic level of service (LOS) objectives contained in the County's General Plan. The commenter refers to the standalone traffic analysis contained in the Focused Traffic Operations Analysis for the SDC Specific Plan, W-Trans, July 2022, which identifies two intersections and two roadway segments where LOS objectives would be unmet if no roadway improvements were made. As described on DEIR page 444, automobile delay and LOS are no longer considered significant impacts on the environment per Public Resources Code §21099(b)(2). Recognizing the potential for confusion when assessing a project's consistency with General Plan policies and objectives pertaining to LOS for CEQA purposes, the California Governor's Office of Planning and Research (OPR) provided the following guidance, provided online at https://opr.ca.gov/ceqa/sb-743/faq.html#general-plans-with-los (accessed 10/4/2022): *Even if a general plan contains an LOS standard and a project is found to exceed that standard, that conflict should not be analyzed under CEQA. CEQA is focused on planning conflicts that lead to environmental impacts. (The Highway 68 Coalition v. County of Monterey (2017) 14 Cal.App.5th 883; see, e.g., Appendix G, IX(b) [asking whether the project will "Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?"].)*

Commenter	Date	Letter	Comment	Response
			service standards established within the County's adopted General Plan constitutes a clear "conflict with a program, plan, ordinance, or policy addressing the circulation system." Further, the failure to include any documentation within the DEIR regarding conformance to the General Plan LOS objectives is a significant deficiency. We note that a detailed traffic impact analysis has been conducted for the Project, although that document has not been included in the DEIR. Specifically, Footnote 118 (DEIR p. 410) references the Focused Traffic Operations Analysis for the SDC Specific Plan (W-Trans, August 2022 [actually July 6, 2022]). Although the traffic analysis is not part of the DEIR, we reviewed it to establish whether the Project conforms to General Plan Objectives CT-4.1 and CT-4.2. Our review revealed that the WTrans report (p. 3) states: Under future conditions with implementation of the SDC Specific Plan, two intersections are projected to operate unacceptably if no modifications to the current roadway configurations are made. The intersection at Arnold Drive/Harney Street would operate unacceptably at LOS F during the p.m. peak hour . . . The future new intersection on SR 12 at the new SDC Connector Road would have unacceptable LOS E operation on the stop-controlled connector road approach . . . Although improvements are identified that would remedy these deficiencies, no assurance is provided that those measures would be implemented. The focused traffic study (p. 5) also says: With the additional traffic generated by the buildout of the SDC Specific Plan, the segment	*Auto delay, on its own, is no longer an environmental impact under CEQA. (See Pub. Resources Code, § 21099(b)(2).)* The DEIR transportation analysis does not identify a significant CEQA impact associated with traffic congestion and LOS. This is consistent with CEQA requirements and does not constitute a flaw in the transportation analysis. Please also note that the Focused Traffic Operations Analysis for the SDC Specific Plan document was prepared as a standalone document separate from the DEIR because it specifically addresses a non-CEQA topic area.

Commenter	Date	Letter	Comment	Response
			of SR 12 between Arnold Drive and Trinity Road would continue to operate below the County's standard at LOS D, as would the segment of Arnold Drive between SDC and Madrone Road. Although these road segments are also identified as falling short of the County LOS standard without the Project, no mitigation measures were proposed to allow operation at an acceptable LOS. In any event, it is clear that these two roadway segments will fail to meet the County LOS standard upon completion of the Project, thereby violating the General Plan objectives. In conclusion, the information necessary to address conformance with General Plan Objective CT-4.1 and CT-4.2 exists, but was not included within the DEIR, which would have allowed public review. As described here, that information indicates that the Project fails to conform to the County's LOS standard, as two intersections and two road segments will operate at unacceptable levels of service upon completion of the Project, and no assurance was provided that these deficiencies will be remedied. Thus, a significant impact exists with respect to conflicts with the adopted General Plan. Finally, the focused traffic study must be incorporated into the DEIR. The provision of this new information within the DEIR provides grounds for recirculation of the document.	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-247	Project Trip Generation is Underestimated – The DEIR (p. 440) states that the Project will generate 5,736 daily trips. Of that total, 1,398 of those trips (i.e., 24.4 percent of the total) will be "captured within the campus itself," resulting in net external trip generation of 4,338 trips. We believe the DEIR has substantially underestimated the volume of traffic associated with the Project. The DEIR's Project trip generation estimate was developed using the SCTM19 travel demand forecasting model maintained by the Sonoma County Transportation Authority (SCTA). The specific trip generation factors employed were not revealed in the DEIR. Consequently, it is impossible for the reviewing public to evaluate the reasonableness of either those factors or the resulting trip generation estimates. Traffic impact analyses for proposed development projects commonly use information presented in the Institute of Transportation Engineers (ITE) document Trip Generation Manual (Eleventh Edition, 2021) to develop project-related trip generation estimates. Although we acknowledge that the ITE trip rates often differ from corresponding rates contained within travel demand forecasting models such as the SCTM19 model, comparison of an estimate based on the ITE information versus the estimate documented in the DEIR provides a valuable perspective on the credibility of the DEIR Project's Two scenarios are addressed here. The first employs the Project plan as described in DEIR Section 3.14 - Transportation, and the second considers a maximum residential development scenario based on information in the Specific Plan document. DEIR Section 3.14 – Transportation Project Plan	The commenter asserts that the vehicular trip generation for the project was underestimated and provides an alternative means of calculating the project's daily trip generation through application of rates published by the Institute of Transportation Engineers (ITE) in the Trip Generation Manual, 11th Edition. The trip generation characteristics of the proposed Specific Plan were extracted from the SCTM19 regional travel demand model operated and maintained by the Sonoma County Transportation Authority (SCTA). The model includes sophisticated algorithms to predict traveler behavior, and has been calibrated against real-world observations both through comparison of traffic volume projections versus observations, as well as aggregated "big data" obtained through mobile devices that provides real-world data on how residents, employees, and visitors travel within and beyond Sonoma County. As with all travel demand models, SCTM19 considers the proximity of housing, jobs, and services to one another, and accordingly does account for travel occurring within the Plan area (i.e., the component of travel that does not add traffic volumes to the roadway network beyond the immediate area). In the earliest steps of producing travel demand estimates, the SCTM19 model uses trip generation rates published by ITE, similar to those referenced by the commenter. The model proceeds through numerous additional steps, however, before outputting vehicular volumes. A key component of these additional steps entails the balancing of trips, wherein trip "productions" and "attractions" are matched in order to eliminate the double-counting

Commenter	Date	Letter	Comment	Response
			Scenario Table 1 provides a trip generation estimate for the Project based on the plan as described in DEIR Section 3.14 - Transportation and on commonly-accepted procedures documented in the ITE Trip Generation Manual. That estimate reflects the following parameters: • The land use values described in DEIR Section 3.14 – Transportation, including the specific housing type breakdown, were evaluated. • The ITE Trip Generation Manual typically provides two methods to develop an estimate of project-related traffic: one using an average rate and one using a fitted curve equation. For this analysis, we have reported whichever of those two methods provides a lower value, so as to provide a conservative estimate of Project trips. The trip generation data sheets for this estimate are presented in Attachment 2. • Within each housing type, it was assumed that 25 percent of the residential units would be inclusionary income-restricted units, in order to conform to Specific Plan Policy 4-14 (Specific Plan, p. 4-25). Because these units generally produce lower volumes of traffic, this assumption again results in a conservative trip generation estimate. • Because the specific uses included within the public/institutional land use are not currently well-defined, no trip generation estimate was included for that land use category. As shown in Table 1, the Project is estimated to generate 12,253 daily trips. This is obviously substantially (i.e., 114 percent) greater than the DEIR estimate of 5,736 daily trips. As we stated	that would otherwise occur, and to calibrate the model's theoretical volume projections to those that are actually occurring in the field. Examples of trips that would be double-counted without balancing include an outbound commute trip generated from a residence in the morning that is also counted as an inbound morning trip to the office or employment site. Direct application of ITE trip generation rates would count these as two separate trips even though only one trip is actually being made. Direct application of ITE Trip Generation Manual rates constitutes standard traffic engineering practice when analyzing the effects of a proposed single-use development in a focused geographic area, as is commonly done in traffic impact studies focused on level of service. In such project-level analyses, use of a full-scale regional travel demand model such as SCTM19 is typically unwarranted except in cases of very large or complex projects. With a complex programmatic plan such as the proposed Specific Plan, however, use of a sophisticated regional model is required to fully account for the conditions occurring both within the project itself (including presence of multiple land use types) as well as conditions reflective of the project's context within the broader area and region. The SCTM19 model is the best-available tool to produce traffic volume forecasts in this manner. The root of the commenter's suggestion that the trip generation estimates output from the SCTM19 model should be comparable to those resulting from a straightforward application of ITE Trip Generation rates by land use is understood, since it is how project-level analyses for discreet projects are often

Commenter	Date	Letter	Comment	Response
			above, model-based trip generation factors often differ from the ITE trip rates. However, a difference of this magnitude is exceptional and is greater than we have ever seen. Consequently, we question the validity of the DEIR trip generation estimate. Maximum Residential Development Scenario As we indicated above, we have questions regarding certain aspects of the proposed development plan. One such question concerns how many residential units will be constructed. Although the DEIR transportation analysis addresses development of 1,000 residential units, the Specific Plan indicates that a greater number of units is possible. Table 4-2: Minimum and Maximum Housing Units by District (Specific Plan, p. 4-12) provides detailed information regarding how many housing units could be constructed within various subareas of the Project. That table reveals that the maximum number of housing units that could potentially be built is 1,210. Further, the notes to the table state that "[u]p to 10% deviations from the minimum and maximum by district are subject to approval by the Community Development Director." If such a deviation from the maximum values were to be approved, the total number of residential units would increase to 1,331 (1,210 X 1.10 = 1,331). To assess the impacts of this maximum development scenario with respect to the volume of traffic associated with the Project we have performed a second trip generation analysis, as summarized in Table 2. The basic parameters of this analysis are similar to those described above for the Table 1 analysis. Attachment 3 contains the data sheets for the residential uses; the non-residential data sheets are unchanged from the previous analysis.	conducted, but is inappropriate for application to a complex programmatic Specific Plan with multiple uses since it would have a propensity to substantially overestimate actual impacts. The commenter also refers to language regarding the number of residential units in the Specific Plan, and estimates that the total number of residential units could be 1,331 rather than the 1,000 analyzed in the EIR, resulting in an underestimation of traffic. Section 2.5.1 of the DEIR includes a discussion on the methodology used to estimate the number of residential units. Based on this methodology, the analyses contained in the DEIR assume a total of 1,000 residential units which include market rate, inclusionary, adaptive reuse, and additional County-provided affordable housing. The transportation analysis is consistent with this estimate. The commenter also notes that underestimation of daily trips affects the VMT analysis, since VMT is calculated by multiplying the number of daily trips by their lengths. As described above, the trip generation estimated by the SCTM19 model is appropriate and is not an underestimation. Further the commenter's simplified representation of VMT is correct at a broad level but does not reflect the way VMT is calculated for transportation CEQA purposes, including the use of efficiency (or "per person") metrics as produced by the SCTM19 model. For instance, the applied VMT analysis produces "partial VMT" efficiency metrics for residential and employment uses, focusing on home-based travel and home-based commute travel, respectively, consistent with OPR guidance. These

Commenter	Date	Letter	Comment	Response
			With consideration of the larger number of residential units, the Project's total daily trip generation increases to 14,290. This is 149 percent greater than the value claimed in the DEIR. Summary The analysis presented here indicates that the Project's daily trip generation has been substantially underestimated. This finding relates directly to the Project's impact with respect to vehicle-miles traveled (VMT). The DEIR acknowledges the relationship between trips and VMT at p. 447, where it says: . . . trip reductions should in theory translate to roughly equivalent VMT reductions. Thus, trip increases, as we have described, will similarly translate to roughly equivalent increases in VMT. Further, as described at DEIR p. 425, the calculation of VMT: . . . is based on the estimated number of vehicles [actually, vehicle-trips] multiplied by the distance traveled by each vehicle. If, as we have found, the number of vehicle trips is 2.14 – 2.49 times greater than the value considered in the DEIR, then the VMT values associated with the Project will also be 2.14 – 2.49 times greater than the DEIR findings. Although the DEIR has already concluded that the Project's VMT impact will be significant and unavoidable, it has failed to accurately portray the magnitude of that impact. This is a serious deficiency in the DEIR, which suggests a need to reevaluate the Project's impact and recirculate the DEIR for further public review. transportation analysis.	types of efficiency metrics require the use of a regional model such as SCTM19 to develop and are not the products of a simple multiplication of aggregated trips by trip lengths. It is also noted that a review of the land use inputs that were entered for the proposed Specific Plan in the SCTM19 model, as well as review of the population and employment estimates output from the model for those land uses, was conducted by both W-Trans and SCTA staff to confirm that no data entry errors occurred. This review confirmed that the land use quantities entered in the model match those described in DEIR section 3.14.4.2. With respect to population and employment, the SCTM19 model estimates that the proposed Specific Plan would result in an increase of 2,510 persons and 1,014 jobs, which are very close to the estimated values cited in the DEIR Project Description section 2.5.1.2. Note: The project description includes an estimated population of 2,400 and 940 jobs; the SCTM19 model uses somewhat different methodologies to estimate population and employment, though since the resulting estimates are within 4 to 7 percent of that stated in the project description, it is clear that the full land use inventory is being reflected in the SCTM19 results.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-248	Internal Trips are Substantially Overestimated – As described above, the DEIR transportation analysis (p. 440) claims that 1,398 of the Project's total 5,736 daily trips will occur completely within the Project site. In other words, 24.4 percent of the vehicle-trips resulting from the Project would never leave the Project site. These trips, which are typically referred to as internal trips, would have no impact on any element of the transportation system beyond the Project boundaries. Because this a substantial percentage, it seemed appropriate to test the validity of this claim. Various tools are available to develop estimates of internal tripmaking at mixed-use developments such as the proposed Project. Three such tools have been employed here: • Institute of Transportation Engineers/NCHRP 684 Internal Trip Capture Estimation Tool – As described in the ITE Trip Generation Handbook (Third Edition, September 2017, p. 46), this approach is based on procedures documented in National Cooperative Highway Research Program (NCHRP) Report 684: Enhancing Trip Capture Estimation for Mixed-Use Developments. That report documents the extensive research, data collection, and analysis undertaken in developing and validating the recommended procedure. • U.S. Environmental Protection Agency (EPA) Mixed Use Trip Generation Model – As described at the EPA website (https://www.epa.gov/smartgrowth/mixed-use-trip-generationmodel), this model was developed cooperatively between EPA and ITE. Six metropolitan	The commenter states that the internal trips assumed in the analysis are overestimated, and provides alternative internal trip estimates from three off-model sources. Rather than using off-model sources such as the ITE/NCHRP 684, EPA Mixed Use Trip Generation Model, or SANDAG spreadsheet tool mentioned by the commenter to reduce the trips projected to occur by applying conventional ITE rates, the applied analysis utilizes the SCTM19 travel demand model to assess the proposed Specific Plan's travel characteristics. As discussed above in the response related to the Plan's trip generation, it is common for traffic impact studies for individual development projects to use standard ITE trip generation rates, which are sometimes adjusted for mixed-use projects using the referenced off-model sources. While this approach can be appropriate to assess project-level impacts in a defined area, it was determined that a more robust analytical tool, the SCTM19 travel demand model, would be appropriate to gauge the effects of the proposed programmatic Specific Plan. Please see the response to the above question pertaining to trip generation for additional detail on the SCTM19 model and how it was applied.

Commenter	Date	Letter	Comment	Response
			regions were evaluated in detail and the resulting model was validated against actual traffic counts at mixed-use developments across the country. This model is in use in California, Washington, and New Mexico, and according to EPA the model has been adopted as a statewide standard by the Virginia Department of Transportation. • San Diego Association of Governments (SANDAG) Smart Growth Trip Generation Spreadsheet Tool – Similar to the EPA method, this tool employs trip generation rates specific to the San Diego region. Although the trip rates vary from the ITE rates, the internal trip capture results should be representative of a development similar to the proposed Project. The results of these analyses are summarized below. ITE/NCHRP 684 Internal Trip Capture Estimation Spreadsheet Tool Attachment 4 contains a copy of the spreadsheet illustrating the results of this analysis procedure. Although the spreadsheet tool allows for adjustments to be made to reflect transit usage and changes to vehicle occupancy, no such modifications were made. Doing so would simply reduce the number of vehicle-trips estimated (internal, external, and total) with no effect on the resulting internal trip percentages. As shown in Attachment 4, the model projects an internal capture percentage of nine percent (actually 8.8 percent). The gross total of 12,256 daily trips would be reduced to 11,180, with 1,076 internal trips estimated. (Note that three of the individual daily trip totals were rounded up to ensure equal numbers of entering and exiting daily trips in the	

Commenter	Date	Letter	Comment	Response
			spreadsheet. Thus, the total trip generation in the model is 12,256 instead of the 12,253 described earlier.) EPA Mixed Use Trip Generation Model The results of this analysis are presented in Attachment 5. According to the EPA tool, the Project's 12,253 daily trips would be reduced to 11,291 external vehicle-trips (a difference of 962 trips). Those 962 internal trips include 796 vehicle-trips, 114 external walking trips, and 53 external transit trips. Considering only vehicle-trips (and ignoring external walking and transit trips), the 796 internal vehicle-trips represent an internal capture rate of 6.5 percent. SANDAG Smart Growth Trip Generation Spreadsheet Tool As described above, the SANDAG tool is very similar to the EPA tool, but with minor modifications to reflect local San Diego conditions. Nonetheless, it is believed to provide valuable perspective regarding the level of internal tripmaking at the proposed Project. The SANDAG results are provided in Attachment 6. The SANDAG model estimates that a total of 996 trips will be in the form of 821 internal vehicletrips, 120 external walking trips, and 55 external transit trips. The 821 internal vehicle-trips constitute 6.7 percent of the 12,253 gross total daily trips. Summary The internal trip values derived from the three models presented here range from 6.5 to 8.8 percent, and all are substantially lower than the 24.4 percent value employed in the DEIR analysis. By substantially overstating the volume of traffic to be captured within the Project site, the number of external trips was excessively reduced. Consequently,	

Commenter	Date	Letter	Comment	Response
			the DEIR analysis has failed to accurately assess the off-site impacts of the Project. Specifically, by underestimating the number of external trips, the analysis has similarly understated the Project-related VMT, which serves as basis for determining the significance of the Project's transportation impact. In short, the Project's transportation impact has been greatly understated due to a failure to provide an accurate estimate of the volume of traffic resulting from the Project.	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-249	Flawed Project Traffic Assignment – DEIR Table 3.14-3: Projected Traffic Volumes in Plan Area (DEIR p. 441) presents traffic volume information for the three road segments that provide access to the site – Arnold Drive north and south of the site and the proposed Highway 12 connector. (Orchard Road connects to Jack London State Park to the west of the site, but would not be expected to carry a meaningful volume of Project traffic. That road is not included in the DEIR analysis.) Information is presented for various scenarios, both with and without the Project and with and without the Highway 12 connector. Based on this information, it is possible to derive the Project traffic assignment – that is, how many of the Project's claimed 4,338 external daily trips are estimated to be added to each of these three road segments. Table 4 below summarizes that information. (We should note that we were unable to confirm all of the existing traffic volumes, as DEIR p. 419, which apparently includes some of that information, was missing from the document that was available for downloading from the county website.) In each scenario analyzed, the volume of Project traffic assigned to the regional access roads falls substantially short of the 4,338 external trips claimed to be generated by the Project. In both scenarios involving implementation of the Highway 12 connector, the volume of traffic projected on Arnold Drive between Harney and Glen Ellen is actually shown to be reduced upon completion of the Project, which seems unlikely. The volume of Project traffic and its relationship to the claimed Project trip generation is summarized as follows: • Existing + Project (With Highway 12 Connector):	The commenter states that the traffic assignment is incorrect. In developing estimates of daily project volumes on individual roadway links, the commenter relied on information shown in DEIR Table 3.14-3 (Projected Traffic Volumes in Plan Area). As noted at the introduction of the "Transportation Data" section containing this table, the volume data is being provided in the DEIR for informational purposes but was not directly applied in the CEQA transportation analysis. Table 3.14-3 provides summaries of daily volumes, rounded to the nearest ten, on key roadway links as projected by the SCTM19 model; it includes the effects of not only project traffic, but on influences created by the proposed new roadway link to SR 12. It was not intended to provide a summary of project-only traffic volumes as used by the commenter though a coarse approximation of project trips can be extracted. Through reviewing the information in Table 3.14-3, W-Trans did identify four incorrectly-reported volumes that were the result of offset cell references in a summary spreadsheet. These errors did not affect the conclusions of the analysis but do affect the results of the commenter's approach in estimating project-only volumes. The corrected daily volumes are as follows: • Arnold Drive – Harney to Glen Ellen o Future plus Project volume 6,710; incorrectly reported in the DEIR as 6,310 o Future plus Project (no Hwy 12 connector) volume 7,810; incorrectly reported in the DEIR as 7,410 • Arnold Drive – Harney to Madrone

Commenter	Date	Letter	Comment	Response
			4,070 Daily Trips (93.8% of Project trips) • Existing + Project (No Highway 12 Connector): 3,410 Daily Trips (78.6% of Project trips) • Future + Project (With Highway 12 Connector): 3,320 Daily Trips (76.5% of Project trips) • Future + Project (No Highway 12 Connector): 2,650 Daily Trips (61.1% of Project trips) The DEIR analysis apparently fails to include a substantial portion of the Project traffic. Oftentimes, this sort of oddity is described as being due to existing or "background" traffic being diverted to other routes when the Project traffic demand is added to the study area roads. This can occur in a travel demand forecasting model when the added traffic causes a particular route to become congested and have high travel times, so the model redirects traffic to other, less congested routes so as to create an equilibrium condition on the study area road network with respect to travel time. In this case, though, no such alternative routes are available, so this explanation would not apply. The only explanation that does seem to apply is that the analysis is defective, and that it fails to accurately account for the full volume of Project traffic. The significance of this deficiency is magnified by the fact that the DEIR analysis only includes about 38 percent of the actual volume of Project traffic (i.e., 4,338 external trips compared to the corrected values of 11,180 – 11,291 documented in Table 3). The transportation analysis must be revised to remedy these substantial deficiencies, and the new analysis must recirculated for public review.	o Future plus Project volume 10,480; incorrectly reported in the DEIR as 9,960 o Future plus Project (no Hwy 12 connector) volume 10,160; incorrectly reported in the DEIR as 9,640 For the purposes of providing clarification and responding to the commenter's question about traffic assignment, following is a breakdown of "project only" daily volumes by segment under the year 2040 buildout condition. Note that the SCTM19 model assigned 100 daily vehicle trips to a traffic analysis zone (TAZ) adjacent to the SDC site between the campus and Madrone Road that are not included in the reported segment volumes because they do not traverse the entire segment. **Segment/Zone Daily Project Volume** Arnold Drive – North of SDC: -20 Arnold Drive – South of SDC: 2,810 New Highway 12 Roadway Link: 1,450 TAZ 192: 100 Total: 4,340 The rounded total project-only volume of 4,340 daily vehicles matches the external trips forecast by the SCTM19 model to be generated by the proposed Specific Plan, confirming that all trips have been effectively assigned to the roadway network.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-250	Defective Vehicles-Miles Traveled Analysis – The analysis of VMT impacts (Impact 3.14-2, DEIR p. 445) indicates that the Project will have a significant and unavoidable impact, with a significant impact relative to Household VMT and less than significant impacts regarding Employment VMT and Total VMT per Service Population. A significant impact was also found with respect to induced VMT associated with the proposed connector to Highway 12 (which is described as an "east-west emergency access connection from the site"). (DEIR p. 447) We believe the VMT analysis is flawed, as described in the following sections. Transportation Demand Management Effects The VMT analysis is summarized in DEIR Table 3.14-4: Planning Area VMT Metrics. (DEIR p. 446) That table includes a section labeled "Proposed Plan with 15% TDM Reduction," which is described as being for informational purposes and "reflect[s] a theoretical 15% reduction in VMT associated with required TDM measures." We believe this information is misleading, as no support is provided with respect to the feasibility of actually achieving a 15 percent reduction in VMT. Further, based on this "theoretical" information the DEIR makes the questionable and conclusory statement that (DEIR p. 447): . . . it is likely that actual VMT will be less than the projections above. Our analysis has suggested that, to the contrary, the actual VMT will be substantially greater than those projections. In fact, only one paragraph later the DEIR contradicts itself and recognizes the questionable nature of the suggested TDM benefits (DEIR p. 447):	The commenter asserts that the DEIR's informational discussion regarding the effects of Transportation Demand Management (TDM) are misleading, that the employment based VMT assessment lacks substantiation, and that the VMT reduction strategies required by Specific Plan Policy 3-14 would be ineffective. With respect to the discussion of TDM strategies criticized by the commenter, the results presented in DEIR Table 3.14-4 showing the proposed Specific Plan's VMT performance metrics with a 15 percent reduction due to required TDM are presented for informational purposes and are not relied upon in making a significance determination. As described on DEIR pages 448-449, this approach was intentionally chosen in acknowledgement of the fact that the most effective forms of TDM strategies will need to be tailored to individual projects, that they will evolve over time, and that uncertainty exists as to whether 15 percent reductions can be guaranteed at every stage of development (particularly in early years when the positive synergies among housing, jobs, and services may not yet be realized). Despite this uncertainty, the proposed Specific Plan requires TDM to be implemented by all development, and requires establishment of a Transportation Management Association (TMA) to oversee and coordinate TDM strategies in an efficient manner. While the DEIR conservatively concludes that there would be a significant and unavoidable impact, the expectation remains that land uses within the proposed Specific Plan will be able to achieve the 15 percent reduction targets that are shown informationally in Table 3.14-4, particularly once

Commenter	Date	Letter	Comment	Response
			However, the ability for individual development projects to achieve a 15 percent reduction in VMT is uncertain. Clearly, any statement regarding the potential benefits of implementing TDM measures at the Project must be taken with a sizable grain of salt. Employment VMT Analysis As noted above, the DEIR analysis found a less than significant impact with respect to Employment VMT (also referred to as "Home-Work VMT per Worker" in the DEIR), with a finding of 4.8 homebased commute VMT per worker. (DEIR p. 445) Table 3.14-4 lists values for other pertinent geographical areas near the Project, as follows: • Planning Area Baseline Average: 7.1 home-based commute VMT per worker, • Countywide Baseline Average: 12.4 home-based commute VMT per worker, and • Regional Baseline Average: 16.9 home-based commute VMT per worker. These values raise questions regarding the validity of the DEIR's employment VMT finding of 4.8 home-based commute VMT per worker. This value is about 67 percent of the corresponding value for the Planning Area, 39 percent of the Countywide value, and only 28 percent of the Bay Area Region value. Without further substantiation of the DEIR's VMT analysis procedures and background parameters and inputs, it is difficult to readily accept that the Project's VMT result would be so vastly different from the other areas referenced above. Unfortunately, the reviewing public is expected to blindly accept the output of the SCTM19 travel demand forecasting model even though, as described above, the model has obvious flaws with respect	sufficient development levels have been achieved to support a broad spectrum of TDM measures. The commenter also questions the DEIR findings related to employment based VMT, including how the proposed Specific Plan could have a projected VMT per worker that is lower than broader geographical area averages. Please see responses above regarding the applicability of using the SCTM19 travel demand model, which was used to analyze and estimate VMT. Regarding the specific VMT outputs produced by the model for employee-related VMT, which is analyzed using a home-based commute VMT per worker performance metric, the commenter is correct that the proposed Specific Plan is expected to result in a lower value per worker than the countywide and regional averages. While not entirely unexpected given the proposed uses within the Specific Plan (and associated jobs-housing balance), in 2021 W-Trans did collaborate with SCTA to investigate the employee-based results when the model was being used to test various land use alternatives, prior to initiation of work on the DEIR. Staff at SCTA examined how the model was calculating and projecting employee VMT, confirming that the model's employment VMT projections properly aligned with related factors including calculated average trip lengths, home-based work attractions, home-based work person trips, employment estimates, origin-destination trip tables, and the land use quantities used as inputs. SCTA staff observed that the model is favoring home-based work attractions from areas near the Specific Plan and from within the Specific Plan TAZ itself; this is not unexpected given that,

Commenter	Date	Letter	Comment	Response
			to its ability to estimate Project-related traffic volumes. In short, we question whether the employment VMT value derived for the Project is credible. Proposed Policies Reducing VMT Impact In recognition of the Project's significant and unavoidable VMT impact, the DEIR addresses ways to reduce that impact. The primary approach to achieving this goal is apparently Specific Plan Policy 3-41, which states, in part (Specific Plan p. 3-12): Require all development to reduce vehicle trips by at least 15 percent below rates listed by the Institute of Transportation Engineers Trip Generation manual using transportation demand management strategies. As we described above, however, the Project's supposed trip generation, as reflected in Section 3.14 – Transportation, is already extremely low. According to the DEIR, the total daily trip generation is 5,736 trips/day. This includes trips associated with 1,000 residential dwelling units and substantial non-residential development types although, unfortunately, no trip generation breakdown is provided between the residential and non-residential land uses. For perspective, if we totally ignore the non-residential development (a frankly ridiculous notion, given that this ignores 190,000 SF of office space and 40,000 SF of commercial space), the Project's trip generation rate would be 5.736 trips per dwelling unit (i.e., 5,736 trips / 1,000 DU = 5.736). If the non-residential land uses were included, the overall Project trip rate would be substantially lower. For comparison, the current ITE daily trip generation rates for various types of residential uses that are potentially applicable to the Project are as follows:	like most travel demand models, SCTM19 is a "gravity" model wherein the likelihood for trip origins and destinations to be matched decreases as the distances between origins and destinations increases. Based on these findings, it was determined that the SCTM19 model remained the appropriate and best-available tool to complete the VMT assessment prepared for the DEIR. The commenter opines that Specific Plan Policy 3-41 is virtually meaningless given the low trip generation estimated in the DEIR analysis. Policy 3-41 requires all development occurring within the proposed Specific Plan to reduce vehicle trips by at least 15 percent below the level that would be calculated through application of standard ITE trip generation rates. These TDM measures would be determined during the entitlement process for individual development projects, at which time they would also need to be quantified to confirm that the 15 percent reductions (below levels estimated using ITE trip generation rates) would be achieved. Thus, the traffic generation characteristics analyzed at the programmatic level in the DEIR have no bearing on this requirement, in contrast to the opinion offered by the commenter. The requirements set forth in Policy 3-41, in addition to establishment of a TMA to oversee TDM strategies for the overall campus as required in Policy 3-42, would lead to quantifiable reductions in VMT. The commenter continues by again challenging the proposed Specific Plan's overall trip generation methodology and results applied in the DEIR; these references to the trip generation estimates contained in the DEIR are extraneous as they would play no role in the

Commenter	Date	Letter	Comment	Response
			• Single-Family Detached Housing: 9.43 daily trips/dwelling unit, • Single-Family Attached Housing: 7.20 daily trips/dwelling unit, • Multifamily Housing (Low Rise – Not Close to Rail Transit): 6.74 daily trips/dwelling unit. Therefore, it appears that, if the Project's trip generation estimate is to be believed, the Project trip rate is already substantially less than 15 percent below the ITE trip rates. Two conclusions can be derived from this information: • The Project's trip generation as presented in the DEIR is not to be believed, and • Specific Plan Policy 3-14 is specious. Summary As we have described above, the DEIR transportation analysis is significantly flawed and those flaws relate directly to the validity of the VMT analysis. To briefly summarize: • The Project trip generation estimate substantially understates the volume of traffic that will result from the Project. • The internal trip capture rate is excessive, resulting in further reduction of the Project's traffic volumes. • Only a portion of the Project's trips have actually been assigned to the study area roads. • The purported benefits of implementation of TDM strategies are unlikely to be realized. • The Project's derived Employment VMT value is highly questionable, when viewed in light of corresponding values for nearby geographical areas. • Specific Plan Policy 3-41, which is claimed as a means to reduce Project VMT, is virtually meaningless, unless the Project's trip generation	requirements for individual developers to reduce their projects' VMT levels. For additional information on how trip generation was otherwise assessed in the DEIR, please see the responses to prior comments provided above.

Commenter	Date	Letter	Comment	Response
			estimate is substantially modified to reflect reality. The VMT analysis must be modified to correct the deficiencies described above. Upon completion of that revised VMT analysis, the DEIR must be recirculated for further public review.	
Sonoma Land Trust	9/26/2022	B11-251	I have been asked to review and comment on the Sonoma Developmental Center (SDC) Specific Plan and associated Draft Environmental Impact Report	See response to comment C109-1.

Commenter	Date	Letter	Comment	Response
			(DEIR). I write this as a research scientist who has spent more than two decades studying wildfire science and fire ecology, global change, and conservation biology. From this perspective, I appreciate the intention to balance human welfare and economic development with plans for preservation of historical and natural resources in the area. Nevertheless, my review of the plan and DEIR have led me to conclude that many issues relative to wildfire risk have been overlooked. The discussion of fire risk in the DEIR reflects several misconceptions concerning fire ecology, fire history, and the consequences and effectiveness of different fire mitigation strategies. The SDC property is situated within a highly fire-prone landscape, and based on evidence from the scientific literature, the Proposed Plan has high potential to significantly increase fire risk even further to new and existing structures at the SDC property as well as to the surrounding communities. A rise in human-caused ignitions due to increased population growth and expansion of human infrastructure could increase fire frequency to the point that wildfire would significantly affects public health, ecological functioning, and provision of ecological services (e.g., erosion and flood control). Unfortunately, research on recent destructive fires shows that the proposed mitigation strategies to reduce fire risk are unlikely to eliminate these significant impacts. Below please find an explanation for my conclusions summarized in three main points.	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-252	RELIANCE UPON FIRE HAZARD SEVERITY ZONES IS INAPPROPRIATE FOR CONCLUDING THERE IS NO FIRE RISK. The reliance upon existing Fire Hazard Severity Zones as the basis of the findings reflects a misunderstanding of the purpose of the maps, their scale of accuracy, and their potential for uncertainty at specific locations. They are also out of date. The Cal Fire maps were not designed with the intention of indicating precisely where structures are most at risk for wildfire. Instead, the objective for these maps is for use in general planning and policy guidance. For example, defensible space practices are only enforceable within high hazard zones; homeowners are required to disclose upon sale whether the property is in a in high hazard zone; and county governments can use the zones to enforce building codes or other fire safety measures. The maps were developed in 2007 using a simple set of variables, map overlays, and general assumptions to delineate the relative degree of fire hazard across the landscape – that is, areas where fire behavior is likely to become extreme given a fire occurs. In other words, the hazard areas shown on Fire Hazard Severity Zones are delineated in very broad classes and have limited precision. Given the uncertainty and coarse scale of these maps, they are not appropriate for predicting where buildings are likely to be destroyed. This is something that Cal Fire has been transparent about (Sapsis 2018), as the appropriate use of these maps has been misinterpreted elsewhere.	See response to comment C109-2.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-253	Part of the reason they are inappropriate to predict structure loss is that the location and behavior of fire is stochastic and unpredictable at any given time or location. Fire occurrence, behavior, spread, and eventual destruction of a house depends upon a large suite of random factors, such as where and when an ignition occurs; what the fire weather at the time of ignition is; what direction the wind is blowing; what the fuel and topography conditions are at the point of ignition; what kind of housing density and arrangement are in the surrounding area; whether any other fires are burning and the availability of firefighters, etc. This does not mean that the maps of fire hazard are useless. It means that they need to be interpreted with an understanding of what they can or cannot do; and that they are not completely accurate. This is true of fire mapping in general. For example, a map delineating probability of ignition will look completely different than a map delineating probability of a large fire (e.g., Syphard et al. 2019). Unlike the Cal Fire maps, some maps are designed with the specific objective of delineating fire risk to structures (e.g. Syphard et al. 2012), but even these maps have substantial uncertainty given the random nature of wildfire. A study comparing maps of fire risk to structures in southern California with the Cal Fire maps in the same regions found significant differences in the areas mapped as high risk, and the Cal Fire maps performed poorly compared to the other maps (Syphard et al. 2012).	See response to comment C109-3.
Sonoma Land Trust	9/26/2022	B11-254	Another source of uncertainty in the Cal Fire maps is the assumption that hazard is likely to be governed by the same factors in the same way across the state. Science shows that the relative weighting and direction of variables that influence the locations of fire occurrence,	See response to comment C109-4.

Commenter	Date	Letter	Comment	Response
			size, and risk vary from region to region (e.g., Syphard et al. 2019). Therefore, accuracy of the Cal Fire maps is likely to vary from place to place, and there is no guarantee that the maps near the SDC are accurate, even in a general sense or for their intended purpose. There are examples of recent highly destructive fires where substantial structure loss occurred in areas not mapped as high risk in the Cal Fire maps (e.g., Coffee Park in the Tubbs Fire, Malibu City in the Woolsey Fire). This should serve as an important illustration of why the maps should not be the final word in a conclusion about fire risk to structures. An important point is that the current maps - the ones used for the DEIR - were developed in 2007. The current landscape reflects very different environmental and housing conditions than those that were there 15 years ago. The factors used to create the 2007 the maps, such as fuel type, fire history, and housing, have all changed substantially. Cal Fire has been putting significant effort into updating their maps with new variables and assumptions, and these may be more appropriate for future decisions. However, those maps are not available yet - and maps developed in 2007 should not be trusted to assess the fire risk for a development to be constructed after 2022.	
Sonoma Land Trust	9/26/2022	B11-255	The Proposed Plan Is Likely To Increase Regional Fire Risk Although the DEIR acknowledges that the location of the proposed development is in a fire-prone part of the landscape, it does not thoroughly establish the baseline conditions that this is an area with a long history of wildfires that have already resulted in serious impacts. It was only a few years ago that structures were destroyed by wildfire at this very site and many more structures were destroyed nearby. Even without the new residents	See response to comment C109-5.

Commenter	Date	Letter	Comment	Response
			and visitors proposed for the site, the evacuation situation has apparently been extremely problematical in recent fires - and evacuation is often the time when people lose their lives to wildfires. These baseline conditions have not been adequately described in the DEIR despite the need to establish them before assessing the impact of the project. Based on data regarding repeat fires in the same locations, there is reason to believe that the area proposed for development on the SDC site is susceptible to more wildfires in the future. There is also reason to believe that the SDC development will lead to an increase in the number of wildfires in the region, not only due to the potential for climate change to exacerbate fire risk, but also because of the probable increase in human-caused ignitions. In addition, the DEIR lacks a description of how the Proposed Project will not only be impacted by fire, but also how it will impact fire in the vicinity in the future.	
Sonoma Land Trust	9/26/2022	B11-256	As evidenced by the almost perfect overlap of the nearby 2017 Tubbs fire with the 1964 Hanley Fire (Keeley and Syphard 2020), fires often recur in the same locations. This is because certain locations are more fire-prone than others given their topography, location within a wind corridor, climate, and vegetation. Research on structure loss in California has demonstrated that structures located in areas with a history of recurring fire are among those that are most likely to be destroyed by fire (Syphard et al. 2012). Although the 1964 Hanley Fire occurred in nearly the same location as the 2017 Tubbs Fire, there were only about 100 structures lost, and there were no fatalities. However, in 2017, more than 5500 structures were destroyed and 22 people lost their lives. The difference	See response to comment C109-6.

Commenter	Date	Letter	Comment	Response
			is the rapid growth of human population and housing in the footprint of the fire during the interim.	
Sonoma Land Trust	9/26/2022	B11-257	The placement of new housing in fire-prone locations, like the proposed Project, not only increases the exposure of those structures to wildfire, but it also increases the likelihood of more fire occurring in the surrounding region due to human-caused ignitions. As recognized in the DEIR, humans cause more than 95% of the fire ignitions in Sonoma County, and studies repeatedly show that fire frequency is highest in low-intermediate-density development patterns, particularly when surrounded by wildland vegetation (i.e., the Wildland Urban Interface) (Syphard et al. 2007, Syphard et al. 2019, Radeloff et al. 2018). This is because, as low-medium density housing development expands (the kind proposed for this development), there is an increase in the number of people and opportunities for fires to ignite; and there is still ample continuous vegetation in the surrounding landscape for wildfires to spread. Larger numbers of people also increase the odds of fires starting during severe fire-weather conditions that lead to the most catastrophic outcomes. Recent research shows that human-caused ignitions are the top-ranking reason for area burned in Santa Ana wind-driven fires; and that human-caused fires have worse outcomes than lightning-caused fires.	See response to comment C109-7.
Sonoma Land Trust	9/26/2022	B11-258	Extensive research also shows that the location of human ignitions tends to occur closest to roads and human infrastructure (Syphard et al. 2008, Molina et al. 2019, Chen and Jin 2022). Therefore, the addition of people coming into and out of the region because of the new development increases the likelihood of more fires starting near the area. The lack of public transport is a concern not only in terms of greenhouse gas emissions,	See response to comment C109-8.

Commenter	Date	Letter	Comment	Response
			but also in terms of ignitions and increasing fire risk. Given that the most likely form of transportation to and from the development is via automobiles, many more people will be on the roadways, and thus, many more opportunities will arise for fire ignitions to occur. The increased access to open space areas also would provide more opportunities for humans to unintentionally start fires. In turn, the type of low-medium density development proposed in the plan is not only where fire frequency tends to be highest, but this is also where structures are most likely to be destroyed by fire (Syphard et al. 2012, 2019, Kramer et al. 2018). Also, it is not just housing location and density that drives risk exposure; it is the overall location and pattern of development (Syphard et al. 2012). Isolated or remote clusters of development are particularly vulnerable (Syphard et al. 2013). In other words, fire risk is a multi-scale issue (Syphard and Keeley 2021), and the landscape context is critical. Developments surrounded by large amounts of continuous wildland vegetation, such as is the case here, are particularly dangerous because they are exposed to potential fire on all sides. This scenario is similar to what happened in the town of Paradise in the 2018 Camp Fire. To that end, "community separation" of urban areas seems like a risky design strategy in the proposed plan - that adds edge between development and wildland. As acknowledged in the EIR, the potential for destructive wildfires is increasing in many parts of California due to climate change. Recent research also shows that proximity to the WUI is the top explanation for why fires have become destructive in the project region (Syphard et al. 2022).	
Sonoma Land Trust	9/26/2022	B11-259	Policies For Mitigation Do Not Eliminate Fire Risk Although studies show that community planning and	See response to comment C109-9.

Commenter	Date	Letter	Comment	Response
			fire-safe design and landscaping can significantly enhance fire resilience, statistics from recent wildfires indicate that these actions are not guaranteed to reduce impacts to less than significant levels (Syphard and Keeley 2019, Baylis and Boomhower 2022). While having a strong and well-enforced community wildfire resilience plan is critically important for reducing fire risk to the largest extent possible, constructing a significant number of residences and businesses will add more frequent ignitions to an already highly fire-prone region. This will exacerbate fire risk in the region regardless of the mitigation policies put in place. Therefore, although the DEIR relies on policies and mitigation measures to conclude that the project would not exacerbate wildfire risk, the initiation and enforcement of these measures do not ensure that significant impacts would be sufficiently mitigated.	
Sonoma Land Trust	9/26/2022	B11-260	Vegetation Management One of the measures that the DEIR relies upon to claim no significant wildfire impacts is vegetation management to reduce fire risk. Vegetation management includes mechanical fuel breaks surrounding the development, clearance of woody shrublands or understory woody trees, defensible space, and controlled burning of vegetation. There are several common misconceptions about, and overestimations of the relative effectiveness of, these measures for reducing structure loss, especially during severe fire weather when most structures are destroyed. Fuel reduction through vegetation management is often viewed as a means of stopping or slowing the spread of fire; however, treatments typically only do this under mild weather conditions. In severe fire weather, with strong winds, vegetation treatments generally do not prevent or stop fires on their own.	See response to comment C109-10.

Commenter	Date	Letter	Comment	Response
			Policy 2-31 would require construction and maintenance of a managed landscape buffer along western and eastern edges of the Core Campus to aid in fire defense, consisting of a shaded fuel break in wooded areas and grazed or mown grassland. The construction of these types of fuel breaks can be helpful for protecting communities, when done strategically, by providing safe fire-fighter access. They may also slow fire spread enough to buy time for defensive activities (Syphard et al. 2011).	
Sonoma Land Trust	9/26/2022	B11-261	Despite these benefits, the big issue with placing too much trust in fuel breaks and other forms of vegetation management is that most structures are destroyed because they are exposed to the millions of wind-borne embers that are generated during severe fire-weather. Although woody vegetation is the primary source of firebrands, wind-borne embers are known to fly kilometers ahead of a fire front, crossing vegetation treatments, and landing on or near structures. In fact, wind-borne embers often jump California's widest freeways. Therefore, although fuel breaks can facilitate safe firefighter access in some circumstances, they cannot prevent embers from flying past them. Furthermore, despite the role of fuel breaks for providing safe firefighter access, it is often unsafe for firefighters to be present during the worst fire-weather conditions. In a historical survey of fires and fuel breaks in southern California national forests, 22- 47% of fires stopped at fuel breaks when they encountered them (Syphard et al. 2011).	See response to comment C109-11.
Sonoma Land Trust	9/26/2022	B11-262	The creation of defensible space around structures at the parcel level, as suggested in policies 2-34 and 2-36, is a mitigating policy proposed for the DEIR, and I concur that this should be implemented to increase community resilience. Studies show that properly created defensible	See response to comment C109-12.

Commenter	Date	Letter	Comment	Response
			space (https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/) can significantly reduce the probability of a structure being destroyed in a fire (although there is no additional benefit to extending the distance of defensible space beyond 100 feet (Syphard et al. 2014, Miner 2014)). Nevertheless, as with other vegetation treatments, defensible space should not be considered as something that can definitively prevent structure loss. Many embers directly penetrate a structure without vegetation playing a role, and many structures with well-designed defensible space have been destroyed in recent wildfires. If embers land near the property, they may ignite new fires depending upon the flammability of the surroundings. While the recommended reduction of biomass near the property lowers flame lengths and enhances firefighter safety, the fuel moisture of the vegetation in the vicinity of structures is often more important than the amount of vegetation. Evergreen shrubs and trees are often referred to as "ember catchers" because of this – because the embers may be extinguished if they land on green vegetation. This argues for retaining some green vegetation near the structure and across the landscape.	
Sonoma Land Trust	9/26/2022	B11-263	Research in Australia also shows significant protective effects of irrigated land (Gibbons et al. 2018). Thus, a concern I have about the vegetation management approach described in the DEIR is the proposal to remove chaparral and other woody shrublands and to allow establishment and expansion of grass. Although fire in grass has lower flame lengths, grass is the most flammable and easily ignitable vegetation type in California (Syphard and Schwartz 2021, Syphard et al. 2022). Grass is dryer for a much longer period in the	See response to comment C109-13.

Commenter	Date	Letter	Comment	Response
			year than chaparral, and when it does ignite, it is the fastest spreading vegetation type. Most firefighters who lose their lives in fires have been killed in grass fires. Therefore, while the practice of mowing or grazing grass can enhance fire safety (if mowing does not occur during severe fire weather), removing shrublands and converting them to grass is likely to make the landscape more flammable.	
Sonoma Land Trust	9/26/2022	B11-264	Compliance With Fire-safe Building Codes In addition to defensible space, the DEIR relies upon class A roof retrofits and the compliance with fire-safe building codes in the construction of new buildings to mitigate fire risk. Although fire-safe building practices, such as those required in new building codes, increase the possibility that structures will survive wildfires (Syphard and Keeley 2019), they also do not guarantee prevention of structure loss. The extent to which enforcement of building codes increases the rate of structure survival in wildfires is yet unknown. For example, one study shows that building codes that enforce fire-safe construction helped to decrease rates of structure loss compared to rates of loss before the codes were enforced (Baylis and Boomhower 2021). On the other hand, an analysis of the Camp Fire, where more than 18,000 structures were destroyed, showed that homes built before and after the enforcement of building codes were destroyed at roughly equal rates (Knapp et al. 2021). Therefore, as with defensible space, many new homes with fire-resilient construction have been destroyed in recent California wildfires.	See response to comment C109-14.
Sonoma Land Trust	9/26/2022	B11-265	Although fire-safe building practices improve the odds of survival for new homes, these codes do not protect the existing homes at the site and in the surrounding areas. The increase in population and human activity in the region at large increases the odds for more human-	See response to comment C109-15.

Commenter	Date	Letter	Comment	Response
			caused fires to start, as people will be moving in and out of the area, engaging in more activities that could generate sparks, and spending more time recreating in flammable open-space areas. Given that humans are mobile, ignitions are numerically more likely to occur anywhere in the surrounding area that experiences an increase in human presence and activity, and this exposes more existing structures to wildfires at a landscape scale. In other words, because wildfires occur over large areas, with the most destructive wildfires becoming very large (Syphard et al. 2022), impacts can be expected to occur in areas much larger than the project footprint. Furthermore, new building codes will not benefit the older structures within the project footprint, some of which have significant historical and cultural value. Policy 2-38 suggests retrofits of new roofs, siding, and windows for existing structures, but this is not a complete list of needed retrofits for fire safety, and the details of this policy are vague. Would these retrofits be applied to all existing buildings, even the historical ones? They also would not apply to buildings outside of the SDC site.	
Sonoma Land Trust	9/26/2022	B11-266	Shelter in Place The DEIR relies in part on proposed Policy 2-54, which requires the Project proponent to build or designate an on-site shelter-in-place facility. DEIR at pages 510 and 511. This alternative of sheltering in place is a dangerous proposition, as evidenced by the Black Saturday Fires in Australia in 2009. In those fires, 173 people lost their lives, and more than half of those people had been sheltering in place. (https://www.sciencedirect.com/science/article/abs/pii/S221242091730050X). As a result of these fires, the Australians have now shifted thinking away from their	See response to comment C109-16.

Commenter	Date	Letter	Comment	Response
			stay and defend policy and now have a system in which all residents are encouraged to evacuate when weather conditions meet a "catastrophic threat" level. In short, buildings are replaceable, but human lives are not. While having a shelter-in-place facility may benefit those who are simply unable to evacuate, this should be a last resort, and the SDC project should not rely on this method as mitigation for wildfire risk related impact. Finally, I question the enforceability and endurability of many of the proposed policies. Who is ultimately responsible for ensuring that the policies are followed? Activities such as fire-safe education, defensible space maintenance, or maintenance of buildings require ongoing, permanent attention. Who will ensure that these activities will continue after the structures have been built? Will a permanent staff position be created to ensure ongoing compliance? In short, people will move in and move out over time, but the houses and the landscape will remain.	
Sonoma Land Trust	9/26/2022	B11-267	Conclusion In conclusion, contrary to the assertions made in the DEIR, there is a strong likelihood that the proposed development, and its alternatives, will have significant impacts relative to wildfire. The potential for increased numbers of wildfires – and more wildfires during severe fire weather - are likely to significantly affect public health and ecological functioning. There are also likely to be increased economic costs for management and suppression, from damage/destruction to human infrastructure or agricultural lands, and from post-event hazards such as mudslides or debris flows. Sufficient homeowners insurance for wildfire, which is becoming increasingly expensive, will also be difficult to attain, particularly for the low-income residents that are supposed to be supported by this plan.	See response to comment C109-17.

Commenter	Date	Letter	Comment	Response
			Public health may be threatened not only from direct injury and mortality during a fire, but from smoke. The evacuation plans described in the DEIR only account for fires coming in two directions and spreading through other towns before reaching the project site. These analyses should also incorporate scenarios in which fires are spreading directly from the roads east of or from Sonoma Mountain west of the project site. In these cases, if the fire weather is severe and the fires are burning toward the project site, there would likely be less time for residents to evacuate, and this puts human lives at risk. Another potential impact to public health and safety is that, if fire frequency increases regionally due to additional opportunities for human-caused ignitions, secondary hazards may occur post-fire, such as flooding, landslides, runoff, or debris flows. Not only may these secondary events be potentially harmful during the event, but there may be subsequent impacts to water quality.	
Sonoma Land Trust	9/26/2022	B11-268	While my letter is aimed at explaining the wildfire-related potential and costs associated with the project, there are also ecological impacts that may result from the increased fire risk in the area. For example, there are ecological costs associated with vegetation management and construction of fuel breaks. There are also potential ecological impacts that will result from the potential for increased fire frequency in the area. Many vegetation types in the western USA are experiencing fire-driven conversion, often from native vegetation to invasive species (Guiterman et al. 2022). Therefore, the DEIR's conclusion that the project would result in no potential loss of forest is inaccurate because it fails to account for the potential effects of increased wildfire. While the policies to reduce fire risk at the site may work to lessen some of these impacts, the proposed	See response to comment C109-18.

Commenter	Date	Letter	Comment	Response
			policies are unlikely to offset the increase in fire risk to the property and surrounding area that results from the project. Fire hazards will nevertheless likely be significant.	
Sonoma Land Trust	9/26/2022	B11-269	Finally, in my reading of the DEIR, I was unable to understand some of the statements. Therefore, it would be helpful to have additional clarification on the following questions: 1) Why does the plan state that the Historic Preservation Alternative leads to higher fire risk? Based on its reduced population and housing, the Historic Preservation alternative appears to be more fire-safe than the proposed project or its other alternatives. 2) On what basis does the DEIR assume that low-lying creeks and riparian areas would increase fire safety? While these areas are less flammable in general, they do not appear to be close to the proposed housing. Also, when riparian areas dry out, they can burn rapidly at high intensity. 3) On what basis does the DEIR assume that the housing in low-elevation or flat areas would not be at high risk? While it is true that topographically complex areas can often have highly erratic fire behavior, many structures are lost in low-elevation, low-relief areas (Syphard et al. 2021).	See response to comment C109-19.
Sonoma Land Trust	9/26/2022	B11-270	There are several local and state regulations applicable to the SDC Specific Plan that are not included in the Hydrology/Water Quality Regulatory Setting section (3.9.1 on pg. 270) of the DEIR. These include the following. a. Sonoma County General Plan 2020 Policy C-WR-2f, which states, “Discretionary projects in Urban Service Areas, where the density of development thus extent of impervious surface area is greater than in Rural Communities, shall be required to maintain the	Comment incorporated. Local and state regulations mentioned in this comment are added into the Regulatory Section of Hydrology and Water Quality.

Commenter	Date	Letter	Comment	Response
			site's pre-development recharge of groundwater to the maximum extent practicable/feasible. Develop voluntary guidelines for development in Rural Communities that would accomplish the same purpose. (GP2020 Revised)". b. Sonoma County General Plan 2020 Policy C-WR-4b, which states, "Use water effectively and reduce water demand by developing programs to: (1) Increase water conserving design and equipment in new construction, including the use of design and technologies based on green building principles; (2) Educate water users on water conserving landscaping and other conservation measures; (3) Encourage retrofitting with water conserving devices; (4) Design wastewater collection systems to minimize inflow and infiltration; and (5) Reduce impervious surfaces to minimize runoff and increase groundwater recharge. (GP2020)". c. Sonoma County General Plan 2020 Policy C-WR-4f, which states, "To minimize generation of wastewater and encourage conservation of Coastal water resources, require use of water saving devices as prescribed by the local water provider in all new developments. (New)". d. California statutes and regulations (e.g., California Code, Division 3. Dams and Reservoirs) related to dam safety. As elaborated below, the missing County policies and state regulations are directly relevant to the water supply and flood hazard assessments for the project as elaborated below.	

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-271	The DEIR Project Description is not detailed enough to evaluate potential impacts on hydrology and the environment. The DEIR does not contain a project plan with sufficient detail about land use change to complete the necessary hydrologic and water quality assessments to determine impacts from the project. Due to the lack of an adequate Project Description, I don't agree with the DEIR determinations that potential hydrologic and water quality impacts are less than significant and that no mitigation measures will be required for the following reasons. a. Impact 3.9-1 - The DEIR states that potential impacts to federal, state, and local water quality standards are less than significant. However, the DEIR has not analyzed how changes in site runoff and associated erosion potential will change. Based on my experience, this analysis would require detailed hydrologic and hydraulic modeling that incorporates all changes in land use (esp. impervious surfaces) and runoff estimates to determine where and by how much flow rates (and erosion potential) may impact receiving waterways both on- and off-site. BMPs and other measures would then be designed correctly to mitigate these impacts. This is the primary way the DEIR can address the significance of the impact before and after mitigation. b. Impact 3.9-2 - The DEIR states that the project will not interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin and associated potential impacts are less than	The commenter's main point is that there is not detailed analysis and therefore the impacts cannot be assessed. It should be pointed out that the potential impacts are discussed (3.9-1 to 3.9-4) and it is shown that development does have the potential to impact water resources. However, the impact analysis also makes specific references to county and state policies that will require specific mitigations prior to developing any of the parcels in the Specific Plan area. There are 28 County General Plan policies that are intended to minimize water resource impacts. There are also specific County design and mitigation thresholds that any development in the Specific Plan area must comply with. The impact discussions regarding the potential changes in water quality and water resources cite specific policies that address those potential impacts and are therefore built in mitigations required for any Specific Plan developments and therefore no mitigations are specifically called for other than complying with existing State and County development policies and requirements during detailed planning and project proposals. In regards Comment 2a. County and State have specific policies which regulate the discharge of storm water and specific requirements for detention and in some cases retention of storm water runoff. These types of features can only be effectively designed once detailed information on development footprints is known. In the case of this Specific Plan, these detailed specific footprints are not known and therefore complying with State and County regulations will guarantee these facilities are designed so that they reduce any specific project

Commenter	Date	Letter	Comment	Response
			significant. However, the DEIR does not contain any detailed technical analysis of how the project development will alter groundwater recharge. The DEIR has an obligation to describe any potential changes in recharge. Simply stating that BMPs that support groundwater recharge will be integrated into the Project does not demonstrate that they will be sufficient to mitigate potential impacts. c. Impact 3.9-3 - The DEIR states that Project development would not substantially alter the existing drainage patterns or result in substantial erosion and flooding on- or off-site or contribute runoff that would exceed the capacity of existing or planned storm drain systems. Thus, the DEIR concludes that associated impacts are less than significant. These conclusions are not substantiated as the DEIR does not present results from any hydrologic on hydraulic analyses to demonstrate to what degree the project may increase runoff rates and erosion potential from new or improved development. The assumption that adhering to County mandated BMPs will reduce flooding and erosion impact to below significant has not been demonstrated. Instead, the DEIR defers analysis and mitigations for hydrologic and water quality impacts. d. Impact 3.9-4 – The DEIR states that the potential to expose people and structures to significant risk or loss, injury or death involving flooding from dam failure is less than significant. However, this is completely contrary to the	water resource impacts to a less than significant level. In regards to Comment 2b. The commenter does not acknowledge the fact that the proposed development area already has nearly 74% of the core campus area consisting of impervious structures. There is no current groundwater recharge BMPs on the site. Specific Plan development will provide an opportunity to retrofit existing areas to enhance groundwater recharge above what the site contributes now. In regards to comment 2c. Developments within the Specific Plan area will undergo detailed hydrologic analysis to determine the size and extent of detention basins and other storm water management options. Each development will be required to calculate its runoff impact and demonstrate that it will not have an impact on existing facilities. In some cases it may be easier and more appropriate to upgrade the facilities. In either case, review by County Public Works and floodplain managers as well as building permit specialists will ensure that each proposed project complies with current building codes and development regulations regarding storm water management. In regards to Comment 2d. Every dam that is regulatory size and is under the California Division of Safety of Dams (DSOD) jurisdiction is required to have a dam failure inundation map. This is a map that shows the areas of flooding during a dam failure event. It does not indicate the likelihood of such a failure. The dams in the Specific Plan area are old dams that were constructed prior to the oversight of the State. Deferring the studies of dam failure potential is not deferred analysis. The

Commenter	Date	Letter	Comment	Response
			California Division of Safety of Dams (DSOD) conclusions about Project dam safety presented in Section 3.9.2.5 (Flooding – Flooding from Dam Failure, pg. 286-287) of the DEIR. Page 286 of the DEIR states, “The DSOD has classified the downstream hazard of a failure at Fern Lake as high”. On page 287, the DEIR states, “The DSOD has classified the downstream hazard of a failure at Suttonfield Lake as extremely high.” These statements alone suggest this potential impact is not “less than significant”. The DEIR does present inundation maps associated with these failures but provides no further analysis on how these potential impacts will be mitigated apart from the statement (pg. 287) “Specific geotechnical investigations of the dams at Fern and Suttonfield Lakes would need to be conducted to determine their potential for failure.” However, this is a deferred analysis, which does not support the findings of “less than significant” impacts and “not applicable” mitigations. e. Impact 3.9-5 - The DEIR states that implementation of the Project would not conflict or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Thus, the DEIR concludes that associated impacts are less than significant. However, for the same reasons presented above (items 2a. – 2c.), the DEIR does not present any technical justification for this determination and should be considered inadequate and incomplete.	area of inundation is known, however, the potential for failure of these dams is unknown. The Specific plan does not intend to make any changes to the dams or their operations, therefore, there would be no increase in risk associated with these dams. Also in 2021 the DSOD determined that the condition of the dams was satisfactory and thus the risk from dam failure was acceptable to DSOD. In regards to Comment 2e. The commenter questions the less than significant impact determination for water resources. At this stage of the planning it is not realistic to expect technical justification for this determination. There are numerous State and County policies which clearly dictate the steps that any proposed development within the Specific Plan area must comply with in order to obtain specific project approval. These policies regulate how much, how fast, and what types of facilities are needed to protect water quality, enhance groundwater recharge and protect residents from flooding. These studies are mandated by current regulations and are not needed to show Specific Plan feasibility but to ensure that there are less than significant impacts for the identified projects in the Specific Planning area.

Commenter	Date	Letter	Comment	Response
Sonoma Land Trust	9/26/2022	B11-272	An important analysis of the SDC project is the determination if there are sufficient water supplies to meet proposed project water demands. Appendix D of the DEIR presents the results of this analysis. Based on my review of Appendix D, I've identified several mistakes and other issues that suggest the DEIR does not demonstrate there is sufficient water supply to meet future (2045 full buildout) demands. Table 2 (pg. 14) of Appendix D indicates that estimated Project annual water demands by the year 2045 will be 342 acre-feet per year (AFY). Table 9 (pg. 31) of Appendix D indicates that available annual supply that will be 100% reliable for the period 2030-2045 is 356 AFY. Comparison of available and reliable water supply (356 AFY) to full buildout demands (342 AFY) suggest there is very little margin for error in terms of future water supply management. The DEIR supply estimate is also concerning to me in that the historic (1969-2007) water use (demands) for the SDC averaged 622 AFY and peaked at 1,143 AFY in 1986 (pg. 12, Appendix D). I'm suspect that the historic SDC water use is nearly twice the volume of estimated future full buildout (2045) Project water demands, especially when the Project proposes to build an additional 1000 residential units and hotel and reoccupy and/or expand the commercial and industrial uses (see Table 1, pg. 13 of Appendix D). Even with conservation measures, I would expect that Project water demands would be similar to if not larger than historic use. The next paragraphs elucidate this opinion. In reviewing and cross-checking the data and	As discussed in the Water Supply Assessment (WSA), the water supply and demand estimates for the Proposed Project are both conservative estimates. For example, as mentioned in the comment, the available supply generated by the surface water rights associated with the Sonoma Developmental Center (SDC) Property used for the purposes of the supply and demand comparison represent the modeled supply that is 100% reliable for all year types. As mentioned in Section 6.2.3 of the WSA, modeling suggests that the available supplies and water rights would allow for additional diversions of approximately 280 acre feet per year (AFY) on average and as much as 808 AFY above the 100% reliable yield if the diversions were not constrained by the current storage capacity and Proposed Project demands. Thus, projected available normal year supplies would be able to accommodate up to 636 AFY in demands, which is in line with the average historical water production at the SDC site (i.e., 622 AFY). Additionally, the modeling presented in the WSA does not account for any potential operational improvements to the SDC supply infrastructure (e.g., automated Sonoma Creek intake pump controls and other supervisory control and data acquisition [SCADA] improvements), which could increase diversions. The Proposed Project's demand estimates are also intended to be conservative. For example, community landscaping water use is estimated according to the Maximum Applied Water Allowance (MAWA) per the California Model Water Efficient Landscape Ordinance (MWELO), which represented the upper limit of annual applied water for established landscaped areas. However, it

Commenter	Date	Letter	Comment	Response
			information presented in Tables 1 and 2 of Appendix D, I identified several questionable results that suggest the DEIR water demands are significantly underestimated. These findings are as follows. a. Table 2 (pg. 16 of Appendix D) only provides employee water use estimates for the proposed hotel. Water use by guests staying in the 100,000 square foot hotel is not accounted for in the annual water demand estimate. Incorporating guest water use into the demand estimate could easily result in total annual project demands greater than reliable supply. b. To better evaluate the DEIR demand estimates, I created Table A (below), which merges data from Tables 1 and 2 in DEIR Appendix D. In doing this exercise, I identified a significant math error in the DEIR demand estimates for General Commercial, Office, Public/Industrial, and Research & Development land uses presented in Table 2 of Appendix D. When independently calculating water demands using the 2045 land use areas and Water Use Factors provided in Appendix D, the respective 2045 water demands for the General Commercial, Office, Public/Industrial, and Research & Development land uses result in values that are two orders of magnitude higher than those reported, which results in an increased annual Project water demand of 9846 AFY (see Table A). c. The Permit Sonoma website1 provides guidelines (8-2-1 Water Supply, Use and	is likely that actual plantings will be less water-intensive than the MAWA estimates. The demand estimates also do not account for the Proposed Project's potential use of recycled water, which could offset a portion of the projected potable demands. Lastly, the demand and supply comparisons do not account for any demand reductions that would occur due to implementation of a water shortage contingency plan (WSCP) during dry years. Valley of the Moon Water District's 2020 WSCP presents options for the District to achieve more than 50% reduction in dry year demands, if required. Any development at the SDC would be required to comply with this and future WSCPs developed and implemented by the District. While the historical production at the SDC site provides a useful comparison for estimated supply yields from the water supplies associated with SDC property (see Response 3-1), they are not representative of future Project demands. The land uses associated with the historical demands will be fully replaced by the those associated with the Proposed Project (i.e., the Proposed Project demands are not additive to existing demands). As discussed in WSA Section 4.4, the selected hotel water demand factor is based on a literature values included in Waste Not, Want: The Potential for Urban Water Conservation in California (Pacific Institute, 2003, https://pacinst.org/publication/waste-not-want-not/). The commercial demand factors developed in that document were derived based on the total water use for each land use type and then normalized by gallons of water per employee per day. As such,

Commenter	Date	Letter	Comment	Response
			Conservation Assessment Guidelines) for the preparation of Water Supply Assessments. The purpose of this policy is to provide guidance to applicants and their representatives on how to prepare a Water Supply, Use, and Conservation Assessment (henceforth, the "Assessment"). The Assessment may be a standalone document, or supplemental to a hydrogeologic study, Zero Net Use report, or other water supply related report. These guidelines are intended for discretionary and ministerial projects. Discretionary projects that are dependent on groundwater or surface water will typically require an Assessment with the use permit application. The Assessment will inform the environmental review process and conditions of approval. The authority of the Assessment falls under Sonoma County General Plan, Water Resource Element Goals WR-2 and WR-4, Objective WR-4.1, WR-4.2, and WR-4.3, and Policies2 WR-2c, WR-2d, WR-2e, WR-4b, and WR-4f. Therefore, the DEIR Water Supply Assessment (Appendix D) should adhere to County Guidelines. Appendix A to the County's Guidelines has water use estimates for residential, landscape, agricultural, and Commercial and Industrial uses that are greater than those factors presented in Table 2 of Appendix D (see Table B). Applying the Sonoma County water use estimates to Project water demand estimates results in higher residential and irrigated area water demands than presented in the DEIR (see Table B below).	while the water demand factor is based on the number of employees, it includes all the water use associated with hotels (e.g., water used for cooling, pools, restaurants, banquet rooms, showers, toilets, faucets, etc.). No change to the factor is required to account for guest water use as it is already built into the estimate. The commenter has identified that the units for the commercial/industrial and research and development (R&D) water use factors are incorrectly reported in Sections 4.2 and 4.3 and Table 2 of the WSA as "AFY/100 square feet (sf)". The correct units are actually "AFY/10,000 sf". While the units are labeled incorrectly, the reported water use estimates in the WSA are correct and are based on the correct units. See revised Table 2 attached with changes highlighted in blue. The commercial/industrial factor used for General Commercial, Office, and Public/Institutional factors were derived from the average commercial sector water use per account between 2017 and 2019 (1,195 gallons per day [gpd]/account or 1.34 AFY/account) (EKI, 2020. 2020 Water Demand Analysis and Water Conservation Measure Update, prepared for Valley of the Moon Water District, December 2020) divided by the average building area of all commercial accounts (7,490 sf/account) (Average billing area for commercial accounts was calculated based on the tax records for all commercial accounts within the District's service area) in the Valley of the Moon Water District Service Area, per the equation below: $1.34\frac{AFY}{account}\ x\ \frac{account}{7{,}490\ sf} = 0.000179\frac{AFY}{sf} = 1.79\frac{AFY}{10{,}000\ sf}$ The R&D water use factor was derived from the

Commenter	Date	Letter	Comment	Response
			In summary, correcting math errors and applying the Sonoma County guidelines water use estimates to the DEIR demand estimate tables results in a total annual Project water demand of 10,231 AFY, a values three times higher than reported reliable supply (356 AFY). This annual total demand will be even higher when hotel guest water use is considered.	Redwood City Engineering Standards Volume 3. Water Demand Projection Worksheet (https://www.redwoodcity.org/home/showpublisheddocument/20382/637183931771200000), which reports an R&D water use factor of 0.21 gpd/sf [Note that the water demand factor used in the WSA for R&D is likely conservative. The Genentech Campus Master Plan Public Review Draft (https://www.gene.com/assets/frontend/downloads/media/genentech_campus_plan_2019/Genentech_Campus_Plan_2019.pdf) studied 2016 water use at the Genentech campus in South San Francisco found that average annual water use equaled 180 gpd/1,000 sf (equivalent to 2.02 AFY/10,000 sf) or 14% lower than the factor used in the WSA], per the equation below: $0.21\frac{gpd}{sf} x\ 0.00112\frac{AFY}{gpd} = 0.000235\frac{AFY}{sf} = 2.35\frac{AFY}{10{,}000\ sf}$ While the units for the factors were incorrectly reported the water use estimates reported for estimated water use in Table 5 and other sections of the WSA are correct. As noted in the referenced website on the 8-2-1 Water Supply, Use and Conservation Assessment Guidelines, the purpose of this policy is to provide guidance to applicants and their representatives on how to prepare a Water Supply, Use, and Conservation Assessment (henceforth, the "Assessment"). This Assessment is triggered by a "use permit application" and is not the same as a Senate Bill (SB) 610-compliant WSA. The website also notes that the "water use rates may deviate from the above listed default use rates with site-specific data or published reference, and approval of the review authority." The residential

Commenter	Date	Letter	Comment	Response
				water use factors presented in the Assessment Guidelines of 0.5 AFY per dwelling unit (446 gpd/du) is over 80% more than the single-family water use factors for Valley of the Moon Water District, which were based on average 2017-2019 residential water use within the District and serve as the basis for the Proposed Project residential water demand estimates (EKI, 2020. 2020 Water Demand Analysis and Water Conservation Measure Update, prepared for Valley of the Moon Water District, December 2020). It is not realistic to assume that water use for the Proposed Project's new homes, all of which would be constructed according to current CalGreen building code standards, would be significantly higher than the District's existing low density residential use. The Assessment Guidelines residential water use factors also do not account for reduced water use associated with higher density residential units, as are planned for the project. Additionally, consistent with the Making Water Conservation a California Way of Life legislation, on September 29, 2022, the Department of Water Resources (DWR) submitted the recommendations on guidelines and methodologies that urban water suppliers will be required to use to calculate their annual urban water use objective (referred to as "Objective") to the State Water Board for approval. Compliance with the Objective will be calculated as the sum of an urban water supplier's: (1) residential indoor water use standard, (2) residential outdoor water use standard, (3) large commercial, industrial, and institutional (CII) landscape outdoor water use standard, (4) water loss standard, (5) bonus, and (6) variance. Further, on September 28, 2022, Governor Gavin

Commenter	Date	Letter	Comment	Response
				Newsom signed Senate Bill (SB) 1157. This bill reduces the previously adopted residential indoor water use standard of 55 gallons per capita per day (GPCD) by 2025 and 50 GPCD by 2030 to a new standard of 47 GPCD by 2025 and 42 GPCD by 2030. With the water demand factors included in the Assessment Guidelines, the Proposed Project would not be able to achieve the developed and pending water use Objectives and thus the Assessment Guideline factors are no longer applicable and should not be considered a reasonable basis for the demand projections included in this WSA.

Commenter	Date	Letter	Comment	Response
Amanda Zangara	8/19/22	C1-1	I am writing to express my concern for the recently released Draft and Environmental Impact Report and Draft Specific Plan for the Sonoma Developmental Center. The drafts' proposal for 1,000 residential units along with commercial development brings about great concern for the environmental impacts in an area where wildfire and drought continue to be of great concern. These issues rise to the forefront of concern due to their potential effects on human well being; for me, the impact on wildlife is also of great concern, though unfortunately in our current human-centric existence, the flora and fauna that are so important within the larger ecosystem seem to gain less of our attention. Overall, the loss of biodiversity, one of the greatest gifts of living in Northern California, will ultimately impact us all. This should be given great weight when determining land use and planning.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Amanda Zangara	8/19/22	C1-2	I am urging the county to engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022. Furthermore, I am calling for a re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.	This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.
Amanda Zangara	8/19/22	C1-3	I have dedicated myself to working with young children in the outdoors in efforts to cultivate their connection to nature and hopefully inspire them to act as individuals who seek to preserve it. I hope that you will consider the existence of the future generations and consider the impact such a project could have on the environment they will one day live.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Betsy Donnelly	8/19/22	C2-1	Thank you for taking the time to read my email today. I would like to ask that the County engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022. Because the Specific Plan and EIR were released before the State selected a development proposal, the Specific Plan is hypothetical. Neither it nor the EIR disclose the characteristics or environmental impacts of the proposal that will ultimately be accepted by the State.	Thank you for your comment letter. This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.

Commenter	Date	Letter	Comment	Response
Betsy Donnelly	8/19/22	C2-2	I also ask that for a re-drafting of the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide. Thank you for your time and attention to this matter.	This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.
Brad McCarty	9/14/22	C3-1	The DEIR doesn't seem to look at the impact on cyclists and pedestrians OUTSIDE the campus: it does acknowledge that VMT along Arnold Dr and Hwy 12 will increase and cannot be mitigated. Does the traffic impact analysis estimate the corresponding increase in the number of bicycle and pedestrian collisions along Arnold Drive and Hwy 12 both with and without bike and pedestrian infrastructure improvements? If so, what are those numbers?	Thank you for your comment letter. As outlined on page 428 fof the DEIR, per CEQA requirements, the EIR is not required to analyze a projected increase in bicycle and pedestrian collisions. Instead, regarding traffic safety, the EIR is required to assess the impact of the plan on Impact 3.14-3, "Implementation of the Proposed Plan would not substantially increasehazards due to a geometric design feature (e.g., sharp curves ordangerous intersections) or incompatible land uses (e.g., farm equipment)." As outlined on page 450, the impact of the Proposed Plan is considered Less Than Significant, and no mitigation measures are required. In addition the policies and implementing actions outlined in Section 3.14.4.3 address proposed safety and roadway improvements in the Specific Plan.
Brad McCarty	9/14/22	C3-2	It is not valid to assume that the County or Caltrans will make the needed improvements as part of future development: they have, to date, been unable to make ANY improvements on those roadways in the impacted area: both roadways have ZERO shoulder width sections which require cyclists and pedestrians to be in the vehicle lanes.	This comment is noted, however it pertains the the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Brad McCarty	9/14/22	C4-1	The SDC DEIR states that traffic modelling was done to estimate evacuation travel times throughout the Sonoma Valley during various emergency conditions. Its conclusion is that evacuation times are barely impacted at all (worse case less than a 2 minute additional delay I believe) by the addition of 1,000 new housing units and 2,000	This comment is noted. Please see MR-4 regarding the adequacy of the wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			residents. Obviously many of us who did evacuate during the 2017 wildfires found those results difficult to believe.	
		C4-2	Well, yesterday afternoon (8/30/22) there was a single structure fire in Boyes Hot Springs which caused emergency responders to close Hwy 12 in both directions for about 1.5 hours. That closure snarled traffic throughout the valley and travel times WELL exceeded an additional 2 minutes over normal times. Arnold Dr, Agua Caliente Rd and Boyes Blvd were complete stand stills. Perhaps the impact was even greater due to the diverted Northbound and Southbound traffic from Hwy 12 intersecting each other at the roundabout on Arnold Dr. This huge snarl was due to a single structure fire! This is why valley residents are VERY sceptical of the evacuation traffic impacts of the proposed plan.	This comment is noted. Please see MR-4 regarding the adequacy of the wildfire evacuation analysis.
Brian Bollman	9/14/22	C5-1	I have the following concerns regarding the Sonoma Developmental Center Specific Plan --The Specific Plan does not appear to address the issue of embodied carbon within existing buildings to be removed.	Thank you for your comment letter. This comment is noted. Please see MR-8 regarding the historic preservation of existing buildings on the core campus.
Brian Bollman	9/14/22	C5-2	--The Specific Pan does not appear to address the consequences of creating a high density development at a great distance from jobs and other facilities. specifically it doesn't adequately address commute and errand times.	This comment is noted, however it pertains the the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Brian Bollman	9/14/22	C5-3	In these times of global warming these concerns need to considered in the planning of any new development. Any development in this area needs to re-purpose existing buildings to the greatest degree possible without building any new buildings, and either be extremely limited in size, or be entirely selfcontained, having all of the industry and facilities needed to support the new community within the community.	This comment is noted, however it pertains the the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Brian Bollman	9/14/22	C5-4	Building removal and construction is a major contributor to global warming, and should only be done when clearly necessary. Sonoma County is into its sixth straight year of population decline. It is unclear as to why we would need to do a great deal of construction and development in such and out-of-the-way corner of the county. And such construction and development is clearly not consistent with our county's stated goal of reducing greenhouse gas emissions.	Thank you for your comment letter. This comment is noted. Please see MR-8 regarding the historic preservation of existing buildings on the core campus.

Commenter	Date	Letter	Comment	Response
Carol Carr	9/14/22	C6-1	PLEASE protect the natural treasure of SDC!!!! The intricacies of what is being moved on by your agencies are difficult for the lay person to follow, but I do understand that the county has an opportunity to proceed in a respectful and environmentally protective fashion at SDC or not - and that your agencies are willing to manipulate the regulations and the process in order to circumvent environmental impact and protection, despite the desires of the Board of Supervisors and the constituencies they represent. I ask you to please have a conscience that includes longterm impacts for the quality of life and nature and the planet as a whole and protect the incredible resource of SDC. I ask that you do not exploit that space for gain and development, creating more damage and loss of the ecosystem and precious habitat that currently exists. Truly, those are not yours to squander, yet unfortunately, you apparently have the power and willingness to do. Please, as followed by the Sonoma Land Trust and the rest of us who care deeply about this very important issue, -until after October 24th- pause this review of the Specific Plan and EIR pending completion of the RFP process so that the county specific plan can be aligned with an environmental impact that respects the grave issue of the development of SDC. You may think that what you do is not crucial and that rationales of development and profit support your abuse of power, but we need leaders who are no longer motivated by exploitation, greed, and profit. Please act both consciously and conscientiously on this very important decision. If you are in a position of authority, you have a mandate to act responsibly and with conscience for the greater good.	Thank you for your comment letter. This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.
Carole Harbard	9/14/22	C7-1	It seems the community has not been heard and vital considerations like the actual boundaries of the properties and how they relate to the wildlife corridor, the fire risk and evacuation of so many residence, the increased use of water in a drought ridden environment to name a few.	Thank you for your comment letter. This comment is noted. Please see MR-7 regarding impacts on wildlife movement and MR-4 regarding the adequacy of the wildfire evacuation analysis.
Carole Harbard	9/14/22	C7-2	1. Engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022. 2. Re-draft the County Specific Plan and EIR to describe and analyze the impacts of the	This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.

Commenter	Date	Letter	Comment	Response
			actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.	
Charles G. Tsegeletos	9/14/22	C8-1	I am a 30 year resident of Sonoma Valley and I ride and hike the trails above SDC almost every week. I feel the current plan of 1,000 homes and 900 on-site jobs will destroy the uncrowded and rural character of the area. This magical place will become just another crowded, housing place and it will be lost to all Sonomans now and into the future.There just aren't places like this anymore and it would be a terrible loss to our community. Perhaps half the numberof houses would be okay but even that is a risk. Please work to align the Specific Plan and the EIR with the states RFP.	This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.
Chris Gralapp	9/14/22	C9-1	The August Draft Specific Plan for Sonoma Developmental Center was released in advance of the State's RFP for selection of a developmental proposal, way too soon. Sonoma County should align the SDC Specific Plan with the State's RFP, not work completely independently before you know the parameters set by the State. You are putting the cart before the horse. Sonoma County must engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022. Please redraft the Specific Plan and the EIR to match and analyze the impacts of the actual proposal that the State selects for this site! It only makes sense, and will help to make for a much smoother process.	Thank you for your comment letter. This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.
Chris Gralapp	9/14/22	C9-2	The SDC site cannot support 1000 residential units--adding that much would put massive pressure on Bennett Valley Road, which already has problems with traffic and a high accident rate. As a Bennett Valley homeowner, I cringe at the thought of multiple times the high speed traffic moving through our quiet valley. Also, that much density would also disastrously impact the native environment. We have the chance of a lifetime to protect this stunning habitat, and link some significant corridors. Please reduce proposed population density. We know the state has mandated new housing, but it doesn't have to all be at SDC!	This comment is noted, however it pertains the the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Christina Carasch	9/14/22	C10-1	I am horrified that a 1000 homes and commercial developments are proposed for the developmental property in Glen Ellen and especially because the proposal was released before the EIR. This is a precious area and I have lived here for 33 years and I know how fragile this environment is in everyway (water, traffic, wild life, recreation,population growth to mention a few). I worked for the county for many years and I know you can do better then this. For the sake of town and our county I implore you to carefully consider the impact these ideas and implementing them will have and will have forevermore.	Thank you for your comment letter. This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.
David Eichar	9/14/22	C11-1	The board of supervisors directed staff to pursue an SDC specific plan with 750 residential units. Despite this, the main EIR project is for the 1000 residential unit plan. This provides less details about the environment impacts of a 750 unit plan, mainly just saying the impacts are less than the 1000 unit plan. If the 750 unit plan had been the main plan under review, more details regarding environmental mitigation would have been defined.	Thank you for your comment letter. This comment is noted, however it pertains the the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
David Eichar	9/14/22	C11-2	The draft EIR does not take into account the full impact of the hotel for Vehicle miles traveled and Greenhouse gas emissions. Hotels with conference rooms, especially one in the SDC, would be a destination hotel and draw more visitors to the Sonoma Valley. The entire trip,door to door, needs to be counted, including visitors' travel to their airport, air travel, and the trip from the airport to the hotel at SDC. Many EIRs I have seen assume that a hotel would not bring any more visitors to Sonoma County, arguing that they are coming for other destinations within Sonoma, such as wineries. You need to look nofurther than MacArthur Place Hotel and Sonoma Mission Inn, which have business conferences during the week. These business conferences bring visitors to Sonoma Valley, who would not have traveled here if it were not for the conference.	Thank you for your comment letter. This comment is noted. Please see MR-6 regarding the adequacy of the transportation analysis.

Commenter	Date	Letter	Comment	Response
David Eichar	9/14/22	C11-3	The estimate of increase in traffic times during wildfire evacuations iscompletely inadequate. In Oct 2017, wildfires started Sunday night. We did not need to evacuate immediately. But by Wednesday, with the Nunns fire spreading towards us from the north, and another spreading from the east, we left early that evening. Arnold Drive southbound was back up almost to Boyes Blvd. It was stopand go to Watmaugh Road. It took us an additional hour or more to travel from Boyes Hot Springs to get to the intersection of Arnold Drive and Watmaugh Road, than usual. In order to get an accurate estimate of increased travel time during an evacuation, the DEIR must start with a valid base. At survey of residences' experiences evacuating from wildfires needs to be conducted.	This comment is noted. Please see MR-4 regarding the adequacy of the wildfire evacuation analysis.
Denise Sobel	9/14/22	C12-1	I am not sure this is the place to send this email. But, I hope it finds someone who might listen. 1000 homes in SDC means at least 2000 people, 2 to 4000 cars, noise, lights, pollution, traffic, destruction of Sonoma's wild life corridor, to name a few concerns. People employed there would bring another 1000 cars to the now overcrowded Arnold Drive, more pollution, noise and destruction. A road cutting across to Hwy 12 will do nothing to alleviate the problem and destroy the beauty of this wild area. Yes, at one time there were 3000 people living at SDC, but during that time, the population of Sonoma was way less. And, most of those people didn't drive!	Thank you for your comment letter. This comment is noted, however it pertains the the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Denise Sobel	9/14/22	C12-2	Is anyone looking at where the water will come to supply the 1000 homes. Right now,everyone in Sonoma is counting each drop of water they use. I have heard no oneaddressing this problem. Plans are to take out the Pillsbury dam and end divertingwater to the eel river which feeds into the Russian River where Sonoma gets 30% ofits water. Where is more water going to come from?	This comment is noted. Please see MR-5 regarding the adequacy of the Water Supply Analysis.
Denise Sobel	9/14/22	C12-3	And, what about evacuation if there is a fire? I am asking you to drive down Arnold Drive or Hwy 12 one of these weekday mornings or late afternoon. Bumper to bumper traffic on both roads. The intersection of Hwy 12 and Verano is at a standstill most days after 3pm. I cannot imagine what will happen if evacuation is required during commute times. People died in Paradise when their	This comment is noted. Please see MR-4 regarding the adequacy of the wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			city burned down, there was only one way out,and it could not handle all the people needing to get out.	
Douglas C. Rice	9/14/22	C13-1	The different proposals, some of which have true merit, must be weighed against what is sensible and feasible and not in a monetary calculation from a developers perspective but from a communityperspective.I was an employee of SDC for more than 37 years. My position was with work development as theDirector of Sunrise Industries the Sheltered Workshop for the clients living at SDC. My 'dream' was totake the egress from Hwy 12 onto what is called the soccer field adjacent to the vineyards of the Tellerfamily and make this an industrial site set up to do limited manufacturing for start up companies. This site would be leased by DGS to individuals living at SDC/community who would own and operate thismanufacturing site aided by a Board to assist in helping to make decisions and how to grow. This, along with housing for the worker/owner of this company would be a hand and glove providing a true base forthis population to become self-reliant and self-funded. Alas, this never came to be. However, this email is not about what could have been but what it will become.I am a very strong proponent of affordable housing, but not a strong proponent of attempting to solve thisissue in one fell swoop dedicating it all to property at SDC. I understand that SDC's land is a perfect sitefor this sort of endeavor but to what degree is the meaningful question. Given all of the objections I am sure that you have received related to the proposal of allowing 1,000 housing units to the property should be strongly considered. A plan to set aside property for some housing is reasonable and should be competed in stages. When you look at developments such as Oakmont and its process to develop their property should be an example of how SDC might be developed and also learn what they did wrong and how not to make the same mistakes. So many lessons to be learned from previous attempts that should not be over looked or reinvented. I would also like to see a scaled back version of quantity of affordable housing allowed. A caveat for future expansion if all goes well could be put into place to allow for controlled and limited growth witheach phase and in turn each phase to be reviewed with the same conditional parameters and community input. Even though there appears to have been little to no consideration for any of the use	Thank you for your comment letter. This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			plans with regard to the population that lived at SDC, it is a shame that some sort of accommodation for those that lived here and those in the community to avail themselves of some part in this development for their better good. Thank you for taking the time to read my input...I hope it helps in some small way in making decisions on what SDC will become tomorrow.	
Douglas C. Rice	9/14/22	C13-2	I would like to see, as I believe most locals, a dedicated pathway across this land for wildlife to use freelyand without the threat of harm.	This comment is noted. Please see MR-7 on wildlife movement.
Douglas C. Rice	9/14/22	C13-3	A few of my essential worries is the ongoing drought and our ability to handle more housing withdiminishing water supplies, traffic mitigation and how our roads would look, not if but when we have arepeat of the fire storm in 2017 let alone the daily traffic we will see increased with no possibility forwidening any of the corridors, Hwy 12 or Arnold Dr. This is a major safety issue	This comment is noted. Please see MR-4 on wildfire evacuation.
David Eichar	9/16/22	C14-1	The addition of the road from SDC out to Highway 12 (highway 12 connection) would result in significant impact on wildlife. This area is a wildlife corridor. As wildlife currently traverse this area, the addition of vehicles in this area would disrupt the wildlife movement. This is especially true during construction. It is best not to add this road.If the road is built, despite the significant impact, then the following mitigation measure can be taken to reduce the	Thank you for your comment letter. This comment is noted. Please see MR-7 on wildlife movement.

Commenter	Date	Letter	Comment	Response
			impact. 1. Limit construction of the road to certain hours and months, where wildlife movement through the corridor is less. 2. Make the road one-way only, east bound. 3. Close the road, except for emergency evacuation.	
Deborah Eppstein	9/16/22	C15-1	SAFRR appreciates the opportunity to present our concerns regarding the Sonoma Developmental Center DEIR. If you have any comments or questions regarding this letter, please contact Deborah Eppstein by email (deppstein@gmail.com) or phone (801-556-5004). The two articles referenced in the letter are also attached.	Thank you for your comment letter. The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Denise Lacampagne	9/16/22	C16-1	I am ordinary citizen that is concerned about the future of Sonoma Developmental Center. I have lived on Marty Drive in the Glen Ellen neighborhood adjacent to SDC since 1976. I own my home. I worked at the Center for 33 years. I am not opposed to reasonable renovation, housing and development. I appreciate this opportunity to share my thoughts. Overall, it has been disheartening and unbelievable to see this report indicate thatthis project, overall, would have less than significant impact in so many areas that seem directly related to quality of life and environmental issues. Already, since the facility has closed, the campus portion has been impacted by the lack of care and upkeep of the grounds as evidenced by overgrown foliage and dying andfallen trees. Although I have reviewed parts of the DEIR, I make no claim to understanding everything, following the format or what some of the references to acronyms and regulations of this tool are. I am the first to admit my comprehension is minimal. I must trust the experts to address the impact of numerous outstanding water, light,noise, climate/environmental, fire safety, traffic, demolition, wildlife and habitat,etc. issues.	Thank you for your comment letter. The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Denise Lacampagne	9/16/22	C16-2	3.10-1 indicates this project as having no impact regarding dividing an established community and 3.12-1 speaks to the population growth as less than significant. As I understand this document, a separate development of with 1000 homes, shops, adjacent buildings and businesses and over twice the number of vehicles appears to directly contradict the terms “no impact” and “less than significant”. As proposed, this development would divide an established community. My concerns are primarily the number of homes and businesses that are being considered (along with other Sonoma Valley proposed developments at Hanna Boys Center and Elnoka Lane) and how this will impact evacuation throughout Sonoma Valley and our everyday life in Glen Ellen. As you are well aware, both Arnold Drive and Highway 12 are one lane roads to/from Santa Rosa, Napa or Highway 37. Petaluma and Rohnert Park can only be reached by one lane roads, as well.	This comment is noted. As described on page 318 of the DEIR, while the Proposed Plan does include the construction of linear features or other barriers, such as roads, the emphasis of the plan is on increasing connectivity within the Planning Area and improving linkages between the larger Sonoma Valley communities. As stated in the DEIR, "Such features include car-free circulation options within the site and transportation connections between the SDC site and the larger Sonoma Valley and Bay Area, such as transit access, safe sidewalks and crossings, and regional bicycle routes. Two new intersections on Arnold Drive immediately north and south of the Main Entry Road will be added to improve connectivity to the entire SDC site. The Proposed Plan will also establish a new community bikeway connecting Railroad in Eldridge to Carmel Avenue in Glen Ellen in addition to the development of a multi-use creek trail running parallel to Sonoma Creek that connects to a greater Glen Ellen-Eldridge community bikeway. Further, multimodal neighborhood connections will be added to connect the Campus east and west of Arnold Drive. ... By improving connectivity and land use consistency around the Core Campus and larger Sonoma Valley region, the Proposed Plan would make it easier for residents and employees to travel within the Planning Area and beyond. Therefore, because the Proposed Plan would not introduce any physical barriers to the Planning Area and would generally improve connectivity for all users, including vehicles, bicyclists, and pedestrians, it would result in no impact

Commenter	Date	Letter	Comment	Response
				with respect to physically dividing an existing community."
Denise Lacampagne	9/16/22	C16-3	Please note that references to population and vehicles at Sonoma Developmental Center when it was an active community are skewed. Overall, the number of people that lived there at any time did not drive or own vehicles. They lived incongregate housing. The staff who worked there came in at least 3 separate shiftsand were not on the roads at all times of day or simultaneously.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Denise Lacampagne	9/16/22	C16-4	Fire in this area has been a very real threat. Some tables in the original reports showed the fire line of the 2017 Nun's fire within the SDC grounds. In fact, the fire extended beyond the SDC grounds, burning a home on Burbank St. and continuing along the creek bordering several more homes. During that evacuation, cars were bumper to bumper, taking over two hours to get out of this end of the valley.	This comment is noted. Please see MR-4 on wildfire evacuation.

Commenter	Date	Letter	Comment	Response
Denise Lacampagne	9/16/22	C16-5	Many questions have come up after reviewing pieces of this DEIR for Sonoma Developmental Center. I do have several simple questions that jumped out at me that I am hoping to get direct answers to. 1) I would like to NOTE that the yellow area identified as Eldridge North area on pages 75-76 DOES NOT border on Eldridge South. It is part of Eldridge and the SDC campus. It DOES border on Martin St. which is part of the town of Glen Ellen. Labeling the Martin St., Burbank St., Cecilia Dr., Lorna Drive and Marty Drive as Eldridge has been a confusing and misleading misnomer and continued to not be addressed or corrected throughout the SDC planning documents.Would you please consistently cIarify the correct boundaries in ALL of the maps, tables and ALL documents pertaining to this SDC. 2) Will a barrier/fenceremain in place between the the yellow area identified as Eldridge North on page 76 and the current Glen Ellenn eighborhood where Martin St. and Burbank St. intersect? Will the proposed streets of Eldridge North merge onto Burbank St.? 3) Where exactly does the possible road from the SDC campus to Highway 12 comeout at? How would the cars trying to merge onto Highway 12 be managed? I have personally tried mergingon to Highway 12 past Temelec during an ordinary accident where traffic was at a lengthily, complete stop because of emergency vehicles (not threatened by fire) and other drivers were unwilling to let other cars onto the majort horoughfare. 4) Land Use Classifications indicates that the Institutional area-page 72- Walnut Circle identified in blue on page 76 could allow short term residential housing andevents. What is meant by short term residential housing? What type of additional events other than the types noted for the Historic Core (purple), Firehouse Commons (hot pink) and the MakerPlace (coral) are intended?With these combined events, itis reasonable that a significant number of attendees/tourists/employees will need daily access and egress from the venues as well as convenient parking on campus. How is this traffic generated by other than residential housing, being accounted for in terms of the single road/narrow bridge coming in and out of this campus?	This comment is noted. As outlined on page 520 of the DEIR, "infrastructure facilities would be subject to separate project-level CEQA review as applicable at the time the design is proposed in order to identify any potential project-specific impacts and identify any mitigation as may be appropriate." Therefore, the details and impacts of the proposed Highway 12 connection and any other major infrastructural changes will be outlined in a dedicated CEQA review process. Please see MR-6 for more detail on the transportation analysis. Further comments pertain to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Denise Lacampagne	9/16/22	C16-6	5) There are references Paratransit/Dial-a- Ride options beingpresented. Although, they provide a great service, there are eligibilityand time frame requirements that do not make it simply a matter ofmaking an appointment whenever a ride is needed. Whose oversightwill the proposed Transportaion Management Association(TMA) be under?6) As a resident that lives veryclose to the proposed projectand a retired employee thatsigned annual asbestos waivers,I am concerned how theasbestos issues will becontained during demolition. Isee references to “should, may,could”, but no definitive “willor must” terms.Who exactly will actually bemonitoring and ensuring thisprocess is carried outcorrectly?I look forward to your responses.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Elisa Stancil Levine	9/19/22	C17-1	There is no mention of mercury contamination in the report, and the evaluation of numerous buildings, based on casual visual examination, is suspect. Many of these buildings deemed ingood condition are not. As a historic restoration specialist I find the absence of mention of mercury very concerning, just as I find the minimal testing of actual building materials on the site concerning. I appreciate the detail and depth of the report but must raise a flag for full disclosure and proper testing, thank you.	The comment is noted. Please see Appendix G of the DEIR regarding soil analysis results. The objective of the RBM Surveys was to provide information regarding the presence of RBMs at the site including lead-containing coatings, PCB-containing light ballasts, PCB-containing caulking, miscellaneous universal wastes, and mercury-containing sources, and the presence, location, and quantity of ACMs and assumed ACMs, for the purposes of site planning and decision-making. There were mercury-containing fluorescent light tubes, HID lamps, pressure gages, and assumed PCB-containing light ballasts observed during the assessment. One soil sample was collected from the water treatment plant exterior sink drain location and analyzed for mercury content via CA-ELAP EPA Method 245.1. Detectable mercury was found in the soil sample. The Hazards and Hazardous Materials Impact Analysis starting on page 261 of the DEIR is informed by these assessments. Proposed policies and Standard Conditions of Approval would address potentially significant risks and mitigate them to a less than significant level.

Commenter	Date	Letter	Comment	Response
Elisa Stancil Levine	9/19/22	C18-1	Please explain why mercury contamination is not included in the EPA report. Elisa Stancil Levine, concerned citizenand historic restoration specialist	The commment is noted. See response to comment C17-1.
Elizabeth Crabtree	9/19/22	C19-1	I am deeply concerned by the vague and misleading way that the SDC DEIR addresses the very real and growing risk of catastrophic wildfire and drought in Sonoma Valley. The current proposal to create a densely populated community (with low-ball estimates of the number of future residents—3,000+ is far more likely) on the SDC campus, under the guise of building much-needed affordable housing, is untenable. Such development will create a town with a population over 4 times the size of Glen Ellen, and nearly a third the size of Sonoma, on a relatively small parcel of land, with one way in and out. This ill-conceived development plan puts our community at tremendous risk in the event of an uncontained wildfire. During rush hour, it can take 3-5 minutes to safely merge onto Arnold Drive. Imagine thousands more vehicles on this two-lane country road, trying to flee a fast-moving fire. To the extent that the DEIR addresses the possibility of wildfire at all, it envisions an orderly evacuation with ample time for residents to get to safety—or, if that is not feasible, to "shelter in place." As a survivor of the 1991 Oakland Hills fire, I know that wildfire is neither orderly nor predictable. The 2018 Camp Fire that leveled the town of Paradise came upon the residents so quickly that hundreds of people—including children—were forced to abandon their gridlocked cars (bumper-to bumper on a two-lane road) and "shelter in place" on a concrete pad for hours as propane tanks blew up around them. Those people survived, with severe PTSD; 85 others did not. It is beyond my comprehension that in 2022, in the midst of a years-long drought, knowing what we now know about wildfire risk in California, Sonoma County officials would put forth such an extravagant development plan without adequately considering the danger to its constituents, present and future. Insurance companies have stopped writing policies in high-risk fire areas; we feel lucky to have insurance, but the cost of our policy has doubled in the past year. The County of Sonoma owes its constituents responsible, realistic, honest, and thoughtful planning. This DEIR falls far short of that minimum standard.	Thank you for your comment letter. This comment is noted. Please see MR-4 regarding wildfire risk and evacuation times.

Commenter	Date	Letter	Comment	Response
Fred Hodgson	9/19/22	C20-1	After reading the last SDC plans, I am reminded again that very little thought is given to water. If we are to triple the local population in the near future, where is the water to come from. As we are already restricted and have been off and on for a number years, it seems ludicrous to build hundreds of housing units and very little if any water for them. Please give some thoughts on how this problem will be solved.Thank You	Thank you for your comment letter. This comment is noted. Please see MR-5 regarding the Water Supply Assessment.
Geri Brown	9/19/22	C21-1	The recent proposal for development of the SDC contains a housing element and commercial space that is too dense for the area and is not in alignment with the community engagement process and proposals. The latest plan increases the extensive risks of congested traffic, inadequate evacuation routes, inadequate water sources, encroachment of wildlife corridors and watershed, and is basically just too big for this part of Sonoma County. I live in Oakmont and dread the resulting additional daily traffic congestion along highway 12 and Arnold Drive as a result of over 1000 new homes and 900+ new jobs contained in this latest proposal, especially given our recent wildfire evacuations.This influx of new residents and workers will destroy the peaceful nature of our community. Let's be more creative with the use of SDC and keep in alignment with the community needs. I urge the County to: 1. Engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022.2. Re-draft the County Specific Plan and EIR to describe and analyze the impactsof the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.	Thank you for your comment letter. This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.

Commenter	Date	Letter	Comment	Response
Greg Guerrazzi	9/19/22	C22-1	I am a 28 year resident of Glen Ellen and lifelong resident of Sonoma County. My family has been in the County for over 100 years.I have diligently participated in the SDC Specific Plan process with the local community. It is very apparent that the local community input, guaranteed to be included in the plan by Permit Sonomaand required by DGS, has been thoroughly ignored. The local community feels they have been placated to during this entire process and no longer can rely on Permit Sonoma to conduct a fair, honest and equitable EIR process. Please engage the community in a meaningful planning process for SDC. The draft EIR and records of the community input substantiate that a meaningful and truthful planning process has not been undertaken. Align the County Specific Plan with the State's Request for Development Proposals and adhere to the General Plan, local zoning and historical preservation guidelines. It is very apparent that the County and State are not in sync on this process, which is obvious as the State awaits responses to the RFP due October 24, after the proposed adoption of the EIR.	Thank you for your comment letter. This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.
Greg Guerrazzi	9/19/22	C22-2	I understand that the County of Sonoma is under a State mandate to build many housing units and Permit Sonoma plans to force a large percentage of this housing into the historic village of Glen Ellen by tripling our population. It is the fault of Permit Sonoma and the negligence of our County leadership, that the County is in this dire housing situation due to years of ignorance, denial and favoritism to developers by Permit Sonoma and County leaders. So much so that now the village of Glen Ellen must bear the brunt of the County's woeful housing plans of the last decades. This is completely unacceptable. Would other historic Sonoma County villages, such as, Occidental,Bodega, Graton, Forestviille and others be subject to destruction by adding 1,000 homes? We all agree that housing must be a part of the redevelopment of SDC but at a reasonable level of400+/- units, with all being affordable. The Sonoma Valley does not have a need for a new commercial area as the existing commercial areas are not fully utilized. We all agree that SDC is a unique property of great biodiversity and value to our environment. Thedestruction of this property, and the surrounding area by adding 1000 homes and thousands of people, is a violation of your personal commitments to protect the citizens of Sonoma County. Below are some comments to the Draft EIR:	Thank you for your comment letter. This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Greg Guerrazzi	9/19/22	C22-3	1. The entire Specific Plan process and the resulting EIR are negligent in their approach, rendering them hypothetical. I understand and appreciate that the State has allowed the County to develop a plan, however the County is woefully unprepared to conduct such aprocess, which I have witnessed very closely. Aligning the Specific Plan and EIR with the State's RFP, would increase efficiency, save valuable taxpayer resources, and ensure thorough planning and environmental review. Review of the Specific Plan and EIR must be paused pending completion of the RFP process. 7. Re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.	This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.
Greg Guerrazzi	9/19/22	C22-4	2. We spent several hours trying to evacuate Glen Ellen in 2017, on our own accord as there was not notification. The Draft EIR states that only a minute or so would be added to the evacuation timeline with the addition of thousands of people at SDC. How can this be possible? The addition of an evacuation route to Hwy 12 is incomprehensible. History has proven that the fires will come out of the northeast and east and this evacuation route will send people into the face of the fire, rendering this route unusable in an emergency situation. This study is obviously flawed.	This comment is noted. Please see MR-4 regarding wildfire risk and evacuation times.
Greg Guerrazzi	9/19/22	C22-5	3. Building dense housing and commercial space in the wildland fire/urban interface is completely irresponsible. People will perish due to the negligence of this process. 6. Approval and development according to the Specific Plan will result in the densest development in all of Sonoma Valley, completely out of scale with the surrounding area and not in accord with the General Plan. 8. Over 700 market rate homes will not adequately address the dire housing situation created by Permit Sonoma and County leaders. 9. The total number of housing units the County must provide should not be the driving force of the Specific Plan. Simply evaluate the subject property based on the biodiversity and surrounding community. The housing need has extremely clouded this process.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Greg Guerrazzi	9/19/22	C22-6	4. We are under strict water controls in Sonoma Valley, see attached. The entire area is experiencing a severe drought. The Sonoma Valley water supply cannot support thousands of additional people. How can an entire new city be built in an area under severe water restrictions that are expected to remain in place indefinitely? The Draft EIR does not adequately address the water needs of the entire area.	This comment is noted. Please see MR-5 regarding the Water Supply Assessment.
Greg Guerrazzi	9/19/22	C22-7	5. Climate change is real and obvious in our area. Protecting biodiverse lands and precluding over development of areas such as the SDC campus are paramount to survival of the human race.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Greg Guerrazzi	9/19/22	C22-8	10. The traffic study is erroneous and does not address the stress that will be created on Arnold Drive and Hwy 12.	This comment is noted. Please see MR-6 regarding the transportation analysis.
Greg Guerrazzi	9/19/22	C22-9	11. Protection of the Wildlife Corridor is woefully understated. How can thousands of people live and work within yards of a critical wildlife corridor?	This comment is noted. Please see MR-7 regarding the interface with the wildlife corridor.
Greg Guerrazzi	9/19/22	C22-10	12. The Specific Plan and resulting Draft EIR are flawed, and the process must be re-started with preservation of the biodiversity of SDC and the existing community being paramount. Please consider the community and the environment before pushing development on a pristine property.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Linda Hale	9/19/22	C23-1	The following letter was sent to Governor Gavin Newsom and the DGS via Gerald McLaughlin. This letter was also sent to the Sonoma County Board of Supervisors,Senators Mike McGuire and Bill Dodd, and the Sonoma Index Tribune. This letter is written in support of the Sonoma Land Trust's request to engage inmeaningful planning for the SDC by aligning the County Specific Plan with the State's request for development proposals. Stating that no specific plan has been selected and that no mitigations are available for water, traffic, and wildlife is not a viable EIR. To the Office of Governor Gavin Newsom: The Office of the California DGS has rescinded its earlier premature offering of the Sonoma Developmental Center to a developer prior to the completion of an EIR. The 894 acre property has been held as a public trust to benefit both the disabled and the community. It also serves as the major water recharge shed for Sonoma Valley and is directly in the path of Sonoma Creek which crosses Sonoma Valley and exits through Petaluma to the San Francisco Bay. The community recognizes the need for affordable housing, but the proposed 1,000+ home development with only 250 affordable units, a high	Thank you for your comment letter. This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.

Commenter	Date	Letter	Comment	Response
			end hotel, and visitor services as businesses on site ignores the public input andwill be an environmental disaster for Sonoma Valley. The EIR process was fast tracked when the DGS released the property for sale. This is against the law since no project has been designated by the Board of Supervisors norhad the EIR process even been started. The EIR findings were released with thefollowing legal concerns:	
Linda Hale	9/19/22	C23-2	1. Where is the Response to Public Comments in the Draft EIR?	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Linda Hale	9/19/22	C23-3	2. Where in the DEIR are the actual Specific Plan mitigations listed? (Executive Summary refers to Appendix A, but mitigations are not included)	This comment is noted. Please see MR-1 regarding the adequacy of a self-mitigating plan.
Linda Hale	9/19/22	C23-4	3. The county is using a "Self-Mitigating Plan" approach. What is the rationale for doing this? How will implementation of mitigations work, since they won't appear in the EIR itself but only as a "condition" of moving forward with development?	This comment is noted. Please see MR-1 regarding the adequacy of a self-mitigating plan.
Linda Hale	9/19/22	C23-5	4. How, when, and through what mechanism will the open space lands at SDC be permanently protected and kept in public hands?	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Linda Hale	9/19/22	C23-6	Also Permit Sonoma states: “Public participation identified three key areas of concernamong the 16 areas studied: open space and wildlife, water, and wildfire risk and evacuation routes. The draft Environmental Impact Report finds that the proposed specific plan would not create significant and unavoidable impacts in these areas.” The problem is that the impacts are significant and unavoidable.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Linda Hale	9/19/22	C23-7	There is really no proposed specific plan. The traffic and water studies were done when the SDC was permanently closed by the state, so no impacts were shown due to low traffic and water use in the area. Permit Sonoma has done the EIR only allowing public	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			comments via zoom and the US Mail with no responses to critical concerns.	
Linda Hale	9/19/22	C23-8	Sonoma Valley is congested. It has two main roads and one of them had to evacuate 1,000s of Oakmont residents by bus during the last fire since there are no exit routes that can handle evacuation traffic. Three other major developments are now permitted between the city of Sonoma and Santa Rosa and in process along the Highway 12 corridor. Traffic in Sonoma Valley is already impacted, especially in the Boyes Springs area and the city of Sonoma with only one road out. People say that they no longer come to Sonoma because of the traffic. And Sonoma County has been sued for not meeting its own emission standards.	This comment is noted. Please see MR-6 regarding the transportation analysis.
Linda Hale	9/19/22	C23-9	Sonoma Valley is already in a state mandated Groundwater Study with well restrictions in place for commercial growth and homeowners' wells being monitored throughoutthe valley. We have asked for a reduction to 450 homes and no hotel. Please intervene before this goes any further. We need the State of California to come forward to protect what makes Sonoma Valley the destination it is and to protect local resources. This development will add a new city to the valley floor, deplete our vanishing water sources, and create urban sprawl. Please consider resources and action to protect a California resource. Thank you for being the Governor of California!	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Heather Gallagher	9/19/22	C24-1	My name is Heather Gallagher, I was born and raised in Sonoma, I now reside in Petaluma California. I have been following the recent planning proposals for the SDC. Since I was a little girl and still now as an adult, Every time I drive thru the SDC I feel a sence of magic. I remember looking out the windows of the car with my brothers as the car drove slowly thru the SDC in the morning or early hours of the evening, we would look for deer grazing on the grassy noles. We almost always saw them and if we didn't we were so sad. Since 1986. I have watched Sonoma county go through lots of changes. Over time things start to settle in and many of the changes years later have a lasting impact on the landscape and environmental impacts that are detrimental to the wild life, water ways and environmental impacts. I haven't seen the full scale of the plans for 1000 residential and commercial spaces planned for theSDC, but I know that if even half that amount were planned that it would be detrimental to the land, environment, wildlife, and the catastrophic effects on Sonomas water will be felt even before the first faucet is turned on in one of the homes. In the 90's I was under the impression that Sonoma developed an act that nothing like this would happen, it seems the laws have changed on expending, and that California is turning a blind eye to the environmental impact. I thought the state adopted a 30 in 30 plan, where we use 30% less resources in 2030. Without doing the research I know that this proposal isn't good enough for the SDC, I know that the detrimental building even half the proposal would be detrimental to the impact of ourlocal city's and county, with demolitions environmental impacts, new water, gas and electricity lines, and all the carsongen is that will be released and pollute the land, the neighborhood and the water directly on the other side of the levee.Please, employ you, to do the research, take the time and the resources to develop a new proposal for the land, get a land grant and work with the community to make better choices. Thank you for taking the time to read this message and consideration your actions.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Holly Hertogs	9/19/22	C25-1	I find it incredulous that the EIR to put 1000 new homes on the SDC would not “ significantly impact” the wildlife corridor, fire evacuate routes and water resources. As usual, it sounds like the County priorities the revenue it will receive by issuing permit fees and property taxes over the safety of current Valley residents and environmental protection.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Jan Bowen	9/19/22	C26-1	The State of California is poised to sell Sonoma Developmental Center to Big Money Developers in order to enrich themselves. As long as there is ONE person standing in the rain holding a sign asking for help, SDC still has a purpose. It's legacy is about helping people, not developers. PLEASE DO NOT ALLOW THE SALE OF THAT PROPERTY. I don't need an EIR to know I don't want to see 1000+ homes appear on the property that was known as Sonoma Developmental Center. There's nothing about that that would make it OK to ravage that land.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Jan Humphreys	9/19/22	C27-1	I oppose this draft EIR 1,000 housing units in the heart of Sonoma Valley and in the middle of the Sonoma Valley Wildlife Corridor will have significant and unavoidable impact on these four main areas of concern: 1) open space/wildlife, 2) water, 3) wildfire risk/evacuation routes, 4) quality oflife for all.There is not enough land in the Draft EIR for protected open space. 1050 + acres should be considered, especially around the campus. The only way to reduce impacts is to adopt a smaller project The "Historic Preservation Alternative" with only 200-300 low income homes. No market rate homes. Strict building guidelines to protect impact to the environment/wildlife.	This comment is noted. Please see MR-8 regarding the adequacy of the Historic Preservation Alternative.
Jan Humphreys	9/19/22	C27-2	The Draft plan does not speak to the hazards of fencing on the campus, which any kind wouldstrongly affect wildlife movement as would the introduction of thousands of people and vehicles.This draft is wrong for SDC.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Jan Humphreys	9/19/22	C27-3	What is needed 1- The protection of more lands than 700 acres 2- a plan to reuse and re-purpose current buildings and not to expand beyond the current footprints. 200-300 low income home max. No market rate housing. 3- allow for non-profits/ trade schools/ oceanic research or other environmental friendly to come and residence, rather than housing. 4- To not allow fences of any kind as all prevent wildlife movement. 5- SDC should remain a park friendly campus with no commercial use or investment. Please reject this Draft and find a smaller, kinder, more protective alternative.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Janet Bosshard	9/20/22	C28-1	Review of the Specific Plan and EIR must be paused pending completion ofthe RFP process. I am very concerned about this beautiful pristine area, extremely needed by wildlife. Also, Highway 12 cannot handle more traffic, especially during emergencies as wildfires, accidents, and earthquakes. there are few alternatives to move people and cars out of the area safely and quickly. Engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022. Re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.	Thank you for your comment letter. This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.
Janet Greene	9/20/22	C29-1	I am very concerned about the SDC property. My position is fewer houses, more low cost housing, and keep the remainder as a wildlife preserve. Increasing the population in this area will impact water, fire response and already crowded roads.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Janet Laurain	9/20/22	C30-1	Who is the applicant for the Sonoma Development Center Specific Plan? Are any developers involved?	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Jeanette & Brett Newman	9/20/22	C31-1	We have lived at the address below for more than 20 years. We are happy with much of the SDC Plan however, weare vehemently opposed to putting 1000 residences on that property for two reasons:1. Wildfire- There are only two roads out of this valley, Highway 12 and Arnold Drive. These roads are alreadyheavily used. In the case of an evacuation I fear the added 2000 cars from these new residences could clog the roadsand lead to life threatening situations.	This comment is noted. Please see MR-6 regarding the transportation analysis.
Jeanette & Brett Newman	9/20/22	C31-2	2. Drought- How do you expect to provide the water for these additional residences with our dwindling water supplies?	This comment is noted. Please see MR-5 regarding the Water Supply Assessment.

Commenter	Date	Letter	Comment	Response
Jessica Strachan	9/20/22	C32-1	Thank you for taking the time to read my email. I have lived in Glen Ellen for the past 20 years, and have just finished reading the draft report on the SDC. As a person that still walks in the SDC every day, raised my children adventuring at the SDC's farm, hikes Camp Via, went to every Halloween parade put on by the SDC residents (and cried and cheered as each house went by)- I am sincerely invested in what happens less than a mile from our family home. We all realize that eventually there will be additional homes to take the place of where residents once lived. However- those residents did not drive- or have multiple cars at their houses. And having the three shifts of the workers cut down on the number of cars that were ever on site at one time, of course- the fires weren't as prominent THEN. In this vein I must tell you that I am very frightened of adding additional homes (cars)- when the fire risk is always high, and our lack of water is a problem. In the past two decades, the environment has so substantially changed that fire season is year round. AND adding houses and cars NOW- with the knowledge that we have, does not seem appropriate. ... I would be happy to discuss any of these issues with you, or anyone else, when possible, but lastly - I have to ask this: Please come and look at Glen Ellen. It is not ready for a fire, and neither is the SDC. Until it is- building any homes is a bad idea. The MOST important part of the plan is the egress to highway 12. It is listed as PROPOSED- but it has to be mandatory because the 2017 fire proved we did not have enough ways to leave Glen Ellen. Thanks again for your time.	Thank you for your comment letter. This comment is noted. Please see MR-4 regarding wildfire risk and evacuation times.
Jessica Strachan	9/20/22	C32-2	I really enjoyed reading the dates of when each structure was built. I love each one. I appreciate the research, although I am a little hesitant reading about the possibility of night construction. Even if it were far away from humans- I don't think all of the animals that you listed would enjoy the vibration and sounds day and night.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Jill Koenigsdorf	9/20/22	C33-1	Hello. I received the draft for the Developmental Center's future in today's email, and it still begs the question: How will Arnold drive accommodate the cars of 1000 new residents??	This comment is noted. Please see MR-6 regarding the transportation analysis.
Jill Koenigsdorf	9/20/22	C33-2	Also: will a viable and critical wildlife crossing be destroyed? Hikers, bikers and dog walkers so enjoy and appreciate this green space and cannot imagine such massive development! Thank-you	This comment is noted. Please see MR-7 regarding the interface with the wildlife corridor.

Commenter	Date	Letter	Comment	Response
Joan Geary	9/20/22	C34-1	The attached compressed PDF file illustrating Sonoma wildlife was created in a two-page horizontal book format. If you have an app that can view a PDF file in a two-page format that would be best. If not, it can be viewed page by page on a vertical basis (please ignore the blank pages in this format). Having spent 18+ years documenting Sonoma Mountain wildlife and domesticated animals on ours and neighboring properties, I created a photographic summary of these beautiful creatures. It is my hope that you areable to utilize this information in helping preserve the wildlife corridors onSonoma Mountain. These thoroughfares represent an extension of the SDC corridor as well as other connecting lands. Please take a few minutes to marvel at the creatures that share Sonoma Mountain. These include an array of birds, mammals, reptiles and more. They deserve the protection of these land and water resources so that they may continueto survive. Just in the last few months 19 acres of neighboring virgin land have been planted with grapes and new fences installed surrounding these acres, as well as cutting off access to a seasonal stream. These directly block the passage of many of thes ecreatures on portions of this 90-acre property. Additional buildings are proposedand will block further areas. This, in addition, to other developing properties and SDC spell disaster for the animals. If you would like to share this with others that are able to help in this fight to save these creatures please feel free to do so. I believe this is a one-of-a-kind visual history of this area.	This comment is noted. Please see MR-7 regarding the interface with the wildlife corridor.
Joan Geary	9/20/22	C34-2	Thank you Brian….hope so…..and up the road (check out what they are doing to the 17700 Carriger property (as well as others)…it is an extension of the SDC Corridor and it is getting cut off.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Joan Geary	9/20/22	C35-1	In response to your email requesting suggestions on how we can further protect the wildlife below are a few ideas: -Require wildlife access to ALL seasonal and ongoing creeks, waterways, reservoirs/ponds-Restrict/limit/ban development impacting free movement along wildlife corridors -Require wildlife easements for all new developments (structural and agricultural) Conduct ongoing reviews by Sonoma County to monitor that these easements are maintained. For example, The Carriger Lane development (former Hanna Property) was required to include a wildlife easement. Was this established in the building plans and is it continued to be followed for compliance issues? -Create a map of all wildlife corridors -Limit/ban fencing that restricts free movement of wildlife-Limit noise/lights in sensitive areas including, but not limited to, breeding and nesting. Additional input: -All recommendations from a biological assessment conducted in conjunction with a new vineyard or agriculturepermit that are incorporated into the permit must be reviewed and enforced. For example, if fields are to bedisturbed during nesting bird season and the property owner is required to conduct a survey 7 days in advance of any ground disturbance and that study should be submitted to either the Ag Commission or Permit Sonoma. There does not appear to be sufficient follow-up after initial biological assessments are filed by owners. -Design review and planning for any new homes in the Taylor/Sonoma Mountain corridor should take into account wildlife needs when approving the location of buildings, setbacks from creeks, fencing and potential noise and lighting impacts.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Joe Lieber	9/20/22	C36-1	Introduction: Almost without exception, the plan is opposed by very many individuals and organizations. This should be asign that something is wrong, one would think. The County keeps pointing to the State as the one who is controlling the direction of the planning. Our State legislators chose not to do anything to improve the situation. This will have a massive impact upon our valley and it is wasting a great opportunity to make things better if it were not solely driven by what a developer would want. This is ass-backward as the saying goes. I have contacted Governor Newsom about this with hopes that he can intervene. After all, the State has a huge surplus and using some of this would greatly improve the outcome of the plan. Let’s think out of the box, please. Specific Comments: With the understanding that we should not be confined to the boundaries of the present plan here are some of my additional	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			comments: • Look at this as a wonderful opportunity to do something great rather than sticking to the general formula of developing a plan that would be appealing to a developer. Perhaps set up a non-profit that would handle the project similar to what was done at the San Francisco Presidio. If we had spent the last 3 years developing such an entity, we would not be in the present situation.	
Joe Lieber	9/20/22	C36-2	• All new housing should be "affordable" as there is such a huge need for this not only in the Valley but in the entire state. The numbers of units should be dictated by what the area can broadly comfortably absorb (water capacity, sewer capacity, road capacity, fire safety and so on). • This should be seen as a opportunity to solve other problems such as training people for good-paying jobs. Perhaps the SRJC or some other educational organization could set up a satellite campus for thispurpose? • Perhaps there could be some high-tech businesses set up to bring in good paying jobs? • Homeless services are a possibility, but are very controversial. To me, it is preferable to get people into homes so that these services would not be needed. • Some of the state's huge budget surplus should be used to make the SDC responsive tothe community's needs and the needs of average people who cannot afford to live here. This can also be a means of addressing homelessness as it is caused by the lack of affordably of housing in this area. We are spending millions of dollars on the homelessand not solving the problem. Let's take a bigger picture approach and, again, the SDC is a gift in this regard. So, in general, I am not commenting on numbers of units, etc. but instead have concerns about the general direction this is heading.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Joe Lieber	9/20/22	C37-1	Without getting into the weeds as the saying goes, the big picture is what concerns me. There are so many problems with the way this study has been conducted. Here are a few: • It has been strongly driven by what a developer would want, not what the communitywants. This is wrong! The County always points to the State as the driver of this. The State needs to be pressured to do the right thing. After all, the state works for us, right? • This is a HUGE opportunity to address the state's and the country's affordable housing issues. The myopia of this study is numbing! From this standpoint, this is not only a local valley issue. • Some of the state's huge budget surplus should be used to make the SDC responsive to the community's needs and the needs of average people who cannot afford to live here. This can also be a means of addressing homelessness as it is caused by the lack of affordably of housing in this area. We are spending millions of dollars on the homeless and not solving the problem. Let's take a bigger picture approach and, again, the SDC is a gift in this regard. • Adding to the myopia issue, this project should not be viewed within its own bubble, but, instead it should be viewed within the context of the massive housing issues we have. Again, having this driven heavily by what a developer wants is not the right way to look atthis. This should be seen as an opportunity to solve some significant problems in the area. Are there sources of funds that could subsidize the project so that it can be solely affordable housing, for example? After the tons of money that has been spent on checking the boxes (this study), let's instead step back and take a broader view of this. • There does not seem to be any evidence of creative thought with this study. It is way toomarket driven for something that should be of a public benefit. After all, this is the taxpayer's property.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Jon Greenslade	9/20/22	C38-1	Supervisor Gorin & Mr. Oh, I am writing this email in support of the Permit Sonoma planwhich proposes building the most housing & work opportunities at SDC. SDC has been a source of employment and housing for this community since its inception and it is completely in line with the needs of our community to continue using it along thoselines. Development at SDC will help our community in many ways, most importantly in providing housing, employment, and bolstering education opportunities at our schools. I work in Sonoma Valley & live off Madrone Road with my wife & raised our 4 children there since 2003 when we sold our affordable housing unit off Broadway in Sonoma to buy a house in the Rancho Madrone housing tract. When we first moved up here 25 years ago, our first apartment was the large apartment complex on Madrone Road. This area is theright area for more housing, both affordable & for first time home buyers. The Rancho Madrone tract is a mix of relatively large apartments, smaller, ~1000sq. ft. homes like mine that are generally considered "starter" homes, and larger homes. The mix of the 1000 units planned for SDC seems to fit in perfectly with the character of the Rancho Madrone tract, probably SDC's closest neighborhood. When I first got a job up here in the Valley, the Madrone Apartments was one of the few places myself & my then pregnant wife could afford to live in. Later, when our family expanded to 6, the affordable housing units on Marcy Court allowed us to start to build equity and to be able to live and work in this community. After we built up equity, we were able to sell our affordable housing unit & buy one of the modest homes in the Rancho Madrone tract. The development of SDC will allow others to follow the same type of path we were fortunate enough to have.	Thank you for your comment letter. This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Jon Greenslade	9/20/22	C38-2	SDC is the perfect location for many jobs that seem to pay decently and be abundant in our area, especially warehouse & storage facilities jobs. During my 27 years living here in the Valley, I have been fortunate enough to be able to work closely to where I live, sometimes close enough to bike to work. Many SDC employees have lived in the Rancho Madrone tract over the years. Work opportunities at the new development at SDC will give many others that same opportunity. Assuming many of those jobs will be blue collar-type jobs, this is a tremendous opportunity for average working people. Many people in the Valley have amore "white collar" type job that might allow them to afford a larger house in this area and to have an office or work from home in this area, but that generally is not the case for many of the types of jobs that	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			would be created at SDC, so having affordable housing there will be a great opportunity for them.	
Jon Greenslade	9/20/22	C38-3	Building more homes at SDC will give families a better chance of being able to afford to live in this Valley. Having raised 4 kids through the local public schools, it is no secret that this is not the type of area where young families start out and our schools generally reflect that with lower enrollment and parent participation, partially due to parents having to work further from where they live. Dunbar, the school closest to SDC, has seen both the decline of families living in its area & the "white flight" of many families there choosing to send their children up to the Kenwood School District, as Dunbar had to enlarge its boarders to findmore children to fill its school as enrollment declined. Having more young families and allowing them to live where they work will create more opportunities for parents to be more active in their children's schools and bring more children to our schools. Having development at SDC that can pay for itself is also the fair thing to do. While I enjoy the feeling of walking our dog around Lake Suttonfield in almost complete solitude, I can in no way say it is fair for the taxpayers of the State, County, or Valley pay for me to enjoy such privilege. People could choose to create a special district and tax themselves to keep SDC exactly as it is, but no one is willing to do that. It is only fair that the development, care & upkeep of the SDC area come from development at SDC. Our State & County have more pressing financial needs such as schools, roads, and homeless than to pay for a property in one of the more exclusive and valuable land areas in the State. Those opposing having more people live in their backyard have thrown almost anything that they thought would stick against the wall to stop this development. They are well involved in the community, vocal and organized, but I do not feel they represent the best interest of our community on this issue, especially when you take into account how unaffordable it is to live in our community and state. I applaud	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			you and Permit Sonoma for forging ahead with a plan that offers solid housing and working opportunities for all. Thank you	
Juliet Langley	9/20/22	C39	I am writing to ask you to urge Sonoma County to engage in meaningful planning for SDC - to align the County specific plan with the State's request for developmental proposals. Specifically, to re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide. As I understand it, earlier this month the County released its draft Environmental Impact Report and draft Specific Plan for SDC. And, despite the Board of Supervisor's direction to pursue a specific plan with fewer than 1,000 home, the drafts propose 1,000 residential units and extensive commercial development. : Align the County Specific Plan with the State’s Request for Development Proposals The draft specific plan fails to respond to the challenges of our time—including wildfire, drought, and biodiversity loss. Further, because the Specific Plan and EIR were released before the State selected a development proposal, the Specific Plan is hypothetical. Neither it nor the EIR disclose the characteristics or environmental impacts of the proposal that will ultimately be accepted by the State. I believe it is critical that review of the Specific Plan and EIR must be	Thank you for your comment letter. This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.

Commenter	Date	Letter	Comment	Response
			paused pending completion of the RFP process. Aligning the Specific Plan and EIR with the State's RFP, would increase efficiency, save valuable taxpayer resources, and ensure thorough planning and environmental review. Thank you in advance for your attention to this matter.	
Justin Beck	9/20/22	C40-1	In 2000, the main building of the Sonoma Development Center was listed in the National Register of Historic Places. I am not sure if the new plans involve demolition of the building but just imagine if California had historical buildings like other interesting parts of the world instead of a bunch of lifeless, soulless money-comes-first structures. Just imagine for a moment.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Karen Robidoux	9/20/22	C41-1	please put me down for a no to your plan. This little community can not support 1000 housing units.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Kate Cooper	9/20/22	C42-1	Good morning, I am concerned about the proposal to build a substantial amount of homes and buildings at SDC. This site is a critical wildlife corridor, and protecting this corridor should be the top priority. These wildlife corridors are dwindling, but are so important and relied on by species we need to protect. Therefore, I urge the following:	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Kate Cooper	9/20/22	C42-2	1. Engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022. 2. Re-draft the County Specific Plan and EIR to describe and analyze the impactsof the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide. Thank you for your consideration.	Thank you for your comment letter. This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.

Commenter	Date	Letter	Comment	Response
Kathy Pons	9/20/22	C43-1	I just finished watching the video of the joint CAC and MACs meeting on August 24th. That was a long one! I wanted to let you know that I thought your presentation was very professional and personal. I know you and others have done a LOT of work on this project and seem to be between a rock and a hard place....Would it help if there was consensus among the community? If the community could get behind the "Historical option" with 450 units, could that "footprint" fly? Who wouldn't like it? If it became the "Specific Plan", I understand that would be for 20 years... but how specific does the plan need to be? Could there be changes made as needed? There are always changes to the General Plan or other specific plans too...right? So if the plan starts out on the smaller side (450 units) as a precautionary attitude, maybe after 10 -15 years it is shown that this number works and there may be a need for more units, could this be remedied up to 1000 in steps? We would be able to see how the water supply works, what kind of jobs might be on campus, setbacks from the creek and wildlife corridor could be increased initially and I believe that the 450 number of units is considered economically feasible...This Historical option may also increase the possible re-use of existing buildings too. What do you think? Appreciate your answer.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Chris Gralapp		C44-1	Commercial Cannabis Projects Violate the Bennett Valley Plan. The Board of Supervisors adopted the Bennett Valley Plan (BV Plan) in 1979 with a goal of preserving and protecting the traditional rural character and natural environment of Bennett Valley. The BV Plan was supported by a full environmental impact report. Its area-specific policy requirements were adopted to avoid significant environmental impacts within Bennett Valley. Policy LU-1a of the General Plan states: A Specific or Area Plan may establish more detailed policies affecting proposed development, but may not include policies that are in conflict with the General Plan. In any case where there appears to be a conflict between the General Plan and any Specific or Area Plan, the more restrictive policy or standard shall apply. The BV Plan has three unique features that are pertinent to commercial cannabis development.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Chris Gralapp		C44-2	Commercial Marijuana Development Violates Land Use Policy 2 of theBennett Valley Plan.Land Use Policy 2 of the BV Plan provides “Commercial developmentis not considered appropriate to the rural character of Bennett Valley(emphasisadded).” U.S. Attorney McGregor Scott in Sacramento describes marijuanagrows as“industrial agriculture.”1The processinvolves manipulation and processing of plants as much as growing them. The Cannabis Ordinance, § 26-02-40, defines “cultivation” as commercial cannabis activity. A letter from Adam Brand, Sonoma County Deputy County Counsel, to Kevin Block (January 18, 2019, pp. 2-4) concluded that that any use permit is by law “development.”Growingcannabis commerciallyis obviouslycommercialdevelopment. Thisinevitable conclusion was drawn by Commissioner Greg Carr during the November 2019 BZA hearing for 4065 Grange Road.On April 10, 2018, Supervisor James Gore remarked at a Board of Supervisors meeting that acommercial cannabis operation on Lakeville Highway was "definitely commercial industrywithin a small area with a lot of neighborhood impact."2Commercialcannabis operationsareboth in fact and in law commercial development, and violateLand Use Policy 2.They do not belong in Bennett Valley.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Chris Gralapp		C44-3	Under Land Use Policy 3 Commercial Marijuana Development Cannot Be Approved in Bennett Valley Without Enhanced Law Enforcement. Under Land Use Policy 3 (“Development shall be coordinated with the public's ability to provide schools, fire, police and other needed services”), permitting commercial marijuana in Bennett Valley must be coordinated with improved law enforcement. Cannabis businesses attract crime, and § 26-02-140 of the Cannabis Ordinance notes that growing cannabis poses unique risks to the health, safety, and welfare of residents.3 Home invasions related to marijuana grows are increasingly common in Sonoma County, and the risks of criminal activity is a major concern to Bennett Valley residents. Non-growing neighbors have been terrorized when the “wrong” home was invaded. Crime increases in the immediate neighborhood where cannabis businesses are located and in adjacent areas. While no one can predict which homes and individuals will be victimized, statistically, it is much more likely that residents of Bennett Valley will become crime victims if a commercial cannabis operation is located there. There are already insufficient sheriffs on duty, especially at night when home	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			invasions tend to occur. It can take thirty to forty-five minutes for a sheriff to respond to a call. According to the Sheriff's office, since 2013 ten marijuana-related murders and 22 marijuana-related home invasions have been reported in the unincorporated areas of Sonoma County. During the past 18 months, 59 marijuana-related crimes were reported (five per month) that do not involve murder or home invasions. These numbers would increase substantially if data from the county's nine cities were included.	
Chris Gralapp		C44-4	Commercial marijuana grows open the door to a dangerous activity in Bennett Valley that is inimical to the polices in the BV Plan. The county recognizes the dangers of marijuana cultivation when it comes to protecting its own employees. In eliminating the mandatory minimum 24-hour notice for an inspection of a cultivation, the code enforcement staff "for safety" will still call in advance so the visit is expected."4 The county is rightfully concerned for the safety of its staff, but lacks concern for residents. The county has done nothing to improve public safety while inviting widespread commercial marijuana cultivation in Bennett Valley. For example, the county might establish a sheriff's substation in Bennett Valley at the fire station to reduce response time. The county might ban permits on properties located on shared access roads as a means to minimize home invasions of non-growers. Ordinary residents should not have to share milelong dead-end roads with growers.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Chris Gralapp		C44-5	Bennett Valley Plan's Development Guidelines Require Adequate Roads. The Planning Director must find for any development located in Bennett Valley that "private streets and driveways, both existing and proposed, are properly designed." Under the plain language of the BV Plan (p. 21), the requirements for existing and new streets are identical. Thus, the county's argument that developments on older, pre-1991 roads (but not driveways) are exempt from the	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			CalFire SRA Fire-Safe Regulations does not apply to roads in Bennett Valley. Under the BV Plan, both existing private roads and driveways where development occurs must meet new road requirements. There is no exemption for commercial cannabis operations. Existing private roads that serve new development and are under 20 feet wide must be substantially upgraded to new street standards.	
Chris Gralapp		C44-6	There Are Too Many Commercial Marijuana Projects in Bennett Valley. Since 2017, thirteen marijuana projects have been proposed in Bennett Valley (Table). Many, for now, are not going forward but could be resurrected. Bennett Valley has about 1.3% of Sonoma County's land, and about 6% or more of the proposed commercial marijuana projects. This is far too many and reflects gross over-concentration.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Chris Gralapp	September 19, 2022	C45-1	On behalf of the Bennett Valley Community Association (BVCA) and the residents of Bennett Valley, the BVCA Board of Directors wants to express its concerns about the Draft EIR and Specific Plan for the Sonoma Developmental Center (SDC). The BVCA was established in 1970 and is dedicated to promoting and preserving the rural, residential character and natural environment of Bennett Valley. Specific Plan Policies Do Not Provide Sufficient Protection. The centerpiece of this planning effort is a specific plan, which is intended to adopt area-specific policy requirements to avoid or mitigate significant environmental impacts within the plan's boundaries. Bennett Valley residents are familiar with how the county implements such plans. The attached Bennett Valley Area Plan was adopted over 40 years ago and, like the SDC Specific Plan, was supported by an environmental impact report. Policy LU-1a of the General Plan states "a Specific or Area Plan may establish more detailed policies affecting proposed development . . . where there appears to be a conflict between the General Plan and any Specific or Area Plan, the more restrictive policy or standard shall apply. Our experience in Bennett Valley is that the supposed protections offered in an area plan can be illusory and unenforced. Land Use Policy 2 in the Bennett Valley Area Plan provides "Commercial development is not considered appropriate to the rural character of Bennett Valley." Yet PRMD and county counsel distort the plain words and concluded that commercial cannabis development and operations are not "commercial development." In addition, any new structure must undergo design review to preserve scenic vistas and corridors. The county has	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			decided that large and unsightly hoop houses that can be in place six months each year need not undergo design review. Residents who think the SDC Specific Plan contains policies that forbid or regulate certain activities may learn that the county has made a closed-door decision that is the opposite of any logical interpretation of the plan's provisions.	

Commenter	Date	Letter	Comment	Response
Chris Gralapp	September 19, 2022	C45-2	Evacuation Issues. The BVCA endorses and incorporates by reference the comments filed by the State Alliance for Firesafe Road Regulations on September 13, 2022. About 30% of the land area of Sonoma County has burned since 2017, making wildlife and evacuation issues paramount. Although the DEIR acknowledges that 95% of wildfires are caused by human activity (p. 500), it fails to analyze the extent to which 2,500 new residents, new hotel guests, and new business patrons will exacerbate this risk. All four criteria from the CEQA checklist for Wildfire (XX) would create a significant impact. The DEIR ignores that areas downwind from or adjacent to high or very high fire hazard zones can be consumed by wildfires, as experienced recently in Sonoma County. The 2017 Nuns fire consumed areas near the SDC that are rated as moderate fire hazard, and this occurs across California. Hoping that much of the area is safe because it is only in a moderate fire hazard zone is not a strategy. The DEIR concludes that the proposal would increase wildfire risk to new residents and visitors, but only proposes policies for future consideration without requiring mitigation measures. The DEIR fails to describe existing wildfire hazards or properly analyze potential impacts. It is impossible to evaluate evacuation safety and the associated impacts on existing residents and employees when no baseline is provided for their evacuation utilizing the same routes. We know from the 2017 Nuns Canyon Fire, 2019 Kincaid Fire, and 2020 Glass Fire that Highway 12 was blocked, with traffic often at standstill for hours. The proposal jeopardizes the lives of Bennett Valley residents who need to flee from a fire driving east to Sonoma Valley using Route 12 or Arnold Drive. Moreover, because those routes are known bottlenecks, residents of Sonoma Valley might elect to escape a conflagration by driving west using Bennett Valley Road or even Sonoma Mountain Road. This could congest the escape routes for Bennett Valley residents who need to flee to the west.	Thank you for your comment letter. This comment is noted. Please see MR-4 regarding wildfire risk and evacuation times.

Commenter	Date	Letter	Comment	Response
Chris Gralapp	September 19, 2022	C45-3	The evacuation analysis for Bennett Valley needs to include the fact that during normal conditions Penngrove has become a chokepoint for traffic because of massive housing developments along Petaluma Hill Road. The Board of Supervisors has recognized this problem and recently approved the "Railroad Avenue traffic circulation study." The evacuation route for Bennett Valley residents via Petaluma Hill Road toward Penngrove is already compromised. The DEIR's lack of subregional traffic circulation studies to identify such problems, let alone mitigate them, jeopardizes not only Bennett Valley residents but also the thousands of others sharing these evacuation routes. This violates Public Safety Goal PS-3 of the Sonoma County General Plan ("prevent unnecessary exposure of people and property to risks of damage or injury from wildland and structural fires"), as well as Objective PS-3.2 (new development must minimize fire hazards to acceptable levels). The conclusion that the proposed development would not substantially impair an adopted emergency response plan or evacuation plan (p. 511) is unsupported and contradicted by experience. We know that Highway 12 already gets rapidly congested during mass evacuations, turning it into a parking lot for hours. Depending on the direction of the fires, residents may either need to evacuate south, thus combining with traffic from Boyes Hot Springs and Sonoma, or north, with additional traffic from eastern Santa Rosa. To conclude that adding thousands more people would not impair existing evacuation is incomprehensible. Emergency alarm systems are now implemented (e.g., during the September 13, 2022 earthquake), and residents will flee simultaneously. Assuming that a maximum of 65% of residents would evacuate in the first hour (Figures 3.16-3 and 3.16-4) is unrealistic. The fire may be upon them within the hour.	Thank you for your comment letter. This comment is noted. Please see MR-4 regarding wildfire risk and evacuation times.
Chris Gralapp	September 19, 2022	C45-4	A shelter-in-place facility is never a first choice; studies have shown that people want to flee a fire, not let it burn over them. Most fire professionals say that shelter-in-place is a last resort and emergency plans cannot rely upon it to mitigate fire risks. Fires kill people with smoke and oxygen deprivation, not just flames. The proposal has not mitigated the potentially significant impacts related to wildfire.	Thank you for your comment letter. This comment is noted. Please see MR-4 regarding wildfire risk and evacuation times.

Commenter	Date	Letter	Comment	Response
Chris Gralapp	September 19, 2022	C45-5	Normal Traffic Circulation in Bennett Valley. The proposal will force more traffic onto the few east-west arterial routes in Sonoma County, especially Bennett Valley Road and Sonoma Mountain Road. The most recent Bennett Valley Road study was done in 2011, when over 3,500 vehicle trips were recorded per day. There is no adequate sub-regional traffic circulation study of these impacts. Bennett Valley Road is notoriously tortuous, especially the section between Warm Springs Road and Walker Road. More traffic on this section would be especially dangerous. The portion of Bennett Valley Road that approaches Santa Rosa has had 5 investigated accidents during the last six months, and scores in recent years. The BVCA is very concerned about increases in these already unacceptable statistics. The DEIR concludes there will be significant and unavoidable impacts regarding increased traffic, and proposes no mitigation. This is unacceptable.	This comment is noted. Please see MR-6 regarding the transportation analysis.
Chris Gralapp	September 19, 2022	C45-6	Conclusion The DEIR and Specific Plan ignore the unenforceability of specific plans and gives short shrift to evacuation issues and general traffic issues in Sonoma Valley and Bennett Valley. It must be revised to address them. The proposal risks not only the lives of future residents of the SDC, but also residents of Bennett Valley. The DEIR ignores current and potential wildfire risk factors and assessment methods, and bizarrely dismisses them as insignificant. We recommend drastically reducing the number of housing units and eliminating hotel and new businesses.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Craig S. Harrison	September 19, 2022	C46-1	The proposed specific plan inherently fails to mitigate environmental impacts. In Bennett Valley the County arbitrarily refuses to implement our area plan, despite the requirement in Policy LU-1a of the General Plan whereby the more restrictive policies in a specific or area plan apply if there is a conflict with the General Plan. The Bennett Valley Area Plan forbids commercial development in Bennett Valley (Land Use Policy 2), yet the County supports and encourages commercial cannabis development and operations there. The plan also requires new structures to undergo design review to protect our bucolic viewsheds, but the County allows ugly hoop houses without design review because they are taken down during winter. Thus, according to the County, the viewsheds of Bennett Valley residents are protected only for 6 months of any year. This violates the plan and insults the intelligence of anyone who is not a county employee.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			For these reasons, any mitigations in the proposed Specific Plan for the Sonoma Developmental Center fail to meet the requirements of CEQA.	
David Eichar	September 19, 2022	C47-1	in significant impact on wildlife. This area is a wildlife corridor. As wildlife currently traverse this area, the addition of vehicles in this area would disrupt the wildlife movement. This is especially true during construction. It is best not to add this road. If the road is built, despite the significant impact, then the following mitigation measure can be taken to reduce the impact. 1. Limit construction of the road to certain hours and months, where wildlife movement through the corridor is less. 2. Make the road one-way only, east bound. 3. Close the road, except for emergency evacuation.	This comment is noted. Please see MR-7 regarding the interface with the wildlife corridor.
Jerry Bernhaut	September 19, 2022	C48-1	The SDC Campus Project has proposed the adaptive reuse of five of the existing residential buildings in the southeast corner of the SDC Campus for affordable co-housing. This would serve the needs of low wage workers currently forced to make long commutes to jobs in the Sonoma Valley due to housing costs and the needs of other people for basic housing. This proposal has been submitted to Permit Sonoma. Thus far the County has declined to give this proposal any consideration. The buildings proposed by the SDC Campus Project for adaptive reuse are in the area designated as the Agrihood District on the Specific Plan maps. The Agrihood District is envisioned as a new neighborhood that is a nod to historic agricultural lands with physical and visual connections to the historic agricultural areas, low-impact development at a lower intensity, and a smooth visual transition between higher intensities to the west and the agricultural open space at the east. The clear implication is that existing buildings in this area will be	This comment is noted. Please see MR-8 regarding the Historic Preservation Alternative.

Commenter	Date	Letter	Comment	Response
			demolished. The adaptive reuse of the former residential buildings for affordable co-housing would be consistent with the vision for this area. Adaptive reuse of existing buildings is environmentally superior to new construction when the energy use and GHG emissions from the mining, processing, transportation and assembling of new materials are considered. Adaptive reuse can also be more cost effective if done properly by people with experience in this type of construction. Permit Sonoma should at least have provided some evaluation of this proposed alternative to new construction.	
Jerry Bernhaut	September 19, 2022	C48-2	An agency may not approve a project that will result in significant impacts unless it first finds that mitigation measures or alternatives are infeasible. (PRC section 21081; Guidelines 15091, 15093) The Supreme Court of California decided that considering alternatives is one of the most important functions of an EIR (Wildlife Alive v. Chickering (1976) 18 Cal.3d 190, 197) Without evidence why the alternatives are insufficient to meet the project or CEQA goals, meaningful analysis is impossible. An EIR must "explain in meaningful detail the reasons and facts supporting the conclusion." (Marin Municipal Water Dist. V. KG Land Corp. (1991)235 Cal.App.3d 1652,1664) The SDC Campus Project proposal will serve the goal of providing affordable housing, which was emphasized in State legislation as one of the primary objectives for the future use of the SDC site. The SDC Campus Project has presented a credible cost-benefits analysis of this adaptive reuse co-housing project. To comply with the requirement under CEQA that a lead agency must evaluate a reasonable range of alternatives, Permit Sonoma must either include the SDC Campus Project in its SDC Specific Plan or present evidence why this project is insufficient to meet the SDC Specific Plan or CEQA goals. The EIR must set forth the alternatives necessary to permit a reasoned choice and in a manner that will allow "meaningful evaluation". (Guidelines 15126.6(a),(d),(f); San Bernardino Valley Audubon Soc. Inc. v. County of San Bernardino (1984) 155 Cal.App.3d 738,750-751).)	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Josette Brose-Eichar	September 19, 2022	C49-1	As it states that the Historic Preservation Alternative is environmentally superior, why is it not considered in the DEIR? As there is really no definition of what is required for financial feasibility, how can any plan then be considered or analyzed with an EIR? The lack of what is required for this so called financial feasibility makes it hard to understand why an assumption of 1000 to possibly 1200 homes or residential units, and a very large tourist hotel are what is being spelled out as the basis for this EIR. The starting point seems to be that this much market rate housing and a large hotel must be the only plan and the only one addressed in the EIR, even though it is not known what the actual costs are and what a developer will want as a return on this project. And what about the state's financial responsibility for this site?	This comment is noted. Please see MR-8 regarding the Historic Preservation Alternative.
Josette Brose-Eichar	September 19, 2022	C49-2	The impacts on water use and needs are totally unrealistic. Planning and mitigation for a water shortage are just pushed to the future which is not allowed in an EIR. For a project this size the EIR does not take into account how much water will be needed for all the planned residents, tourists, employees. There is no analysis of what our local water districts have now and if they could support it. The EIR seems to rely on the two existing reservoirs. All you have to do is take a hike around them right now to see how low the water level is. Climate change is the new normal, more heat and less rain. Climate change is not factored into this EIR in relation to water usage. Why would an EIR not have the mitigation of recycling water in it right now? Should not all water be recycled and used on site be mandated in the EIR?	This comment is noted. Please see MR-5 regarding the Water Supply Assessment.

Commenter	Date	Letter	Comment	Response
Josette Brose-Eichar	September 19, 2022	C49-3	Vehicle miles traveled is also given an unrealistic treatment. The simple fact that if you have a luxury hotel you will have hundreds of lower wage workers driving from other locations every day, in addition to the residents of the 1000 to 1200 homes, and any other employees of commercial use at SDC. As most people can not afford housing in the valley today, having only 25% of the housing as affordable in no way assures these employees will be housed on the SDC campus. It guarantees that they will be driving long distances from other locations. I see no real mitigation for these facts as it relates to VMT. Real measures would include mandated changes to public transportation, if the development is as large as planned. Or that actual affordable housing be included in the plan specifically for the low wage employees at the SDC site. The planned connector road to Highway 12 is shown as being needed for fire evacuation. This road would only be environmentally sound as it relates to the campus being a wild life corridor if it was a gravel road, with no lighting and only used for fire evacuation and closed at all other times. Then there is the simple fact that it will be useless in a real fire. Simply routing two or three thousand people over to Highway 12 will do nothing if the fire behaves as it did in 2017, from east to west, in addition to from the north. And given what we have seen with wild fires since 2017, the situation could be even worse.	This comment is noted. Please see MR-6 regarding the Transportation Analysis.

Commenter	Date	Letter	Comment	Response
Josette Brose-Eichar	September 19, 2022	C49-4	I know that we are to keep our comments on the DEIR and not the Specific Plan, but it still baffles me why we have this plan, when almost no one in the valley wants, nor do we need an other large tourist hotel and another 700 or 800 units of market rate housing for wealthy or second home owners. Would we be not be better served economically and environmentally by adapting and saving what we have and creating all affordable housing for those that already live in the Sonoma Valley? And let's be realistic, market rate is not for the so called "missing middle". I have crunched the numbers based on actual real estate values and these market rate homes would have to sell for under $600,000 to be for those at 120% AMI. We all know that is not what two bedroom homes are selling for in the Sonoma Valley, nor would any for profit developer build with that as the selling price.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Lauren Reed	Thursday, September 15, 2022	C50-1	Please do not support the SDC Specific Plan or DEIR as proposed by Permit Sonoma. The DEIR does not adequately analyze and prevent or reduce environmental impacts in most if not all of the areas studied as evidenced by few actual requirements and many vague words such as “promote” or “encourage” or “if feasible.” The DEIR needs to be revised and the Conditions of Approval strengthened and moved into a legally enforceable Mitigation and Monitoring Program. Instead: Scale back size of development to 450 or fewer homes and require that most or all of them be affordable to the majority of people who live in Sonoma Valley. Eliminate the hotel, retail and commercial space that is already provided in Glen Ellen. Protect Open Space by providing enforceable timeline, boundaries and actions for permanently preserving open space and keeping it in public hands. In the DEIR, analyze the impacts of and add enforceable measures to reduce impacts of proposed new uses in the open space including agriculture, agricultural processing, tasting rooms, farm stands, recreation, parking lots, geothermal development and sports facilities (see Table 4-3 of Specific Plan). Increase setbacks along Sonoma Creek, Riparian areas and the Sonoma Wildlife Corridor to at least 100 feet, instead of inadequate 50 feet as proposed. Revise wildfire evacuation impacts to reflect on-the-ground experiences during recent wildfires and new county wildfire risk and hazard maps. Revise the Specific Plan and DEIR with legally enforceable measures to reduce climate emissions, such as reusing and demolishing fewer buildings and providing transit.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Lawrence A. Wilcox	Monday, August 22, 2022	C51-1	Certainly have some respect for the land and open space. We are in a serious drought situation and Sonoma County can only think about tax dollars, but that has always been the mantra of Sonoma county officials. We live in one of the most beautiful lands in California and that is a tribute to those in continue to fight, donate,	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			and encourage the development of open space, trails and wildlife corridors. Stop the incessant development of mega homes and shopping areas and get outdoors.	
Lena Chyle	Friday, August 19, 2022	C52-1	Please do not rush the planning of the SDC. It could be a wonderful addition to our county but needs to be approached with a thorough, realistic and meaningful process that includes, amongst many considerations, wildfire, drought and bio-diversity. Please engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022. Also please re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.	This comment is noted. Please see MR-2 regarding the RFP timeline.
Linda Curry	Wednesday, August 24, 2022	C53-1	Congratulations on compiling alot of data and public feedback into SDC Specific Plan. Just a little confused at the magnitude of the housing element proposed as most of the community input I remember seeing/hearing said that 400-500 units is the maximum density tolerable to the existing community when considering impacts to traffics, schools and services. However, if 500 out of the 1000 units are going to be used as housing for those that were displaced from SDC or newer clients with similar needs, I think a high density structure that assumes residents that will neither drive or require individual cooking accommodations could be a possibility. In no case should the emphasis shift from low income housing to market rate mini mansions. Keeping the wildlife corridor intact and stream protections for Sonoma Creek can only enhance the health of the watershed and regional community. However, any plan must consider impacts on transient wildlife and one element had the Maker element positionned where wildlife would undoubtedly be disturbed by the noise and dust of any creative work. No point in having a corridor if you are going to scare wildlife away.	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Linda Curry	Wednesday, August 24, 2022	C53-2	I am concerned that with the shift in State timeline for the RFP being extended to 9/9/22, the timeline for draft specific plan and EIR should be adjusted accordingly so that the documents can reflect the potential of qualified proposals for the facility. Less than 2 weeks for review of specific plan and EIR is too tight a schedule to allow the thorough review and careful consideration that many members of the community who have been involved thus far would need for comment. Why end comments for specific plan today and extend comments for EIR till 9/23? Why not pause the whole review process until the State selects qualified proposal so that we are talking about what is actually proposed for the site? I know I have only had time for specific plan review and that has been less than I would usually devote to a project of this magnitude. Sonoma Development Center is a jewel that has served Sonoma County and the State for over a century. After the careful collections of public concerns since 2018, it seems more than a little strange that there should be the last minute disconnect between county and state processes. Please get them back into tandem so that Sonoma County does not miss out on the biggest opportunity this generation will have for continuing our traditions of forward thinking, environmentally sensitive public planning while serving the State in relieving them of a burden. For goodness sake don't let the neglect that was shown in the Community Hospital property handoff be the model for this project. Too much is at stake.	This comment is noted. Please see MR-2 regarding the RFP timeline.

Commenter	Date	Letter	Comment	Response
Linda Hale	Saturday, August 20, 2022	C54-1	This letter is written in support of the Sonoma Land Trust's request to engage in meaningful planning for the SDC by aligning the County Specific Plan with the State's request for development proposals. Stating that no specific plan has been selected and that no mitigations are available for water, traffic, and wildlife is not a viable EIR. To the Office of Governor Gavin Newsom: The Office of the California DGS has rescinded its earlier premature offering of the Sonoma Developmental Center to a developer prior to the completion of an EIR. The 894 acre property has been held as a public trust to benefit both the disabled and the community. It also serves as the major water recharge shed for Sonoma Valley and is directly in the path of Sonoma Creek which crosses Sonoma Valley and exits through Petaluma to the San Francisco Bay. The community recognizes the need for affordable housing, but the proposed 1,000+ home development with only 250 affordable units, a high end hotel, and visitor services as businesses on site ignores the public input and will be an environmental disaster for Sonoma Valley. The EIR process was fast tracked when the DGS released the property for sale. This is against the law since no project has been designated by the Board of Supervisors nor had the EIR process even been started. The EIR findings were released with the following legal concerns: 1. Where is the Response to Public Comments in the Draft EIR? 2. Where in the DEIR are the actual Specific Plan mitigations listed? (Executive Summary refers to Appendix A, but mitigations are not included) 3. The county is using a "Self-Mitigating Plan" approach. What is the rationale for doing this? How will implementation of mitigations work, since they won't appear in the EIR itself but only as a "condition" of moving forward with development? 4. How, when, and through what mechanism will the open space	This comment is noted. Please see MR-1 regarding the Self-Mitigating approach. Please see section 1.3 starting on page 45 of the DEIR in regards to the legal requirements and state guidelines for public involvement. Please see Table ES-2: Summary of Impacts in regards to identified mitigation requirements. Other questions are not related to the adequacy of the DEIR.

Commenter	Date	Letter	Comment	Response
			lands at SDC be permanently protected and kept in public hands?	
Linda Hale	Saturday, August 20, 2022	C54-2	Also Permit Sonoma states: “Public participation identified three key areas of concern among the 16 areas studied: open space and wildlife, water, and wildfire risk and evacuation routes. The draft Environmental Impact Report finds that the proposed specific plan would not create significant and unavoidable impacts in these areas.” The problem is that the impacts are significant and unavoidable. There is really no proposed specific plan. The traffic and water studies were done when the SDC was permanently closed by the state, so no impacts were shown due to low traffic and water use in the area. Permit Sonoma has done the EIR only	This comment is noted. Please see MR-6 in regards to the adequacy of the transportation analysis and number of proposed housing units. Please see section 1.3 starting on page 45 of the DEIR in regards to the legal requirements and state guidelines for public involvement.

Commenter	Date	Letter	Comment	Response
			allowing public comments via zoom and the US Mail with no responses to critical concerns.	
Linda Hale	Saturday, August 20, 2022	C54-3	Sonoma Valley is congested. It has two main roads and one of them had to evacuate 1,000s of Oakmont residents by bus during the last fire since there are no exit routes that can handle evacuation traffic. Three other major developments are now permitted between the city of Sonoma and Santa Rosa and in process along the Highway 12 corridor. Traffic in Sonoma Valley is already impacted, especially in the Boyes Springs area and the city of Sonoma with only one road out. People say that they no longer come to Sonoma because of the traffic. And Sonoma County has been sued for not meeting its own emission standards. Sonoma Valley is already in a state mandated Groundwater Study with well restrictions in place for commercial growth and homeowners' wells being monitored throughout the valley. We have asked for a reduction to 450 homes and no hotel. Please intervene before this goes any further. We need the State of California to come forward to protect what makes Sonoma Valley the destination it is and to protect local resources. This development will add a new city to the valley floor, deplete our vanishing water sources, and create urban sprawl. Please consider resources and action to protect a California resource.	This comment is noted. Please see MR-6 in regards to the adequacy of the transportation analysis and number of proposed housing units. Please see MR-4 in regards to the fire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Linda Hale	Wednesday, September 14, 2022	C55-1	I have specific concerns about information released in the DEIR regarding the land use, hydrology and water, and the methodology used and assumptions made. 1) In Article 64 the DEIR states that the property is "located in a local voter-approved Community Separator overlay that preserves lands with low densities between communities....to maintain natural (rural) character and low intensities of development in open spaces between cities and communities." The SDC traditionally served as a buffer between the communities of Sonoma, El Verano, and Glen Ellen because of the open space between buildings and the land available for clear vistas and access. As noted in the DEIR, voters approved the preservation of open space specifically here now and until renewal in 2036. How can "the high density of the development" as stated later in the report regarding buildings, businesses, parking lots, water runoff and paving throughout the development along with bus stops with lights, shelters, and concrete pads in any way meet the criteria for a Community Separator?	This comment is noted. Please see chapter 3.1 starting on page 85 of the DEIR in regards to the potential impacts of the Proposed Plan on the environmental setting and MR-6 in regards to the adequacy of the traffic analysis.

Commenter	Date	Letter	Comment	Response
Linda Hale	Wednesday, September 14, 2022	C55-2	Nowhere under Hydrology and Methodology (39.3.2) is the current state mandated Groundwater Study mentioned. Sonoma Valley is currently at the limit of groundwater usage and Russian River resources for the city of Sonoma. Aquifers are not recharging and have reached historic lows. All local wells are now being monitored. The four wells mentioned on the SDC property are subject to the same drought conditions as all the other wells in the valley. Sonoma County just added new, stricter requirements for well permits. In this DEIR you state that "surface water diversions from local creeks supply the majority of water for domestic uses at the site such that groundwater supplies would not be interfered with substantially." How is this possible? Keep in mind that the reservoirs on the property are already earmarked by most water agencies four times over for emergency backup. 3) Your methodology and assumptions made regarding groundwater supply, water bodies, impervious surfaces, and drainage patterns seem to imply that developers or homeowners will be responsible for creating "drainage, permeable pavements, and the use of porous concrete" by providing them with educational materials about these alternatives. This is not credible. The restraints on water, traffic, and the impacts this development will have on the cities around it deserve a realistic plan. This DEIR points that out.	This comment is noted. Please see MR-5 in regards to disagreement with water supply analysis.

Commenter	Date	Letter	Comment	Response
Linda Hale	Wednesday, September 14, 2022	C56-1	I have specific concerns about information released in the DEIR regarding the land use, hydrology and water, and the methodology used and assumptions made. 1) In Article 64 the DEIR states that the property is "located in a local voter-approved Community Separator overlay that preserves lands with low densities between communities....to maintain natural (rural) character and low intensities of development in open spaces between cities and communities." The SDC traditionally served as a buffer between the communities of Sonoma, El Verano, and Glen Ellen because of the open space between buildings and the land available for clear vistas and access. As noted in the DEIR, voters approved the preservation of open space specifically here now and until renewal in 2036. How can "the high density of the development" as stated later in the report regarding buildings, businesses, parking lots, water runoff and paving throughout the development along with bus stops with lights, shelters, and concrete pads in any way meet the criteria for a Community Separator?	This comment is noted. Please see section 3.1 starting on page 85 of the DEIR in regards to the potential impacts of the Proposed Plan on the environmental lanscape and MR-6 in regards to the adequacy of the traffic analysis.
Linda Hale	Wednesday, September 14, 2022	C56-2	Nowhere under Hydrology and Methodology (39.3.2) is the current state mandated Groundwater Study mentioned. Sonoma Valley is currently at the limit of groundwater usage and Russian River resources for the city of Sonoma. Aquifers are not recharging and have reached historic lows. All local wells are now being monitored. The four wells mentioned on the SDC property are subject to the same drought conditions as all the other wells in the valley. Sonoma County just added new, stricter requirements for well permits. In this DEIR you state that "surface water diversions from local creeks supply the majority of water for domestic uses at the site such that groundwater supplies would not be interfered with substantially." How is this possible? Keep in mind that the reservoirs on the property are already earmarked by most water	This comment is noted. Please see MR-5 in regards to disagreement with water supply analysis.

Commenter	Date	Letter	Comment	Response
			agencies four times over for emergency backup.	
Linda Hale	Wednesday, September 14, 2022	C56-3	Your methodology and assumptions made regarding groundwater supply, water bodies, impervious surfaces, and drainage patterns seem to imply that developers or homeowners will be responsible for creating "drainage, permeable pavements, and the use of porous concrete" by providing them with educational materials about these alternatives. This is not credible. The restraints on water, traffic, and the impacts this development will have on the cities around it deserve a realistic plan. This DEIR points that out.	This comment is noted. Please see MR-5 in regards to disagreement with water supply analysis. Please see MR-6 in regards to the adequacy of the traffic analysis.
Linda Hale	Wednesday, September 14, 2022	C57-1	I have specific concerns about information released in the DEIR regarding the land use, hydrology and water, and the methodology used and assumptions made. 1) In Article 64 the DEIR states that the property is "located in a local voter-approved Community Separator overlay that preserves lands with low densities between communities....to maintain natural (rural) character and low intensities of development in open spaces between cities and communities." The SDC traditionally served as a buffer between the communities of Sonoma, El Verano, and Glen Ellen because of the open space between buildings and the land available for clear vistas and access. As noted in the DEIR, voters approved the preservation of open space specifically	This comment is noted. Please see chapter 3.1 starting on page 85 of the DEIR in regards to the potential impacts of the Proposed Plan on the environmental lanscape and MR-6 in regards to the adequacy of the traffic analysis.

Commenter	Date	Letter	Comment	Response
			here now and until renewal in 2036. How can "the high density of the development" as stated later in the report regarding buildings, businesses, parking lots, water runoff and paving throughout the development along with bus stops with lights, shelters, and concrete pads in any way meet the criteria for open space?	
Linda Hale	Wednesday, September 14, 2022	C57-2	2) Nowhere under Hydrology and Methodology (39.3.2) is the current state mandated Groundwater Study mentioned. Sonoma Valley is currently at the limit of groundwater usage and Russian River resources for the city of Sonoma. Aquifers are not recharging and have reached historic lows. All local wells are now being monitored. The four wells mentioned on the SDC property are subject to the same drought conditions as all the other wells in the valley. The Country has just added new requirements for well permits. In this DEIR you state that "surface water diversions from local creeks supply the majority of water for domestic uses at the site such that groundwater supplies would not be interfered with substantially." How is this possible? Keep in mind that the reservoirs on the property are already earmarked by most water agencies four times over for emergency backup.	This comment is noted. Please see MR-5 in regards to disagreement with water supply analysis.

Commenter	Date	Letter	Comment	Response
Linda Hale	Wednesday, September 14, 2022	C57-3	3) Your methodology and assumptions made regarding groundwater supply, water bodies, impervious surfaces, and drainage patterns seem to imply that developers or homeowners will be responsible for creating "drainage, permeable pavements, and the use of porous concrete" by providing them with educational materials about these alternatives. This is not credible. The restraints on water, traffic, and the impacts this development will have on the cities around it deserve a realistic plan. This DEIR points it out.	This comment is noted. Please see MR-5 in regards to disagreement with water supply analysis. Please see MR-6 in regards to the adequacy of the traffic analysis.
Linda Hale	Sunday, August 21, 2022	C58-1	The following letter was sent to Governor Gavin Newsom and the DGS via GeraldMcLaughlin. This letter was also sent to the Sonoma County Board of Supervisors,Senators Mike McGuire and Bill Dodd, and the Sonoma Index Tribune. This letter is written in support of the Sonoma Land Trust's request to engage inmeaningful planning for the SDC by aligning the County Specific Plan with the State'srequest for development proposals. Stating that no specific plan has been selected andthat no mitigations are available for water, traffic, and wildlife is not a viable EIR. To the Office of Governor Gavin Newsom: The Office of the California DGS has rescinded its earlier premature offering of theSonoma Developmental Center to a developer prior to the completion of an EIR. The894 acre property has been held as a public trust to benefit both the disabled and thecommunity. It also serves as the major water recharge shed for Sonoma Valley and isdirectly in the path of Sonoma Creek which crosses Sonoma Valley and exits throughPetaluma to the San Francisco Bay. The community recognizes the need for affordablehousing, but the proposed 1,000+ home development with only 250 affordable units, ahigh end hotel, and visitor services as businesses on site ignores the public input andwill be an environmental disaster for Sonoma Valley.	This comment has been noted. Please see section 1.3 starting on page 45 of the DEIR in regards to the legal requirements and state guidelines for public involvement.

Commenter	Date	Letter	Comment	Response
Linda Hale	Sunday, August 21, 2022	C58-2	The EIR process was fast tracked when the DGS released the property for sale. This isagainst the law since no project has been designated by the Board of Supervisors norhad the EIR process even been started. The EIR findings were released with thefollowing legal concerns:1. Where is the Response to Public Comments in the Draft EIR?2. Where in the DEIR are the actual Specific Plan mitigations listed? (ExecutiveSummary refers to Appendix A, but mitigations are not included) Virus-free.www.avg.com 3. The county is using a "Self-Mitigating Plan" approach. What is the rationale for doingthis? How will implementation of mitigations work, since they won't appear in the EIRitself but only as a "condition" of moving forward with development?4. How, when, and through what mechanism will the open space lands at SDC bepermanently protected and kept in public hands?Also Permit Sonoma states: “Public participation identified three key areas of concernamong the 16 areas studied: open space and wildlife, water, and wildfire risk andevacuation routes. The draft Environmental Impact Report finds that the proposedspecific plan would not create significant and unavoidable impacts in these areas.” Theproblem is that the impacts are significant and unavoidable.	This comment is noted. Please see MR-1 regarding the Self-Mitigating approach. Please see section 1.3 starting on page 45 of the DEIR in regards to the legal requirements and state guidelines for public involvement. Please see Table ES-2: Summary of Impacts in regards to identified mitigation requirements. Other questions are not related to the adequacy of the DEIR.
Linda Hale	Sunday, August 21, 2022	C58-3	There is really no proposed specific plan. The traffic and water studies were done whenthe SDC was permanently closed by the state, so no impacts were shown due to lowtraffic and water use in the area. Permit Sonoma has done the EIR only allowing publiccomments via zoom and the US Mail with no responses to critical concerns.Sonoma Valley is congested. It has two main roads and one of them had to evacuate1,000s of Oakmont residents by bus during the last fire since there are no exit routesthat can handle evacuation traffic. Three other major developments are now permittedbetween the city of Sonoma and Santa Rosa and in process along the Highway 12corridor. Traffic in Sonoma Valley is already impacted, especially in the Boyes Springsarea and the city of Sonoma with only one road out. People say that they no longercome to Sonoma because of the traffic. And Sonoma County has been sued for notmeeting its own emission standards. Sonoma Valley is already in a state mandated Groundwater Study with well restrictionsin place for commercial growth and homeowners' wells being monitored throughoutthe valley. We have asked for a reduction to 450 homes and no hotel. Please intervenebefore this goes any further. We need the State of California to come forward	This comment is noted. Please see MR-6 in regards to the adequacy of the transportation analysis and number of proposed housing units. Please see section 1.3 starting on page 45 of the DEIR in regards to the legal requirements and state guidelines for public involvement.

Commenter	Date	Letter	Comment	Response
			toprotect what makes Sonoma Valley the destination it is and to protect local resources.This development will add a new city to the valley floor, deplete our vanishing watersources, and create urban sprawl. Please consider resources and action to protect aCalifornia resource.	
Maite Iturri	Wednesday, September 14, 2022	C59-1	The Springs Municipal Advisory Council (SMAC) approved on September 14, 2022, the following recommendation in response to the Draft Environmental Impact Report presentation received on August 24, 2022 for the future use of the Sonoma Developmental Center (SDC) in Eldridge, California. The following paragraph is an amendment to the previously submitted letter dated January 12, 2022 Affordable Housing: That any future SDC housing development be affordable; either owner occupied or long-term rental units. Our recommendation is that housing be for people who work and/or live in Sonoma Valley. The development should be a phased project, incorporating multiple developers and should periodically evaluate the impact to fire, roads, climate, equity, and infrastructure. Could the percentages of housing be reversed so that affordable housing is 75% in all its permutations and market rate housing be 25% of the ratio?	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Maite lturri	Wednesday, September 14, 2022	C59-2	Dear Sonoma County Board of Supervisors: The Springs Municipal Advisory Council (SMAC} approved on January 12, 2022 the following recommendation for the future use of the Sonoma Developmental Center (SDC} in Eldridge, California. We want to urge the Board of Supervisors (BOS) to consider a fourth alternative that is inclusive of the ideas and vision of our Sonoma Valley community. The information provided by local organizations was not incorporated into the plans. There needs to be an effort to outreach to Latinx, low income elder communities, renters, disabled and other disenfranchised populations. Locally gathered information will be useful in addressing the recent, pressing and ongoing concerns not exclusive of but including drought and fire. As a guiding principle, we urge the BOS to require local knowledge and experience in formulating a fourth option. We acknowledge that during a Global Pandemic, outreach can be challenging and for that reason alone, we request adequate time-up to a 2-year period-to find another alternative. In addition, we urge the BOS to lobby the State of California to financially support the remediation and repair of the SDC campus.	This comment is noted. Please see MR-2 in regards to allowing more time before finalizing the Specific plan.
Maite lturri	Wednesday, September 14, 2022	C59-3	We have heard the variety of interests regarding the development of SDC. Some are competing and others are complimentary. The following are some commonalities and agreements among the stakeholders that we represent:. Affordable Housing: That any future SDC housing development be affordable; either owner occupied or long-term rental units. Our recommendation is that housing be for people who work and/or live in Sonoma Valley. The development should be a phased project, incorporating multiple developers and should periodically evaluate the impact to fire, roads, climate, equity, and infrastructure. Road Access and Transportation: Consider and evaluate a second access to HWY 12 from the Eastside of SDC campus for emergency egress with the possibility of a permanent thoroughfare if modeling agrees. Provided that said road not have an impact on the wildlife corridor. Any plan should include a class 4 bike lane through the existing SDC and the new egress road. Vegetation/wildlife/land Preservation: Maintain the rural nature of our valley. Develop and plan to maintain the wildlife corridor while preserving in perpetuity the currently undeveloped/natural lands of the site. Community Services & Facilities: That the development provide the following	This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			community services at the new SDC: Education and Employment Training facilities, Community facilities that include: a plaza, community hall, park, and a performing arts theater, Recreation: Swimming pools, sports fields, fitness classes, Mental Health outreach or crisis center for youth and adults, Community Health Center. Funding: Explore creative funding from all levels of government and non-government organizations. These suggestions were developed based upon information provided by the Springs Municipal Advisory Council members, Sonoma Valley Housing Group and community members. Thank you for your consideration.	
Marcia Johnson	Wednesday, August 24, 2022	C60-1	I ask that you please review the Specific Plan as well as the EIR of the Sonoma Development Center. Taxpayerresources can be saved if aligned with the State's RFP. We must wait for completion of the RFP. Rushing to push through something without all parts being completed defeats the purpose of working together, plus not considering the importance of what environmental damage may occur.	This comment is noted. Please see MR-2 in regards to allowing more time before finalizing the Specific plan.
margandbo@gmail.com	Tuesday, August 23, 2022	C61-1	We've lived next to SDC for 44 years. The dramatic density increase proposed would forever transform us. Gone would be the pastoral small town setting we treasure. Even more importantly, please realize that our snail-paced, stop and go, vehicle-packed evacuation during the 2017 fires was absolutely terrifying and full of danger. So to add 1000 more homes with thousands of additional vehicles to our drought stricken, wildfire prone area is absurd! How can that make sense to anyone? In addition, the drought is serious and real. We're already not watering our gardens, limiting flushes, shortening showers, not washing cars, etc., etc. Adding thousands of people makes no sense since there's already not enough water for those currently here. Of major importance also is that our wildlife's survival depends on our intelligent and realistic planning ....the wildlife corridor must be much wider! Thank you for all the time and effort you are putting	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			into this issue. It can't be easy to have the future of Sonoma Valley in your hands.	
Marie Andel	Monday, August 22, 2022	C62-1	I am writing to express my disappointment with the County's August 10, 2022 Draft Specific Plan and Draft EIR for the future of SDC -- and to urge needed action to align the State and County processes. While we need housing, SDC can't solve it all at once. The proposed addition of 1000 residential units is far too many and feels completely tone deaf to issues of wildfire and drought - much less traffic. I strongly urge the county to engage in a truly meaningful planning process that aligns with the State's RFP process. Draft the plan and EIR to effectively and thoroughly analyze the impacts of the proposal. Listen to your constituents! Thank you for your attention to this matter. A thoughtful and thorough process can result in a great outcome for thevalley, for our safety and the welfare of generations of humans, animals and flora!	This comment is noted. Please see MR-3 for clarification of the level of detail of analysis and programmatic nature of the Draft EIR.
Mark Speer	Tuesday, September 13, 2022	C63-1	I just wanted to convey how important it is to preserve the open space, along with keeping a wildlife corridor available at the former SDC campus. We have all studied the maps and have seen how critical this area is to protecting wildlife in Sonoma/Marin county! To allow corporate greed to take over, and destroy this precious habitat we have in Glen Ellen would be very sad for mankind. Just the other day I saw two species cross the road in front of me on my way to Sonoma as I drove through the SDCcampus. To choke them off through more development would be a mistake forever, and a true pity.	This comment is noted. Please see MR-7 in regards to the adequacy of the DEIR's analysis of the impact on wildlife.

Commenter	Date	Letter	Comment	Response
Mary Currie	Friday, August 19, 2022	C64-1	I am submitting the following comments: 1. The Sonoma County Board of Supervisors gave direction to pursue a specific plan for SDC with fewer than 1,000 homes, yet the Drafts (EIR and SDC) propose 1,000 residential units with extensive commercial development. This leaves the drafts inadequate as the environmental impacts and challenges of today that include wildfire, drought, and biodiversity loss are not addressed.	This comment is noted. Please see MR-7 in regards to disagreement with the proposed number of homes and MR-3 for clarification of the DEIR's level of analysis.
Mary Currie	Friday, August 19, 2022	C64-2	2. Aligning the Specific Plan and EIR with the State's RFP selection process, would increase efficiency, save valuable taxpayer resources, and ensure thorough planning and environmental review. Review of the Draft Specific Plan and Draft EIR must be paused pending completion of the RFP process. The State is due to announce the RFP selection on October 24, 2022.	This comment is noted. Please see MR-2 in regards to allowing more time before finalizing the Specific plan.
Mary Currie	Friday, August 19, 2022	C64-3	3. Re-draft the Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the Specific Plan and EIR provide the streamlined process they are designed to provide	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Mary Poppic-Reeves & Brian Reeves	Wednesday, September 14, 2022	C65-1	We have lived within a mile of the Sonoma Developmental Center for over 20 years. We have raised our two children here, walking its streets and trails while appreciating the truly special place it is, from its diverse community of residents, to its rich wildlife population, and its verdant landscape. It is a unique resource for our community--- for the entire North Bay, that requires a well-considered, thoughtful approach to its transition. While the process may have started out this way, this push to approve an inadequate, nonspecific and unenforceable Draft EIR and Specific Plan is a dangerous and unconscionable rush to judgement. Undertaking this process simultaneous to the State's Request for Proposal is a waste of precious resources; these tools should react to a specifc development proposal that has yet to be produced. The Draft EIR and Specific Plan before you makes it clear the process is out of order. Simply, the cart has been placed before the horse. Your overarching question has to be: What happens if the RFP generates a proposal that this Draft EIR and Specific Plan doesn't specifically address, or worse, is so broad that the room for interpretation allows a full range of unintended and unacceptable consequences? The requisite comprehensive detail of this proposal mandates an EIR and Specific Plan that analyzes point by point all the merits and drawbacks of this enormously complicated project.	This comment is noted. Please see MR-2 in regards to allowing more time before finalizing the Specific plan.

Commenter	Date	Letter	Comment	Response
Mary Poppic-Reeves & Brian Reeves	Wednesday, September 14, 2022	C65-2	3.4 Biological Resources To bring development to the SDC necessitates adding additional roadways to handle the traffic associated with such an overload of residential and commercial units. A new Arnold Drive to Highway 12 connector is proposed—one that would cut a path right though the critical Valley of the Moon Wildlife Corridor. How can this have a “less than significant impact” on the black bears, mountain lions, bobcats, and dozens of other species that have all been documented in the area? If left undisturbed, studies have shown the Wildlife Corridor through the SDC can continue to provide critical connectivity. If development is more important to our environment, what is the plan to mitigate this unrecoverable loss?	This comment is noted. Please see MR-7 in regards to the DEIR's findings on wildlife impacts.
Mary Poppic-Reeves & Brian Reeves	Wednesday, September 14, 2022	C65-3	3.9 Hydrology and Water Quality Where is the water coming from to support 2,400 new residents? The Draft EIR suggests there will be no impact on groundwater. For those who have been asked to conserve water because of a local dwindling supply, development on this scale makes no sense. How will this undeniable impact during a drought emergency be mitigated?	This comment is noted. Please see MR-5 in regards to the DEIR's water supply analysis.
Mary Poppic-Reeves & Brian Reeves	Wednesday, September 14, 2022	C65-4	3.10 Land Use and Planning How can we know that “development under the Proposed Plan would not physically divide an established community” if the Draft EIR isn’t even reacting to a specific development proposal? Those of us on the southside of Glen Ellen would argue any type of major development in the SDC corridor could sever our connection to the village on the north side of Glen Ellen. The project should work to unify, not divide, our historic community, but without specifics,	This comment is noted. Please see MR-8 in regards to the DEIR's historic preservation analysis.

Commenter	Date	Letter	Comment	Response
			we cannot know what impacts might occur and how they might be mitigated.	
Mary Poppic-Reeves & Brian Reeves	Wednesday, September 14, 2022	C65-5	3.12 Population and Housing While we are aware how much Sonoma County needs affordable housing (with two sons who've regretfully had to settle elsewhere to afford their homes), using the SDC to resolve this issue is unrealistic. From a practical standpoint, this project's horizon is not even within ABAG's Regional Housing Needs Allocation time frame (2040 vs. 2023-2030). As broadly conceived as it is now, the Draft EIR and Specific Plan can't even ensure development that complies with the requirements that new housing be firesafe, reduce environmental impacts and traffic, and mitigates the drought emergency. Right now, there are about 700 dwelling units in the Village and 350 in the concentrated southside. You don't need an expert to see that doubling—not to mention potentially tripling, the housing units in Glen Ellen by building them all in the acres between the two will have an impact. Even the lowest increase of 450 units in the Historic Preservation Plan would represent a 45% increase and have an impact of at least equal measure. Trying to solve Sonoma County's housing crisis all in one project located in a narrow Valley with one road in and out is poor planning pure and simple; nothing in this Draft EIR suggests how	This comment is noted. Please see MR-4 in regards to the DEIR's fire evacuation analysis and MR-6 in regards to the DEIR's analysis of housing and traffic.

Commenter	Date	Letter	Comment	Response
			the attendant problems of this scale of development might be resolved.	
Mary Poppic-Reeves & Brian Reeves	Wednesday, September 14, 2022	C65-6	3.14 Transportation Again: one road in, one road out. Then layer in at least one car in every new garage. Even in its heyday in the 1950's the SDC didn't have as much traffic as this scale of development will generate, and the Valley of the Moon, had a much lower surrounding population back then. Adding 1,000 homes could easily add as many cars, particularly given the limited public transportation and limited services in the area. These new residents will need cars and they will need a great deal more time for commuting when they are stuck on that one road in, one road out. Adding another crossing between Arnold Drive and Highway 12 will still place all these cars, a substantial increase, on two two-lane roads that are	This comment is noted. Please see MR-6 in regards to the DEIR's analysis of housings and traffic.

Commenter	Date	Letter	Comment	Response
			already heavily travelled—and have a devastating record for traffic fatalities in this very area. There will be a transportation impact regardless of the scope of the project—it must be comprehensively and specifically analyzed and the impacts duly mitigated.	
Mary Poppic-Reeves & Brian Reeves	Wednesday, September 14, 2022	C65-7	3.16 Wildfire In 2017, we packed up our family and pets as we were ordered to evacuate our home due to the Nuns Fire and were stuck in gridlock on Arnold Drive for hours as we joined our neighbors attempting to flee the flames. The suggestion that adding 2,400 residents would not "not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan," would be laughable, if the consequences were not so frightening. The location proposed for an additional crossing between Arnold Drive and Highway 12? In 2017, it was in flames. We urge you to set this process aside and wait the short time until a development proposal has been chosen by the State. Then a Draft EIR and Specific Plan can be prepared to react to specific issues, impacts can be better analyzed and reasonable mitigation measures proposed. Please do not make a	This comment is noted. Please see MR-2 in regards to allowing more time before finalizing the Specific plan and MR-4 in regards to the fire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			rush to judgement; this resource is too valuable to put at risk.	
Mary Poppic-Reeves	Friday, August 19, 2022	C66-1	I am deeply concerned about the recently released Draft Environmental Impact Report (EIR) and Draft Specific Plan for the Sonoma Developmental Center (SDC). Initiating this review is premature as the California State's Request for Proposal (RFP) has not yet concluded. Spending time and resources reviewing hypotheticals is unnecessary and wasteful, particularly when predominant, critical issues of wildfire, drought and biodiversity loss are not even being addressed. Continuing the review process at this point would be irresponsible. I urge you to pause this process until such time that the Specific Plan and EIR can be aligned with the State's RFP. Specifically: 1. Engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022. 2. Re-draft the County Specific Plan and EIR to describe and analyze the impacts of the	This comment is noted. Please see MR-2 in regards to allowing more time before finalizing the Specific plan.

Commenter	Date	Letter	Comment	Response
			actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.	
Michael Gill	Tuesday, August 23, 2022	C67-1	I wanted to know if tomorrow's Joint Meeting will be recorded for later viewing. If so, please direct me where to find it.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Michael Lockert	Saturday, September 10, 2022	C68-1	As a 46 year resident of Sonoma Valley, I am infuriated by the total dismissal of public input and disregard for public safety reflected in the SDC Plan and Draft EIR. Virtually ALL of the public comments at various meetings over several years have been in support of a much smaller development, with a MAXIMUM of 400 (affordable) units, no hotel, little to no businesses, and honoring the historic significance of the site. The current proposal has so many problems I hardly know where to begin. First and foremost, the impact on fire safety and emergency evacuation cannot be overstated. Valley residents well remember the 2017 wildfire which came into Glen Ellen, and forced the evacuation of hundreds of residents, who found themselves stuck in traffic, taking 2-3 hours just to get to Hwy 37. The idea that adding 2-3000 residents and their pets to the Eldridge area will not have a significant impact on that traffic would be laughable if it were not so potentially dangerous. Adding one connector between Arnold Drive and Hwy 12 will not seriously mitigate that problem. In my opinion, anybody approving the plan, as is, will have blood on their hands when the next wildfire happens. And it will. Secondly, the impact on daily traffic is summarily dismissed as minimal, needing no mitigation whatsoever. I don't know where the authors of this report live, but it is not in Sonoma Valley. It's insane and ridiculous on its face. If we are adding 1000 units of housing, AND a hotel, we are talking about a daily increase of AT LEAST a couple thousand car trips daily without the hotel. The hotel will add who knows how many guests, and staff working 24/7. This will be true even if, decades from now, everyone will be driving electric cars.	This comment is noted. Please see MR-4 in regards to the DEIR's fire evacuation analysis and MR-6 in regards to the DEIR's analysis of housing and traffic.

Commenter	Date	Letter	Comment	Response
Michael Lockert	Saturday, September 10, 2022	C68-2	Although that should lead us to a discussion of the Greenhouse Gas Emissions involved in such a plan, which are required to be considered by any EIR in California, I want to mention another factor that no one seems to be considering, namely the effect of all these residents having pets. There is an explosion of the number of people owning dogs and cats in the USA, and I presume this will be the case for any residents of this project. Inevitably, many of these will escape, having a huge impact on the current and proposed wildlife corridor. Since 1970, the songbird population in the US has declined by 30%, and according to the American Bird Conservancy, cats are the leading cause of direct, human-caused bird mortality. The International Union for Conservation of Nature (IUCN) lists domestic cats as one of the world's worst non-native invasive species. Dogs, both on leash and off, will also have a negative impact on the wildlife corridor, but no one is even considering these impacts let alone recommending any mitigations. Apparently, all of the meetings and requests for public input by the State and County have been a sham. Not one of our governmental representatives has worked as public servants, taking the voice of the people to the halls of power. Not one of our state reps, for instance, has objected to the onerous burden of the estimated $100 million cost of cleaning up the neglected water system and other sources of pollution, caused by the State of California, sole owner of the property for over 100 years. Shame on the Department of Governmental Services and shame on all our state and county representatives for betraying the public trust.	This comment is noted. Please see MR-7 in regards to the DEIR's findings on wildlife impacts.

Commenter	Date	Letter	Comment	Response
Michael Lockert	Monday, September 5, 2022	C69-1	As a 46 year resident of Sonoma Valley, I am infuriated by the total dismissal of public input and disregard for public safety reflected in the SDC Plan and Draft EIR. Virtually ALL of the public comments at various meetings over several years have been in support of a much smaller development, with a MAXIMUM of 400 (affordable) units, no hotel, little to no businesses, and honoring the historic significance of the site. The current proposal has so many problems I hardly know where to begin. First and foremost, the impact on fire safety and emergency evacuation cannot be overstated. Valley residents well remember the 2017 wildfire which came into Glen Ellen, and forced the evacuation of hundreds of residents, who found themselves stuck in traffic, taking 2-3 hours just to get to Hwy 37. The idea that adding 2-3000 residents and their pets to the Eldridge area will not have a significant impact on that traffic would be laughable if it were not so potentially dangerous. Adding one connector between Arnold Drive and Hwy 12 will not seriously mitigate that problem. In my opinion, anybody approving the plan, as is, will have blood on their hands when the next wildfire happens. And it will. Secondly, the impact on daily traffic is summarily dismissed as minimal, needing no mitigation whatsoever. I don't know where the authors of this report live, but it is not in Sonoma Valley. It's insane and ridiculous on its face. If we are adding 1000 units of housing, AND a hotel, we are talking about a daily increase of AT LEAST a couple thousand car trips daily without the hotel. The hotel will add who knows how many guests, and staff working 24/7. This will be true even if, decades from now, everyone will be driving electric cars.	This comment is noted. Please see MR-4 in regards to the DEIR's fire evacuation analysis and MR-6 in regards to the DEIR's analysis of housing and traffic.

Commenter	Date	Letter	Comment	Response
Michael Lockert	Monday, September 5, 2022	C69-2	Although that should lead us to a discussion of the Greenhouse Gas Emissions involved in such a plan, which are required to be considered by any EIR in California, I want to mention another factor that no one seems to be considering, namely the effect of all these residents having pets. There is an explosion of the number of people owning dogs and cats in the USA, and I presume this will be the case for any residents of this project. Inevitably, many of these will escape, having a huge impact on the current and proposed wildlife corridor. Since 1970, the songbird population in the US has declined by 30%, and according to the American Bird Conservancy, cats are the leading cause of direct, human-caused bird mortality. The International Union for Conservation of Nature (IUCN) lists domestic cats as one of the world's worst non-native invasive species. Dogs, both on leash and off, will also have a negative impact on the wildlife corridor, but no one is even considering these impacts let alone recommending any mitigations. Apparently, all of the meetings and requests for public input by the State and County have been a sham. Not one of our governmental representatives has worked as public servants, taking the voice of the people to the halls of power. Not one of our state reps, for instance, has objected to the onerous burden of the estimated $100 million cost of cleaning up the neglected water system and other sources of pollution, caused by the State of California, sole owner of the property for over 100 years. Shame on the Department of Governmental Services and shame on all our state and county representatives for betraying the public trust.	This comment is noted. Please see MR-7 in regards to the DEIR's findings on wildlife impacts.

Commenter	Date	Letter	Comment	Response
Moira Jacobs	Wednesday, August 24, 2022	C70-1	I'm writing to you regarding the SDC plan for its future development. First, I request the county please align the Specific Plan and EIR with the State's RFP, which would increase efficiency, save valuable taxpayer resources, and ensure thorough planning and environmental review. Review of the Specific Plan and EIR must be paused pending completion of the RFP process. I urge the County to: 1. Engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022. 2. Re-draft the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Moira Jacobs	Wednesday, August 24, 2022	C70-2	I request you please consider a much smaller housing footprint in this area, no more than 400 units. The proposed 1,000 units in that hard to access area is a very bad idea. The traffic would be terrible and our rural roads can't sustain this. Why couldn't the county focus instead on beautifying and redeveloping the already developed areas all over Sonoma County, especially the Santa Rosa Ave corridor, the downtown mall and the admin center on Mendocino? Santa Rosa avenue is practically an urban blight. After decades of haphazard development from Rohnert Park up to Santa Rosa downtown, it's a hodgepodge with many undeveloped lots, businesses that seem on brink of closing, and overall it's an eyesore. Instead, as other urban renewal projects have done very successfully, a long term plan for 1,000+ new housing units closer to our core, with better public transport and bike/walk paths lining a beatified tree lined boulevard from RP to SR would be the best plan for our County's future. This can be done in partnership with private sector developers and a voluntary program attractive to property owners in this corridor. Many of these owners might be happy to sell to a developer, especially with a creative program.	This comment is noted. Please see MR-6 in regards to the DEIR's analysis of traffic and housing and MR-2 in regards to allowing more time for the selection of a developer.

Commenter	Date	Letter	Comment	Response
Moira Jacobs	Wednesday, August 24, 2022	C70-3	Imagine our future with a beautiful tree lined Santa Rosa Ave, with wide bike/walk path from RP to SR, along with small sitting/resting parks/gardens along the way. The area can include new housing units, some 5 stories high or higher, yet all along the boulevard the set backs would be tree lined and park like looking. With a model like this you could provide enough housing in Sonoma County for the next 50+ years. Commercial and retail could remain and be integrated into this model, yet they should be more consolidated to take up less space, multi story retail mini malls integrated with shared work sites and housing as an example. It can be done, it would take a 25 year plan, but that is better than destroying the few open spaces we have left. The SDC is best developed as mostly a park like resource for Sonoma County, and something far less traffic creating or sprawl inducing. That land is far better left to very sparsely populated development, a small number of large private residential parcels, a few dense low/mid income units, and mostly a beautiful park like area with some land set aside as wildlife corridors to help sustain what we have left here of our native flora and fauna. This SDC area should have open space land set aside connecting the Sonoma Valley and Jack London State Park with the greater Mayacamas wildlife corridors. Please, before it's too late, reconsider this Sonoma County knee jerk decision of sprawl everywhere. This will only cause more problems than it solves. At the very least, decrease the numbers of units to no more than 400.	This comment is noted. Please see in regards to the DEIR's analysis of traffic and housing and MR-2 in regards to allowing more time for the selection of a developer.
Monica A Menco	Wednesday, August 24, 2022	C71-1	RFP process is complete? This seems like a waste of time and will only lead to confusion and great frustration for the residents affected by what happens to the SDC. Please wait until the State selects a speciic proposal so that the County Specific Plan	Thank you for your comment letter. This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.

Commenter	Date	Letter	Comment	Response
			and EIR will actually address the chosen developmental strategy. We need to have this done correctly.	
Nancy Murray	Monday, August 22, 2022	C72-1	Sonoma County's Specific & EIR Plans should be working in tandem and in conjunction with the State's RFP, & both should address the threats of wildfires drought, climate change & loss of wildlife habitat and biodiversity. Commercial development of this unique property would be a travesty that would profit a few developers & enrich County & State coffers with the resulting property taxes. I encourage you to work together in designing a futuristic plan for SDC that will preserve it's unique, pristine and natural beauty for the enjoyment and health of all the citizens of CA . Once commercially developed this jewel, SDC, is gone forever, never to be replaced.	Thank you for your comment letter. This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.
Orlando O'Shea		C73-1	Introduction The Sonoma Developmental Center site closure has affected many individuals with developmental disabilities. Many have been successfully integrated into their communities through the group home, supported living services, and enhanced behavioral support home (EBSH) models. This has allowed many individuals greater access to their community than may have been previously afforded to them. One population, individuals with developmental disabilities and high behavioral needs, have been less successful integrating into the new community model.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Orlando O'Shea		C73-2	What are the issues that are prohibitive to successful integration? There are several issues that are prohibitive to successful integration. Individuals with high behavioral needs often display aggressive or disruptive behaviors in their neighborhoods while attempting to access natural walking paths or enter into staff vehicles. Even with trained behavioral staff, staff may at times need to implement restraint measures to assist an individual to a safe environment to emotionally regulate. An individual may yell, cuss, or attempt to kick or hit staff during an episode, as well as engage in self-injurious behaviors. In their residence and yards, individuals may yell, cuss, engage in self injury and property destruction. These behaviors can be alarming to neighbors who are unfamiliar with the population and neighbors often feel angry and resentful that an enhanced behavioral support (EBSH) home has been built in their neighborhood. Neighbors often rally together to prevent homes from being developed in their neighborhoods and to shut down existing homes, which has happened successfully in Sonoma County in 2022 when pressure from neighbors shut down a new EBSH home on Hunter Lane in Santa Rosa. As a result, it is currently slated as a home for medical clients with developmental disabilities.	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Orlando O'Shea		C73-3	What is the current status of housing for individuals with high behavioral needs who cannot successfully enter into community? Many of these individuals are in and out of long-term crisis units when they are not successfully integrated into their communities. Many are warehoused outside of Sonoma County and away from their families and communities because there is more affordable access to acreage in less expensive counties. What are the housing needs of this community that can be uniquely served by Sonoma Developmental Center Site planning committee? Our community members with developmental disabilities and high behaviors previously served by Sonoma Developmental Center would benefit from the following structure: 1. Five parcels dedicated to enhanced behavioral support (EBSH) homes, and/or acute or long term (up to 13 months) crisis homes for individuals with developmental disabilities. 2. Homes would be developed on 1-2 acre parcels/and or parcels situated away from dense housing and busy commercial structures to allow for adequate space and privacy for individuals with high behavioral needs. State legislation mandates that the housing needs of individuals	This comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			with developmental disabilities must take priority in planning measures. The above model is the most advantageous way to meet the needs of those who have not been served by the closure of the Sonoma Developmental Center and continue to have outstanding needs.	
Pamela Merchant	Monday, September 19, 2022	C74-1	Please accept these comments on the Draft EIR for the Sonoma Development Center issued in August 2022. My partner and I are homeowners in Glen Ellen and will be adversely affected by the proposal to build over 1000 homes without taking into account the tremendous impact such a large for- profit development will be on the limited fire/police/highway/water infrastructure. PROJECT SCALE and HOUSING Why isn't the Preservation of Historic Resources and Balancing Redevelopment with Land Use (DEIR pages 5 and 6) which would allow for the largest project in Sonoma Valley – 450 new homes – being considered since it is consistent with the state's statutory objectives? Moreover, even the 450 homes are too many to support the existing infrastructure. During the 2017 fires, Highway 12, Arnold Road and Bennett Valley Road couldn't handle current traffic flow. As many have already commented, scale is the best way to mitigate	This comment is noted. Please see MR-6 in regards to the DEIR's analysis of traffic and housing.

Commenter	Date	Letter	Comment	Response
			environmental and resource impact.	
Pamela Merchant	Monday, September 19, 2022	C74-2	UTILITY INFRASTRUCTURE PG&E has not been able to keep up with fire mitigation responsibilities with the current housing stock – it's unlikely that they will be able to handle 450, 1000 or 1200 more housing units. By way of example, we live on Warm Springs Road – the PG&E utility pole for our neighborhood has been slated for replacement for 4 years now due to safety and fire concerns. Will PG&E preference bringing utilities to a new hotel over maintaining its' existing infrastructure?	This comment is noted. Please see MR-4 in regards to the fire evacuation analysis.
Pamela Merchant	Monday, September 19, 2022	C74-3	WILDLIFE CORRIDOR Why is there no analysis of the impacts on the wildlife corridor through the campus? POPULATION AND GROWTH ASSUMPTIONS The proposed plan represents double or tripling of community housing numbers and an extraordinary increase in traffic on already crowded rural roads. The urban sprawl growth scenario is in direct conflict with climate change policies to encourage smart/dense growth near existing transit.	This comment is noted. Please see MR-7 in regards to wildlife.

Commenter	Date	Letter	Comment	Response
Pamela Merchant	Monday, September 19, 2022	C74-4	FIRE/EMERGENCY PREPAREDNESS Having experienced all the disruption of the 2017 fires, it's shocking that the DEIR did not consider a fire scenario where the fire comes from the West. It's also troubling that the DEIR does not take into account an evacuation scenario where the broadband and cell service is out (which would replicate the 2017 fires). Building on-site shelter (Section 16.1.3.4) makes no sense given how devastating fire can be in this area. During the 2017 fire it took between 1 and 2 hours for Oakmont residents to get onto Hwy 12 and it took our neighborhood (Glen Ellen near Kenwood) hours. Adding 450, 1000, or 1200 homes (and twice or 3x as many cars given the lack of public transportation in Sonoma) will create unprecedented traffic jams during a fire. The SR 12 connector road will only work if the fire doesn't cross the road (during the 2017 fires the fire jumped Hwy 12 and Bennett Valley Road in a number of places). In sum, we strongly recommend that the DraftEIR be rejected and that instead of focusing on for profit housing and hotel development, that the County reopen the process for the development of the SDC to take into account fire, safety, community, wildlife, climate change considerations. My personal preference would be that the site be used to support nonprofits and nonprofit run temporary supportive housing for the homeless, those escaping sex trafficking, and the recently incarcerated at a scale more suitable to the space. The space could also be used for 30-60-90 day addiction treatment programs.	This comment is noted. Please see MR-4 in regards to the wildfire evacuation analysis and MR-6 in regards to the housing and traffic analysis.

Commenter	Date	Letter	Comment	Response
Patricia Spicer	Saturday, August 20, 2022	C75-1	After decades of climate investigation and repeated and prolonged episodes of drought, I think it is vital for the county to engage in an alignment of the Specific Plan and EIR with the State's RFP. "Development," even for tax base purposes, is no longer defensible in this region, mostly owing to lack of water, but for many other environmental and traffic considerations. I need not elaborate, as these problems are already well known. I would only suggest that lack of water is a major factor in this case. I would also suggest that anyone involved in current planning leave their offices to visit the sad remains of Sonoma Creek and the lake at Jack London Park. What lake? The old era of expanding commercial and residential growth has ended. Conservation and preservation are essential. The SDC acreage is a gem of Sonoma County and even of northern California, an invaluable remnant of historical importance and wildlife sustainability. I grant that SDC property is owned by the State, but any State property also belongs to state residents and native wildlife. State ownership is more a matter of responsible guardianship than control for the sake of commercial exploitation. On my personal involvement: As a longtime Glen Ellen property owner, I realize that any further reduction in ground water could result in the need to deepen my water well, which I could not afford. I trust we are all aware of the dire situation in Klamath County, Oregon, and other desert regions. Water is life and must be conserved, not depleted.	This comment is noted. Please see MR-5 in regards to the water supply analysis, MR-6 in regards to the housing and traffic analysis, MR-8 in regards to the historic analysis, and MR-7 in regards to the wildlife analysis.
Paul Rockett	Aug. 29, 2022	C76-1	(p. 469 of the DEIR) The DEIR claims that "The WSA concludes all future demands within its service area can be met, inclusive of the Proposed Project in normal and multiple dry hydrologic years from 2025 through 2045." This same DEIR only acknowledges the likelihood of "single dry years", rather than a concatenation of multiple dry years. 1. Recognizing that we are already in our second year of a severe drought in Sonoma County and are still under water restrictions that date back to 2014, what justification does Permit Sonoma use to assert that the only issues concerning water availability were for "single dry years?" 2. Does Permit Sonoma accept that a) Climate Change is driving new drier, hotter climates worldwide, including that in Sonoma County, b) that these changes are man-made, and c) that they will	This comment is noted. Please see MR-5 regarding the adequacy of the Water Supply Analysis.

Commenter	Date	Letter	Comment	Response
			continually worsen until the atmosphere's load of CO2 diminishes significantly?	
Paul Rockett	Aug. 29, 2022	C76-2	(p. 15 of Appendix D) Climate Change as described by the UN Intergovernmental Panel on Climate Change is a cumulative phenomenon. The more CO2 we place in the atmosphere, the more dry, warm years we will have, NOT LESS. 3. If Permit Sonoma accepts man-made Climate Change, and that our dry, warming pattern will only get worse, then why does it presume that there will "Rebound" years, and why does it presume that the Rebound will be sufficient to make up for the dry years? 4. In Appendix D, p. 41, your own model predicts that "starting in 2030, water demands will exceed water supplies due to Lake Sonoma declining below 100,000 Acre-Feet before July 15. For the last two years Lake Sonoma water supplies were below 130,000 Acre-Feet. With recognition that Climate Change is forcing even dryer conditions, how can Permit Sonoma glibly add more total hookups from not just the SDC Specific Plan (1000+ hookups), but also the Springs Specific Plan (480+ hookups), the Sonoma Airport Specific Plan --- with such a small margin of error regarding the water levels in Lake Sonoma? 5. The last option for Sonoma Water is to obtain water from its groundwater pumps. While capacity is high today, groundwater depends upon rainfall plus snowmelt, both of which will be diminishing for the foreseeable future. Where can I find your predictions of rainfall and snowmelt for the next two decades, and their comparison to the 2000-2010 decade? 6. Snowpack in the Northern Sierra's 8-Station Index fell to 61% of normal between 2019-2022. Santa Rosa has received only 55% of normal rainfall in the 2019-2022 period. Using these conditions, and given that they were not included in any estimate or calculation of water supplies in the DEIR, what is the Permit Sonoma	This comment is noted. Please see MR-5 regarding the adequacy of the Water Supply Analysis. As stated on page 292 of the DEIR, groundwater supply and recharge are assessed by comparing existing conditions within the site area and after implementation of the Proposed Plan. Surface water and groundwater quality is analyzed by using information on existing water quality conditions. See Impact 3.9-2 on page 296 regarding Proposed Plan impacts on groundwater recharge. Given existing regulations and proposed policies, the Proposed Plan would not substantially decrease groundwater supplies and would not impede sustainable groundwater management of the basin, and this impact would be less than significant.

Commenter	Date	Letter	Comment	Response
			prediction of expected water supplies for the Valley of the Moon Water District for the next decade?	
Paul Rockett	Aug. 29, 2022	C76-3	Table 13 of Appendix D attempts to show that even in multiple dry years the supply exceeds the demand. Yet on its face, this cannot be true. Multiple dry years imply that demand exceeds supply for several years in a row. This never occurs in Table 13. In fact supply remains exactly as it was during normal years. 7. How can the yearly supply not diminish during multiple dry years? 8. Why is the VOMWD supply in a normal year 3200 AFY and in a multiple dry year still 3200 AFY? 9. Where is there evidence of ANY dry year??	This comment is noted. Please see MR-5 regarding the adequacy of the Water Supply Analysis.

Commenter	Date	Letter	Comment	Response
Paul Rockett	Aug. 29, 2022	C76-4	The SDC Specific Plan DEIR utilized the study by Wong, Broader, and Shaheen to establish the fraction of the working and living population present during a wildfire evacuation. 10.Many if not most of the evacuations used in the Wong et al. study occurred at night, not during rush hours. How would your two scenarios' results change if a scenario had been provided at midnight? 11. The Wong study was used to establish the number of people needing to evacuate. However, at the chosen time, rush hour, many residents would be returning home. Did the studied scenarios include the presence of residents returning against the evacuating traffic to retrieve their spouses and important documents? 12. Did your two scenarios include the neighborhoods of Glen Ellen, Kenwood, Oakmont, the Springs, and/or Sonoma? 13. Having seen multiple evacuations since 2017, it is typical that state and local police routinely force traffic to go ONLY in the evacuating direction. Was this included in the two utilized evacuation scenarios? 14. If such police action was not simulated, then how are your time results changed by such an addition of forced traffic directions? 15. All such evacuation/traffic computer codes require benchmark testing to establish their credibility. What benchmark evacuation was utilized to confirm your code's credibility?	This comment is noted. Please see MR-4 regarding the adequacy of the wildfire evacuation analysis. The evalaution of evacuation times for a nighttime scenario would be expected to be less signficant than the peak hour analysis included in the DEIR. The DEIR assumed full PM peak hour traffic activity to and from all areas outside the evaucation zones. Nightime basline traffic would be much less than PM peak horu traffic. The DEIR assumed 75% of residents and 75% of employees would need to evacuate during the daytime peak hour. A nighttime evacuation would involve a higher perecntage of residents, but almost no employees. The ttoal number of avacuating vehicles would be expected to be less than the peak hour assumptions. The evacaution analysis assumed that 25 percent of normal weekday peak hour activity would occur in the evacuation areas, in addition to the evacuation traffic. This would account for residents returning home before evacuating. The evacuation analysis included evacuation traffic from all neighborhoods shown in Figures 3.16-3 and 3.16-4. Most if not all of the neighborhoods mentioned in the comment are included in one or both of these scenarios. Specific police control strategies were not included in the evacuation analysis. The analysis assumed that each driver would find the fastest avaialable route considering congestion from other drivers. Police control would be expected to facilitiate this priocess by directing drivers to less congested routes. The evacuation analysis did not assume forced control to specific evacuation routes. If such control was

Commenter	Date	Letter	Comment	Response
				implemented, there are a range of potential outcomes depending on how officials react to congestion on various routes. This range of potential outcomes due to different control strategies m,ay affect the overall magnitude of evacuation times but would not significantly change the project impacts on evacuation times disclosed in the DEIR. The travel time analysis is based on the calibrated relationships in the Sonoma County travel model. While there is a great deal of anecdotal information on evacuation times from prior wildfires, there are no comprehensive measured evacuation times that provide for benchmarking of evacuation time modeling. The DEIR therefore uses the best available information. There is anecdotal information on evacuation times from the Nuns fire. However, there are no comprehensive measured evacuation times that provide for benchmarking of evacuation time modeling.
Paul Rockett	Aug. 29, 2022	C76-5	You have multiple individual experiences from the Nun's Fire of Oct. 8, 2017 that cascaded through Glen Ellen at 11:30PM. Participants can tell you exactly how long they took to evacuate. (Most times were in the hour range, not minutes as you O 16.Why did you not use the Nun's fire as your benchmarking calculation? 17.What results would you get, if you ran your calculation for Glen Ellen at 11:30PM at night? • On Aug. 17, 2022 the Board of Forestry approved the updated Minimum Fire Safe Regulations, applicable state-wide. 15. How will the new regulations impact SDC Specific Plan housing density, road configurations, road widths, dead-end roads, etc. to maintain consistency with the new rules?	The comment is noted. The Proposed Plan would comply with all State, regional, and local regulations regarding fire safety. See response to B76-4.

Commenter	Date	Letter	Comment	Response
Paul Rockett	Aug. 29, 2022	C76-6	Cal Fire Hazard Zone maps were last published in 2007. New maps are being redrawn to account for the many wildfires beginning in 2017 that are largely the result of a warming, drier climate. The map changes are mostly going from lower hazard levels to higher hazard levels and are expected to be published during the Fall 2022. 16. Did estimates of fire susceptibility of the SDC area take such changes into consideration? 17. Did estimates of fire susceptibility of the SDC area account for the wildfires of 2017 that penetrated Glen Ellen? Did they account for the multitude of wildfires in Sonoma County during 2018-2021?	The comment is noted. See responses to comments B3-25 and B3-27.
Paul Rockett	Aug. 29, 2022	C76-7	SDC DEIR p. 183 uses the same tired argument that since the Specific Plan VMT adds only 1.1% to the whole of Sonoma County, that thus its contribution is Less than Significant. This absurd argument is deafened by the observation that most auto trips are less than 5 miles in length, and thus the correct VMT for comparison is the local VMT, not the County VMT. 18. Why did this calculation not compare the VMT added from the Specific Plan to that of existing Glen Ellen, where in fact this traffic will reside?	The comment is noted. Please see response to comment B3-15.

Commenter	Date	Letter	Comment	Response
Paul Rockett	Aug. 29, 2022	C76-8	(p. 364 of DEIR) Sonoma County appealed its original RHNA for the unincorporated County, of which the Springs Specific Plan is a part. HCD did not accept the appeal and kept the RHNA at 3881 new dwelling units during 2023-2031. Within the RHNA Appeal Request, Sonoma County accepted the 7% growth estimate which has no factual basis. The HCD uses Population Projection data from the Dept of Finance Demographics Research Unit (DRU), whose data is presented below for Sonoma County: These data come directly from both DRU Estimates (actual census data plus births, deaths, DMV registrations, and more), and DRU Projections (based upon decades of prior history plus demographics). Their spreadsheets are available to all online from the Dept. of Finance and are attached to this email. Note the great difference between the speculation of the DRU Projection, when compared to the Actual DRU Population Estimates. The actual population of Sonoma County has been decreasing since 2016, continuously decreasing, and NOT INCREASING. Thus the push for added market-rate housing to accommodate a growing population is an unsupportable assumption. This DEIR on p. 364 blindly accepts their projections for population growth. Clearly the writers of this EIR did not read the source DRU data. 19.Why did the DEIR accept the 9% growth rate, since County population has been decreasing from 2017 through Jan. 2022, based upon Dept. of Finance DRU data, and since there is no factual basis upon which to base the Projection? 20. How could the County rewrite the SDC Specific Plan to demonstrate the greater likelihood that County population will be static or slightly decreasing? 21. On p. 367 the SDC DEIR acknowledges that from 2010 to 2020 the Sonoma County total population increased by only 1.3% (also seen in plotted data above), however, they then, without evidence, presume that the total County population will INCREASE by 9% during 2020-2040. Since the actual on-the-ground evidence is that Sonoma County's population has been continuously decreasing, how does this DEIR justify its supposed population increase? 22. Did the writers of this DEIR look at the actual County population data before writing this section on Population and Housing?	The comment is noted. Page 367 of the DEIR recognizes that the County's population decreased between 2010 to 2020. The DEIR uses the most recent and reliable population data porovided by the California Department of Finance and Association of Bay Area Governments for its analysis. Please see Impact 3.12-1 on page 376 regarding impacts on induced population growth. buildout of the Proposed Plan would help fulfill State legislature requirements to develop affordable housing within the Planning Area and help mitigate the severe housing shortage facing Sonoma County. Further, the Sonoma County General Plan 2020 Housing Element specifies that future re-use of the SDC facility should include affordable housing. Therefore, given that the Proposed Plan's projected population growth is commensurate with State legislative requirements to prioritize affordable housing development as well as General Plan goals and policies, the Proposed Plan would not induce substantial unplanned population growth in the Planning Area and the impact would be less than significant. Please see also Section 5.1 on page 579 of the DEIR for further analysis on growth-inducing impacts.

Commenter	Date	Letter	Comment	Response
R. Thornton	4-Sep-22	C77-1	I am being asked to reduce my water by 20% while you are considering allowing the Sonoma Developmental Center to add hundreds of homes, commercial development and a hotel. You are also considering adding hundreds of new residences on the Elnoka Property next to Oakmont, where my residence is and where I live. The homes, commercial development, landscaping and other water use tells me that you are not drought conscience. Please consider the rest of us who rely on water and stop the development of the Sonoma Developmental Center and Elnoka and save us all water. You can't have it both ways, we are either in a drought and we need to save at least 20% or we aren't and development is OK.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
R. Thornton	4-Sep-22	C77-2	During the Nuns Fire, I was awakened on October 8, 2017 around 2:30 AM by a neighbor who said “Get out, get out now, a fire is approaching!” You cannot imagine the fear and worry as I got dressed, grabbed my medication and tried to leave my residence in Oakmont. It took 2 hours of trying to drive out and we all felt we were lucky not to burn in our cars. The backup on Highway 12 was miles long. When we finally were able to come home, 3 weeks later, the devastation along Highway 12 with burned out homes, cars, vegetation and anything that was in the fire’s wake was horrifying. Oakmont lost 2 homes including Supervisor Susan Gorin’s and a lot of vegetation. This is well documented. On September 27th, 2020, the Glass Fire reared its ugly head and this time we were sent a voluntary evacuation notification and then a mandatory evacuation notification. The backup along Hwy 12 was again miles long even for those of us who evacuated when we got the voluntary notification. It took many of us another 2 hours to get out safely. Nine days later, I came home to 3 homes that burned to the ground within walking distance of me and Oakmont had a triplex that burned to the ground. I had damage as did my neighbors. This is well documented. We have lost hundreds of homes due to these fires along Hwy 12 from Calistoga Rd through Sonoma. I feel that it is irresponsible to build on the Elnoka property, which is right next door to my sub-HOA in Oakmont and to build in the Sonoma Developmental Center due to the amount of traffic just on a normal day/night not to mention in a fire event and water usage. It appears that widening Highway 12 is not a priority, so then stop more cars from using this highway by not building in this corridor.	This comment is noted. Please see MR-4 regarding the adequacy of the wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
R. Thornton	4-Sep-22	C77-3	It is very important to build housing in Sonoma County, in due time. The wrong place to build is in the Valley of The Moon corridor from Elnoka through to Sonoma. Some of the brightest minds live in Sonoma County and I know that they can figure out how to properly balance housing, drought and fire corridors to come up with a better solution. Remember for every gallon of water used in new housing, landscaping and new hotels is one less gallon of water for the rest of us.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Robert Holloway	Monday, September 12, 2022	C78-1	As a retired professional historic preservationist for the National Park Service, I would like to submit my strong support for the Historic Preservation Alternative outlined in the Executive Summary Section ES.3.3 of the SDC Specific Plan Draft EIR (August 2022). A loss of 28% of Contributing historic resources, combined with new, dense infill construction of 30' to 45' heights and alteration and reconstruction of remaining Contributing structures within the National & State Register-eligible Historic District is simply too great a loss of historic fabric to retain the district's historic feeling and character. This would cause the property to lose its eligibility for listing in the National and California Registers and as a California Historic Landmark. These impacts are described in the Draft EIR 3.5.3.4 (Impacts) as "significant because they would cause a substantial adverse change to the historical district as defined by CEQA Guidelines Section 15064.5." These Contributing structures provide much of the historic district's sense of place and honor the legacy of the Developmental Center's former uses and staff. The historic story can best be told with as much of the original character as possible, even with re-purposed original buildings.	This comment is noted. Please see MR-8 regarding the adequacy of the Historic Preservation Alternative.

Commenter	Date	Letter	Comment	Response
Robert Holloway	Monday, September 12, 2022	C78-2	The County's preferred alternative, outlined as the Specific Plan/Public Draft (August 2022), provides some very thoughtful preservation guidelines in the form of Goals and Policies in the Cultural, Historic, and Tribal Cultural Resources Chapter 3.5.3.3 (Relevant Policies and Implementing Actions). However, these don't go far enough to protect important contributing historic resources using words like "to the greatest extent feasible" (Policy 4-23) and "shall seek to avoid demolition" (Policy LU-1). These policies and actions "encourage" but do not guarantee the preservation of the historic character of the Core Campus. I am a strong advocate for the overall project's mandated goal of creating affordable housing and housing for individuals with developmental disabilities, as well as other types of housing but feel that the Draft Specific Plan's proposal to create 1,000 units of housing is way too impactful. I feel the Historic Preservation Alternative's plan for 450 units is much more in keeping with the scale of the adjacent communities and minimizes additional traffic impacts. Likewise, I would like to see the idea of an additional connection to Highway 12 added to the Historic Preservation Alternative as a way of further minimizing traffic impacts. I don't understand why the Highway 12 connector idea wasn't included in the Historic Preservation Alternative as it would be outside the Historic District footprint. I also feel that the concept of adding a small to medium-sized hotel could be accomplished with architectural sensitivity through the use of rehabilitated existing structures, perhaps the Historic Admin Building, the Sonoma House, or a cluster of the existing cottages. Otherwise, an Agritourism-type hotel could be accomplished as new construction as part of the Specific Plan's Agri-hood concept east of Arnold Drive, allowing its patrons to participate in the Agri-hood goals and practices as part of their stay, learning what makes the Sonoma Valley such a special place. Thank you in advance for including my comments in the final evaluation for the future plan of the SDC property, a place of unparalleled beauty and historical significance.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Roger Peters	Thursday, September 15, 2022	C79-1	You have a lot coming at you on SDC for today's first meeting.on SDC. Rather adding detailed comments to the input load, I will just frame four questions that I hope you will ask of the DEIR sponsors. 1. Why did you (PS) not do Phase II environmental assessments re hazardous materials and substances in the gap areas of recognized environmental conditions (RECs) identified in the prior Phase I and Limited Phase II investigations? The Valley of the Moon Alliance Alliance (VOTMA) filed comments on the need for further environmental assessment work on March 24, 2022 in response for requests for comments in the NOP for the EIR. Those comments are included in pages 459-464 of the appendix to the DEIR. The DEIR acknowledged those comments on page 236 of Section 3.8 Hazards and Hazardous Waste. But the subsequent portion of Section 3.8 of the DEIR does not add any new analysis of RECs that VOTMA referenced. Instead, the discussion for the most part addresses hazardous materials and substance issues that were identified as known or likely to exist in the Core Planning Area. The discussion acknowledged that the 2017 Limited Phase II report identified a variety of areas, both in the Core Planning Area (CPA) and in the lands outside of the CPA where "further investigation was needed." (pg DEIR 248; download, pg 425) For reason unexplained, it appears that no such further investigation was undertaken. Deferral of investigation and mitigation are not an allowed strategy under CEQA. The DEIR appears incomplete and defective on this issue. Since the DEIR indicates at various points that the use of non-Core Planning Areas for agriculture, recreation and other uses is anticipated, it is reasonable to conclude that in developing facilities necessary for and in carrying out operations of that sort there will be the need for grading and other soil disturbance that would upset and uncover hazardous material and substances. The DEIR's approach to study those situations at some time in the future and if they occur constitutes an inadequate and incomplete DEIR. Since the DIER here is likely intended to serve as the environmental review document that will cover the transfer of the preserved lands outside of the Core Planning Area this gap in analysis is problematic.	The comment is noted. As noted on page 261 of the DEIR, the Hazards and Hazardous Materials Impact Analysis considers the nature of foreseeable hazardous materials use, storage and disposal resulting from the redevelopment of the Sonoma Developmental Center. It also identifies ways that hazardous materials could be exposed to the environment or individuals. The analysis includes a qualitative evaluation of impacts associated with the presence or hazardous materials. The analysis is based on a review of materials ranging from online databases such as Envirostar and Geotracker, hazard maps, Phase I & II Site Assessments (see Appendix G), and relevant plans and regulations at the Federal, State, and local levels. Therefore, upon implementation of the Specific Plan and regular operations of the site, compliance with the regulations for hauling hazardous substances would continue to reduce the potential of an accidental release of hazardous materials (Impact 3.8-1) to a less than significant level. Further, Standard Condition of Approval HAZ-3 would require implementation of Best Management Practices to reduce exposure of workers to contaminated materials during construction, icluding a soil management plan and a health and safety plan. Compliance with the Standard Conditions of Approval Measure HAZ-3 and existing regulations would reduce impacts related to the release of hazardous materials due to foreseeable upset or accident conditions to less than significant. Therea are no

Commenter	Date	Letter	Comment	Response
				schools located or are proposed to be located within one-quarter mile of the Planning Area. Thus, implementation of the Proposed Plan would have no impact regarding hazard emissions or materials in within one-quarter mile of an existing or proposed school. Regarding Impact 3.8-4, implementation of HAZ-3 prior to construction would reduce the potential risks associated with releases of contaminated media as a result of Proposed Plan to a less-than-significant level. Please also see MR-3 for a discussion of the limited nature of a programmatic EIR, and the subsequent analysis that will be required at the project level.

Commenter	Date	Letter	Comment	Response
Roger Peters	Thursday, September 15, 2022	C79-2	2. Where is the W-Trans traffic operations analysis that you (PS) suggested in DEIR footnote 118 had been done? The DEIR analysis of transportation, and specifically traffic issues is inadequate. VMT analysis is great for dense urban projects, but does not capture the nuance of rural transportation impacts. The requirement to use VMT and the adverse impact preclusion of LOS for projects CEQA analysis does no preclude the PC or The Board from requiring a traffic impact analysis to assist decision making for land use policy planning purposes and for assessing fire/flood/earthquake evacuation risk parameters. PS recognizes that reality and tries to avoid that issue by implying that WTrans has done an LOS study. In the text associated and associated footnote 118, PS suggests that it has done a traffic impact analysis. When asked to provide that analysis referenced in fn 118, PS responded that the analysis was in Appendix F of the DEIR appendix. Appendix F at pg 748 consists of a one page set of "Traffic Volume Data."There is no text, no interpretation, no assumptions, no contextual analysis. PS should explain why it did not use the Sonoma Valley Traffic Study done in connection with the winery events ordinance, and why it did not use the SCTA Traffic Demand Model to assess congestion associated with the preferred project.	This comment is noted. Please see MR-6 regarding the transportation analysis.

Commenter	Date	Letter	Comment	Response
Roger Peters	Thursday, September 15, 2022	C79-3	3. Where is the stand-alone project specific VMT analysis for this project? Perhaps I missed it in the 3534 page appendices, but I did not see a stand-alone VMT study that could be reviewed for assumptions and whether all the appropriate TAZ had been included, and the overall documents could have been reviewed for completeness. Appendix F is exactly one page and relates to the W-Trans non-analysis of traffic impacts. The textual analysis in the DEIR itself is full of summary and conclusory statements. On its face the findings 1) on page 442 that traffic from Harney to Glen Ellen would be reduced from peak, 2) on pages 445-446 that household, employment, and total service VMT would be reduced by the project compared to peak, and 3) on page 451 that the project would not result in inadequate emergency access, all seem particularly unsupported, counter-intuitive, and problematic. It would seem relevant in that context for the PC to ask some simple foundational questions like where will the people working at SDC be coming from to work there, where will the people who live at SDC but work off site be traveling to, where would guests at the hotel be coming from, where is the nearest pharmacy, where is the nearest full service affordable market, where are the nearest medical and dental general and specialist services, where is the nearest medical complex, and what will be the impact on Highway 12 traffic of having another traffic signal at the new proposed connector? The answers to those questions are not obvious in the transportation	This comment is noted. Please see MR-6 regarding the transportation analysis.

Commenter	Date	Letter	Comment	Response
			segment of the DEIR.	

Commenter	Date	Letter	Comment	Response
Sandra Mauerhan	Saturday, August 20, 2022	C80-1	I read that the Draft Environmental Impact Report was released for the Sonoma Developmental Center on 10 August 2022 with a plan for at least 1,000 residential units and extensive commercial development. This report is premature because the State has not yet completed the RFP process. I request that you please wait to further this development until after the completion of the RFP Proposal. I realize that there is a need for more housing in Sonoma County but, as a resident who has evacuated four times and came close to losing their home during the Tubbs fire I truly hope that the safety and possible evacuation of residents be taken into account. We know that there will be more fires and Highway 12 is just not equipped for the additional people that all of the proposed new developments (Oakmont, Skyhawk, Mahonia Glen etc) plus all of us who already live in this area. It is terrifying to be stuck in traffic when you know that a wildfire is heading towards you and adding so many new homes is nothing short of reckless and will potentially result in loss of life. Add to this the lack of available water for everyone due to the drought and the loss of wildfire habitat I ask that you seriously take all of these issues into account when making future decisions for the Developmental Center - lives will be endangered by poor decisions.	Thank you for your comment letter. This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.
Sharon Bard	Saturday, August 20, 2022	C81-1	I am a long-time Sonoma County resident who has been interested in and have been following the history of the Sonoma Development Center and the property it sits on, for decades--way before the sale from the State of California and the beginning of a redevelopment plan for it's new use. I had understood that the State of California, the former owner of the property, was part of the developmental proposal process and that the sale and purchase of the land was intended to create a plan which would mitigate wildfire, drought and biodiversity loss, huge issues impacting our community currently and even more so in the future. I have now learned that you recently released a draft of an Environmental Impact Report	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			and Specific Plan for SDC which has changed the intentions of the original vision to now include more than 1,000 residential units and extensive commercial development. I am very concerned that this recent draft is not aligned with the State's proposal and is not honoring the original intent of the sale and redevelopment plan.	
Sharon Bard	Saturday, August 20, 2022	C81-2	I am asking that you re-draft your plan which was released on August 10, 2022. That you wait until after the State announces their RFP selection which I understand is to take place on October 24, 2022, and then revise your plan to incorporate their findings. And that in your revision, you include a description and an analysis of the impacts of the actual proposal that the State is selecting for this SDC property. From my prospective, it is important that Sonoma County's plans for this somewhat fragile wildlife corridor be aligned with the State's process and that the ultimategoal protects the land as well as serves the human endeavors which benefit from it.	Thank you for your comment letter. This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.
Sharon Church	Wednesday, September 14, 2022	C82-1	Can you certify and provide documentation that the traffic model referenced in the DEIR included the cumulative impacts of all development (including those not yet built) impacting Highway 12 from Santa Rosa to Sonoma and Arnold Drive, including special events? Claims that adding up to 1,000 housing units (2,400 residents) with an estimated 2 vehicles per household plus 940 jobs in the commercial area (and special events) would not impact our ability to evacuate during the next emergency are irresponsible. The "models" used defy common sense, ignore the already burdened two lane roads (Highway 12 and Arnold Drive), paint a rosy picture of available public transportation and thus demand for vehicles and are clearly a transparent attempt to move past this life or death matter. The draft EIR clearly hasnot sufficiently considered the cumulative impact of development at the SDC, the Highway 12 corridor (from Santa Rosa to Sonoma), and Arnold Drive, including special events, on our ability to evacuate. A Highway 12 connector would only serve to send people toward the fire in a futile circle which could make evacuation even worse and removes an obstacle to growth	This comment is noted. Please see MR-6 regarding the transportation analysis.

Commenter	Date	Letter	Comment	Response
			in protected areas which would further exacerbate our ability to evacuate during a wildfire. Note that the Elnoka Senior Community project on Highway 12 in Santa Rosa was recently reduced by 60% (from 676 units to 272 units) to address concerns raised by the community and to address potential traffic impacts.	
Sharon Church	Wednesday, September 14, 2022	C82-2	"Shelter-in-place", seems like a death warrant, given the extreme devastation caused by wildfires. That concept would certainly reduce vehicles exiting for your models and would also likely increase deaths. Why not address this matter honestly now? CLIMATE CHANGE. The Fire Hazard Severity Zone Map referenced in Figure 2.3-1 of the Specific Plan is undated—what is the date of the information you are relying upon? Figure 2.3-1 of Specific Plan in inaccurate. It does not reflect the fire damage along Sonoma Creek to the nursery on Trestle Glen or the loss of a home and other structures along Burbank Drive in the 2017 Nuns Fire. CalFire is updating the Fire Hazard Severity Zones Maps for the first time since 2007. The new maps are to be released before the end of the year. Have these been taken into consideration? Climate change is here and affecting us now, with forecasts to get much worse. This must be addressed!	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Sharon Church	Wednesday, September 14, 2022	C82-3	How can Risk Factor tell me that properties near Sonoma Creek have a MAJOR risk of flooding which is in direct conflict to the Statement in Section 2.3 of the draft Specific Plan and the 100-year flood plain in Figure 5.3-1 titled "Maximum Heights" that "all 100 year and 500 year floods can be accommodated within the banks of Sonoma Creek without additional flooding". What recent analysis has been performed on flood risk or are you using old data? Last October, per Sonoma Water, an Atmospheric River brought 9" of rain on Sonoma Mountain, causing waste water collections systems to overflow in several locations, including all along Sonoma Creek and notably, at Burbank Drive in Glen Ellen. Is that public health hazard being addressed? The fact that so much water fell at one time is another piece of data pointing to climate change and the potential for flooding along Sonoma Creek.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Sharon Church	Wednesday, September 14, 2022	C82-4	PARKING. How will you ensure that our Glen Ellen neighborhood on the South side of the SDC will not have to support parking for those seeking free parking not available at the campus? Parking policy 3-27 in the draft Specific Plan says there will be NO free parking within the campus. Further, the plan is to provide less parking than would typically be required, to encourage biking and walking. What a disaster for the neighborhood to the South! People will park and store vehicles along Martin, Lorna, Cecelia, Burbank, Sonoma Glen Circle and Marty due to lack of parking spaces and to avoid charges. In addition, the concept of shared parking between residential and commercial is not realistic in practice. This will clearly burden an existing neighborhood to allow for increased development and profit for the developer and pretend there are fewer vehicles. Unacceptable!	This comment is noted. Please see MR-6 regarding the transportation analysis.

Commenter	Date	Letter	Comment	Response
Sharon Church	Wednesday, September 14, 2022	C82-5	GLEN ELLEN, NOT ELDRIDGE. PLEASE explain why the Glen Ellen neighborhood South of the SDC continues to be disrespected by calling us Eldridge? Are you unilaterally deciding to change our name from Glen Ellen to Eldridge so you don't have to acknowledge that you are in fact dividing our Glen Ellen community? Reference Table 4.5-1, Summary of Impacts for Alternatives, Page 575, Item 3.9-1 (sic) which is under 3.10 Land Use and Planning. We are Glen Ellen. Our property tax bills say Glen Ellen, as do our driver's licenses and passports. Eldridge was the SDC campus only and they had their own post office. The SDC and post office are closed. As such, the SDC property is the donut hole of Glen Ellen and should be considered a part of Glen Ellen, not a new town to divide our Glen Ellen community. The development should be in scale that fits the character of the existing community and open space. The proposed scale is simply too much and would be appropriate for San Jose, not Glen Ellen.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Sharon Church	Wednesday, September 14, 2022	C82-6	I participated in the outreach over the years, believing the County was listening to the Community and that the County would embrace a reasonable plan that the Community could support. Instead, you are pushing for the maximum and driving an incompatible plan. Despite pushing an overbuilt plan, you are failing to provide the amount of affordable housing we would support. Clearly there is another agenda which has nothing to do with our Community and affordable housing. I ask that you scale back and restore our faith in our County government.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Sharon Church	Tuesday, August 23, 2022	C83-1	Susan, some preliminary comments below. We really need you to firmly step up and advocate that the scale of the proposed plan be reduced to something more appropriate for this area. We aren't NIMBY's and sensible development can take place at the SDC; however, there is no need to destroy our community for developer profit. Permit Sonoma is not representing the community. GLEN ELLEN, NOT ELDRIDGE. The area south of the SDC is Glen Ellen, not Eldridge. Eldridge was the SDC only and they had their own post office. The SDC and post office are closed. As such, the SDC property is the donut hole of Glen Ellen and should be considered a part of Glen Ellen, not a new urban area to divide our community. The development should be in scale that fits the character of the existing community and open space. The proposed scale is simply too much.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Sharon Church	Tuesday, August 23, 2022	C83-2	EVACUATIONS. Claims that adding up to 1,000 housing units (2,400 residents) with an estimated 2 vehicles per household plus 940 jobs in the commercial area would not impact our ability to evacuate during the next emergency are irresponsible. The "models" used defy common sense, ignore the already burdened two lane roads (Highway 12 and Arnold Drive) and are clearly a transparent attempt to move past this life or death matter. The draft EIR has not sufficiently considered the cumulative impact of development at the SDC, the Highway 12 corridor, and Arnold Drive on our ability to evacuate. A highway 12 connector would only serve to send people in a futile circle which could make evacuation even worse. Note that the Elnoka Senior Community project on Highway 12 in Santa Rosa was recently reduced by 60% (from 676 units to 272 units) to address concerns raised by the community and to address potential traffic impacts.	This comment is noted. Please see MR-4 regarding the adequacy of the wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Sharon Church	Tuesday, August 23, 2022	C83-3	CLIMATE CHANGE. CalFire is updating the Fire Hazard Severity Zones Maps for the first time since 2007. The new maps are to be released before the end of the year. Have these been taken into consideration? What analysis has been performed on flood risk? Risk Factor now lists properties near Sonoma Creek as having MAJOR risks of flooding. Last October, per Sonoma Water, 9" of rain fell on Sonoma Mountain, causing waste water collections systems to overflow in several locations, including all along Sonoma Creek and notably, at Burbank Drive in Glen Ellen. Climate change is here and affecting us now, with forecasts to get much worse. This must be addressed!	This comment is noted. Please see Table ES-2 and 3.9-3 of the DEIR for the less than significant impact finding regarding flooding.
Sharon Church	Tuesday, August 23, 2022	C83-4	PARKING. Parking policy 3-27 in the draft Specific Plan says there will be NO free parking within the campus. What a disaster for the neighborhood to the South! People will park and store vehicles along Martin, Lorna, Cecelia, Burbank, Sonoma Glen Circle and Marty due to lack of parking spaces and to avoid charges. In addition, the concept of shared parking between residential and commercial is not realistic in practice. This is clearly an attempt to burden an existing neighborhood to allow for increased development and profit for the developer. Unacceptable!	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Sharon Church	Wednesday, September 14, 2022	C84-1	EVACUATIONS. Can you certify and provide documentation that the traffic model referenced in the DEIR included the cumulative impacts of all development (including those not yet built) impacting Highway 12 from Santa Rosa to Sonoma and Arnold Drive, including special events? Claims that adding up to 1,000 housing units (2,400 residents) with an estimated 2 vehicles per household plus 940 jobs in the commercial area (and special events) would not impact our ability to evacuate during the next emergency are irresponsible. The "models" used defy common sense, ignore the already burdened two lane roads (Highway 12 and Arnold Drive), paint a rosy picture of available public transportation and thus demand for vehicles and are clearly a transparent attempt to move past this life or death matter. The draft EIR clearly has not sufficiently considered the cumulative impact of development at the SDC, the Highway 12 corridor (from Santa Rosa to Sonoma), and Arnold Drive, including special events, on our ability to evacuate. A Highway 12 connector would only serve to send people toward the fire in a futile circle which could make evacuation even worse and removes an obstacle to growth in protected areas which would further exacerbate our ability to evacuate during a wildfire. Note that the Elnoka Senior Community project on Highway 12 in Santa Rosa was recently reduced by 60% (from 676 units to 272 units) to address concerns raised by the community and to address potential traffic impacts.	This comment is noted. Please see MR-4 on the adequacy of the wildfire analysis and MR-6 on the Highway 12 connector.

Commenter	Date	Letter	Comment	Response
Sharon Church	Wednesday, September 14, 2022	C84-2	"Shelter-in-place", seems like a death warrant, given the extreme devastation caused by wildfires. That concept would certainly reduce vehicles exiting for your models and would also likely increase deaths. Why not address this matter honestly now? CLIMATE CHANGE. The Fire Hazard Severity Zone Map referenced in Figure 2.3-1 of the Specific Plan is undated—what is the date of the information you are relying upon? Figure 2.3-1 of Specific Plan in inaccurate. It does not reflect the fire damage along Sonoma Creek to the nursery on Trestle Glen or the loss of a home and other structures along Burbank Drive in the 2017 Nuns Fire. CalFire is updating the Fire Hazard Severity Zones Maps for the first time since 2007. The new maps are to be released before the end of the year. Have these been taken into consideration? Climate change is here and affecting us now, with forecasts to get much worse. This must be addressed!	The comment is noted. The comment is noted. As described on page 503 of the DEIR, the primary responsibility for preventing and suppressing wildland fires in Sonoma County is divided between local firefighting agencies and the State of California, Department of Forestry and Fire Protection. The SDC Planning Area is currently located in an area identified as a State Responsibility Area (SRA). Fire management in the SDC Planning Area is located in the Sonoma-Lake-Napa Unit SRA. Government Code Sections 51175-89 advises CAL FIRE, to identify areas, or zones, of very high fire hazard severity potential under the Fire and Resources Assessment Program (FRAP). These zones are mapped and identified based on expected burn probabilities, potential fuels over a 30–50-year time period, and their correlated expected fire behavior, to better predict the possible vegetation fire exposure to buildings and developments. Under the FRAP, the Planning Area is located in the Sonoma Creek watershed and includes areas of high to very high Fire Hazard Severity Zones west of Highway 12, areas of high fire hazard severity in the hills, and areas of moderate fire hazards severity zones in the vicinity of Suttonfield Lake and Fern Lake (Figure 3.16-2). The Core Campus is not included in any of these FHSZs. The DEIR uses the most up to date CAL FIRE FRAP mapping data currently available. The CAL FIRE FRAP mapping shows fire severity zones for both SRA and LRAs. Currently the site is in a SRA but the EIR assumes that this responsibility will shift to local agencies once the State disposes the land, and the wildfire and evacuation

Commenter	Date	Letter	Comment	Response
				analyses in the EIR is based on that premise. Thus, this does not change the significance of the wildfire Impact Analysis of the DEIR. On page 518, the DEIR does note that development under the Proposed Plan could result in potentially significant impacts from exacerbating wildfire risks. This increased risk can be due to the site's history of wildfire and proximity to VHFSZs or from increasing the potential for wildfire ignition and spread with development. However, the Proposed Plan includes a plethora of policies and Standard Conditions of Approval to adequately mitigate potentially significant wildfire risks to a less than significant level. Such measures, as described under the Wildfire Impact Analysis starting on page 551 of the DEIR, require the Proposed Plan to construct and maintain a managed landscape buffer to aid in fire defense; enhance creek buffers; remove surface and aerial fuels; implement fuel management methods (such as fuel separation, defensible space with continuous tree canopy, and irrigated agriculture); plant fire resilient landscaping; include a five-foot buffer of defensible space around all developments; prohibit wooden fencing; require all new construction and retrofitting of existing buildings use Class A fire-rated roofing materials, fire-resistant siding, and dual-paned tempered glass windows; prohibit the storage of flammable materials under decks or porches; prune branches of trees; cover all building vent openings with wire mesh screens to prevent infiltration from embers of sparks; and ensure that all property owners are informed and

Commenter	Date	Letter	Comment	Response
				educated about wildfire resiliency requirements at the site at the time of purchase. Further, Policy 6-21 would require all new and existing utility lines be buried underground to mitigate additional wildfire risk. Policy 2-40 would reduce ember ignitions and fire spread by requiring trimming of branches that overhang the home, porch, and deck and prune branches of large trees up to 6 to 10 feet (depending on their height) from the ground. Policy 2-40 would remove dead vegetation and debris from under decks and porches and between deck board joints.The Proposed Plan would also comply with all State and local codes and regulations, such as the California Fire Code and Sonoma County Code, which would further mitigate potential impacts.

Commenter	Date	Letter	Comment	Response
Sharon Church	Wednesday, September 14, 2022	C84-3	How can Risk Factor tell me that properties near Sonoma Creek have a MAJOR risk of flooding which is in direct conflict to the Statement in Section 2.3 of the draft Specific Plan and the 100-year flood plain in Figure 5.3-1 titled "Maximum Heights" that "all 100 year and 500 year floods can be accommodated within the banks of Sonoma Creek without additional flooding". What recent analysis has been performed on flood risk or are you using old data? Last October, per Sonoma Water, an Atmospheric River brought 9" of rain on Sonoma Mountain, causing waste water collections systems to overflow in several locations, including all along Sonoma Creek and notably, at Burbank Drive in Glen Ellen. Is that public health hazard being addressed? The fact that so much water fell at one time is another piece of data pointing to climate change and the potential for flooding along Sonoma Creek.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Sharon Church	Wednesday, September 14, 2022	C84-4	endif]-->PARKING. How will you ensure that our Glen Ellen neighborhood on the South side of the SDC will not have to support parking for those seeking free parking not available at the campus? Parking policy 3-27 in the draft Specific Plan says there will be NO free parking within the campus. Further, the plan is to provide less parking than would typically be required, to encourage biking and walking. What a disaster for the neighborhood to the South! People will park and store vehicles along Martin, Lorna, Cecelia, Burbank, Sonoma Glen Circle and Marty due to lack of parking spaces and to avoid charges. In addition, the concept of shared parking between residential and commercial is not realistic in practice. This will clearly burden an existing neighborhood to allow for increased development and profit for the developer and pretend there are fewer vehicles. Unacceptable!	The comment is noted. The presence of priced parking near an area with free parking can cause motorists to search for spaces on those free streets (commonly known as "spillover"). However, there is a limited distance motorists are willing to walk from their vehicles. In the case of SDC, on-street parking pricing would only be considered in non-residential areas, primarily in the "core campus". The core campus is located roughly one-third mile from the nearest residential uses in Eldridge and almost two-thirds mile to Glen Ellen, walking distances that would be too lengthy and inconvenient for most motorists. Thus, the potential for spillover parking is minimal. The presence of free parking often leads to many motorists seeking spaces in the same highly-desired locations, resulting in vehicles circling the area. This can have

Commenter	Date	Letter	Comment	Response
				the unintended effect of marginally increasing VMT and creating potential safety issues as drivers spend a greater amount of time searching for parking spaces.
Sharon Church	Wednesday, September 14, 2022	C84-5	GLEN ELLEN, NOT ELDRIDGE. PLEASE explain why the Glen Ellen neighborhood South of the SDC continues to be disrespected by calling us Eldridge? Are you unilaterally deciding to change our name from Glen Ellen to Eldridge so you don't have to acknowledge that you are in fact dividing our Glen Ellen community? Reference Table 4.5-1, Summary of Impacts for Alternatives, Page 575, Item 3.9-1 (sic) which is under 3.10 Land Use and Planning. We are Glen Ellen. Our property tax bills say Glen Ellen, as do our driver's licenses and passports. Eldridge was the SDC campus only and they had their own post office. The SDC and post office are closed. As such, the SDC property is the donut hole of Glen Ellen and should be considered a part of Glen Ellen, not a new town to divide our Glen Ellen community. The development should be in scale that fits the character of the existing community and open space. The proposed scale is simply too much and would be appropriate for San Jose, not Glen Ellen.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Sharon Church	Wednesday, September 14, 2022	C84-6	I participated in the outreach over the years, believing the County was listening to the Community and that the County would embrace a reasonable plan that the Community could support. Instead, you are pushing for the maximum and driving an incompatible plan. Despite pushing an overbuilt plan, you are failing to provide the amount of affordable housing we would support. Clearly there is another agenda which has nothing to do with our Community and affordable housing. I ask that you scale back and restore our faith in our County government.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Sherry Smith	14-Sep-22	C85-1	I was a social worker at Sonoma State Hospital (SDC) from 1979-1981 when over 1,000 employees, including Psychiatric Technicians, worked at least 4 different shifts to provide services and care to over 1,000 residents with developmental disabilities. I oppose the development of 1,000 new homes and a hotel in Eldridge. I support the transfer of 765 acres for open space conservation to protect the wildlife corridor, historic Eldridge Cemetery, two lakes, and Camp Via. This would help meet both the federal and state goals for land and water protection. Organizations, including the Sonoma Ecology Center and Sonoma Land Trust, have previously discussed concerns about preservation and I believe their experts will further address the issues of aligning the County Specific Plan process and EIR only after the State of California annoU11ces the RFP selection. The driving force behind the Site Specific Plan is to be "fiscally feasible." (Bradley Dunn, The Sonoma Index-Tribune, 8/17/22, page A9) Fiscal feasibility is linked to the State of California's plan to pass along to a developer approximately $100 million in toxic clean-up costs at SDC. The Site Specific Plan briefly mentions some of the past abuses to clients at SDC. Over 5,400 men, women, and children from ages 7 to 70 were sterilized without their consent. The State apologized and offered $25,000 to sterilized victims. https://victims.ca.gov ; https://dredf.org If none of the SDC victims apply for and collect compensation, perhaps because none of them are alive, I suggest	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			that California allocate the $100 million that should have compensated these victims to pay for the toxic clean-up at SDC. I don't know if the State apologized or compensated any clients for other violations of civil and legal rights and abuses at SDC during the past 100+ years. Another option might be to allocate $100 million for affordable and accessible housiµg and services for people with developmental disabilities at SDC and infill housing in urban areas.	

Commenter	Date	Letter	Comment	Response
Sherry Smith	14-Sep-22	C85-2	Traffic: The EIR should fully address the impact of increased traffic. I see no reference to traffic patterns when SDC was open. I observed traffic slowdowns on Arnold Drive during shift changes. Stop signs on Arnold Drive and surrounding streets within Eldridge slowed down rush hour traffic. During shifts, most employees walked between buildings. Staff who commuted by bicycle along Arnold Drive to SDC risked getting hit by cars since there were no bicycle lanes. In the past 40 years, though various groups have lobbied for more and better bike lanes, the County of Sonoma and Cal Trans haven't significantly improved Arnold Drive for bicyclists traveling between Glen Ellen and Boyes Hot Springs or on Highway 12. The report recommends installing a new traffic light at Harney and Arnold in Eldridge, which might have reduced congestion during shift changes 40 years ago. Traffic lights are currently located at Arnold Drive and Highway 12 in Glen Ellen and a few miles down the road on Arnold Drive at Boyes Blvd in Boyes Hot Springs. A roundabout was installed at Aqua Caliente Road and Arnold Drive a few years ago. During construction of new homes, businesses, etc. there are few mitigation measures suggested. Attached are photos of a construction site of what will be one new home on Chestnut A venue in Aqua Caliente. Large trucks travel on several different narrow streets during the week. Neighbors hear the noise, dust is a problem, there's increased traffic, and a section of the road has been damaged. Imagine what Arnold Drive will be like if 1,000 homes are built in Eldridge.	This comment is noted. Please see MR-6 in regards to the adequacy of the transportation impacts. Please see page 595 of the DEIR that states standard Conditions of Approval HAZ 1 and HAZ 2 impose limits on construction hours and implement construction noise control measures to mitigate the impact of noise from construction impacts. Additionally, all new construction would be required to comply with noise and vibration level restrictions which regulate the time and intensity of construction in the Sonoma County Municipal Code.
Sherry Smith	14-Sep-22	C85-3	3.6 Energy and Greenhouse Gas Emissions: The Summary oflmpacts in the Draft EIR claims no mitigation measures are required for increased traffic and heavy equipment during construction, or when new buildings are completed. If each new home includes 1 car, the hotel is filled with over 100 guests, plus employees drive to work at the hotel and new businesses in Eldridge, unless everyone owns an electric vehicle or bicycles to the village, how can "none required" and "not applicable" be listed under the impact and mitigation measures for energy and greenhouse gas emissions?	Thank you for your comment. Please see MR-6 in regards to the adequacy of the traffic analysis.

Commenter	Date	Letter	Comment	Response
Sherry Smith	14-Sep-22	C85-4	3.7-1 Earthquake: "No mitigation measures required." I disagree. The report doesn't discuss the Rodgers Creek Fault in Sonoma County. Refer to https://us_gs.gov which details a higher resolution map of this fault within the past few years. They predict a 33% chance of a "6.7 earthquake on the combined Rodgers Creek-Hayward fault system" sometime between now and 2043.To give an example of what might happen, during the October 17, 1989 Loma Prieta earthquake (magnitude of 6.9), 3,757 people reported injuries, 63 people died, buildings collapsed, infrastructure-pipelines, overpasses, bridges, and roadways-destroyed, and a World Series game stopped.	As noted on page 226 of the DEIR, Policy GEO-1 of the Standard Conditions of Approval, "Geotechnical investigations shall be performed in areas of existing structures to be rehabilitated or new proposed structures to establish appropriate mitigation technique." As noted on page 233 of the DEIR, "Implementation of GEO-1 will reduce the potential for hazards associated with development on expansive soils or unstable geologic units/soils to a less-than-significant level." Please see MR-1 on the adequacy of a self-mitigating Specific Plan. Please see MR-9 on Mitigation Monitoring and the implementation of the Standard Conditions of Approval.
Sherry Smith	14-Sep-22	C85-5	.8-6 Emergency Response or emergency evacuation plan: I disagree that no mitigation measures are required. Eldridge is part of Evacuation Zone SON-6A5. In past public comments, I mentioned that during the Nuns Fire evacuations in 2017, my friends drove for over four hours from Agua Caliente to reach a hotel in Rohnert Park. The drive normally takes between 30-45 minutes. With approximately 2,000+ new residents in Eldridge, it would take more than an extra minute or two for residents and employees to evacuate safely from Arnold Drive north to Highway 12, west to Bennett Valley Road, or south to Highway 161. A new road from Arnold to Highway 12 might not reduce evacuation times since the fires of 1964 (Hanly Fire, Nuns Canyon Fire), 1966 (Cavedale Fire) and 2017 (Tubbs and Nuns Canyon Fires) spread from the hills and the wind blew and spread the fire west. Cal Fire and the County of Sonoma can provide more details on emergency evacuation routes and historical data about past fires.	This comment is noted. Please see MR-4 in regards to the disagreement with the wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Sherry Smith	14-Sep-22	C85-6	3.8-7 Exposure to significant risk of loss, injury or death involving wildland fires 3.16 Wildfire: I disagree that no mitigation measures are required. If there's no risk, then why has my insurance more than tripled since 20 I 7? Will new home owners in Eldridge be able to purchase fire insurance? Even if "affordable homes" are built at Eldridge, the insurance policies may not be affordable because companies, including CSAA, State Farm, etc. are well aware of the future risks of wildland fires to the destruction of homes and property in Eldridge. During the Nuns and Tubb Fires in 2017 and since then, residents have also been exposed to "pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire" each year. Climate change has increased risks throughout Sonoma Valley to the possibility of wildland fires in the future as well as smoke drifting into our region from fires in other areas of California.	This comment is noted. Please see MR-4 in regards to the disagreement with the wildfire evacuation analysis.
Sherry Smith	14-Sep-22	C85-7	3-14 Transportation: The County of Sonoma doesn't plan to increase bus service along Arnold Drive. There's no service overnight. Paratransit is an option for disabled residents, though not at night, on major holidays, and service is limited on other holidays. Any new resident of Eldridge who doesn't have a vehicle would be at increased risk of injury or death during a disaster or evacuation. Many of the residents who died during the Tubbs and Nuns fires were elderly or disabled.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Sherry Smith	14-Sep-22	C85-8	Storm water and storm drain systems page 58: My father was an engineer for the Water Resources Division of the United States Geological Survey. He measured gauges along rivers, streams, and creeks, and was knowledgeable about flooding. When my friend decided to purchase a house in Glen Ellen, he asked my father to give an opinion about the possibility of Sonoma Creek flooding in the future. My dad walked the property and explained where the creek had risen in the past. It was his professional opinion, as a retired engineer, that there wouldn't be a "100 year" storm flooding Sonoma Creek. My father was wrong. In about 1997, Sonoma Creek flooded in Glen Ellen, then a catastrophic flood severely damaged my friend's home on New Year's Eve 2006/2007. He rebuilt. The Sonoma Index-Tribune followed the stories about the flooding. Supervisor Valerie Brown knew about this, as did the County of Sonoma Permit and Planning Department. Any discussion about a possible "100-year storm" and Sonoma Creek not flooding is misguided because of Climate Change and past flooding in the region. Storm drains are inadequate elsewhere in Sonoma Valley, including on Mountain Avenue. Homes have flooded and excess water pools on the street during heavy rainfall. Adding 1,000 homes, a hotel, and businesses will change both the surface and subsurface water flow in Eldridge. Infrastructure planning and construction needs to mitigate potential problems. The USGS California Water Science Center and National Weather Service are perhaps the agencies most familiar with stream gauges along Sonoma Creek and the likelihood of flooding in the future.	This comment is noted. Please see Table ES-2 and 3.9-3 of the DEIR for the less than significant impact finding regarding flooding.

Commenter	Date	Letter	Comment	Response
TOM BENTHIN	Thursday, September 15, 2022	C86-1	We live in Glen Ellen and are asking you to please not support the SDC Specific Plan or DEIR as proposed by Permit Sonoma. Instead, please direct Permit Sonoma to: 1. Scale Back Size of Development to 450 or fewer homes and require that most of them be affordable to the majority of people who live in Sonoma Valley. Eliminate the hotel, retail and commercial space that is already provided in Glen Ellen. 2. Support Historic Preservation Alternative as it is the most environmentally sound. 3. Protect Open Space by providing enforceable timeline, boundaries and actions for permanently preserving open space and keeping it in public hands. a. In the DEIR, analyze the impacts of and add enforceable measures to reduce impacts of proposed new uses in the open space including agriculture, agricultural processing, tasting rooms, farm stands, recreation, parking lots, geothermal development and sports facilities (see Table 4-3 of Specific Plan). b. Increase setbacks along Sonoma Creek, Riparian areas and the Sonoma Wildlife Corridor to at least 100 feet, instead of inadequate 50 feet as proposed. 4. Wildfire: Revise wildfire evacuation impacts to reflect on-the-ground experiences during recent wildfires and new county wildfire risk and hazard maps. Eliminate the shelter-place as there is no evidence it would save lives. Develop and add enforceable Conditions of Approval for Wildfire to reduce and prevent risk as there currently are none. 5. Climate Crisis: Given the County's Climate Crisis Resolution and commitments to reduce climate changing emissions (GHGS) from driving and other sources, revise the Specific Plan and DEIR with legally enforceable measures to reduce climate emissions, such as building fewer homes, reusing and demolishing fewer buildings, providing transit. 6. DEIR is Inadequate While the so-called self-mitigated Specific Plan contains many general policies, goals and conditions of approval to address environmental impacts, the DEIR falls short of CEQA requirements. The DEIR does not adequately analyze and prevent or reduce environmental impacts in most if not all of the areas studied as evidenced by few actual requirements and many vague words such as "promote" or "encourage" or "if feasible." The DEIR needs to be revised and the	This comment is noted. Please see MR-3 in regards to the programmatic nature and detail of analysis of the draft DEIR, MR-7 in regards to the adequacy of the wildlife movement analysis, MR-8 in regards to the adequacy of the historic preservation analysis, and MR-1 in regards to the self-mitigating plan.

Commenter	Date	Letter	Comment	Response
			Conditions of Approval strengthened and moved into a legally enforceable Mitigation and Monitoring Program.	
TOM BENTHIN	Thursday, September 15, 2022	C86-2	We are asking this as residents whose home burned in the 2017 fires and who have rebuilt. Having had to flee the Nunn Canyon fire, we are intimately aware of the dangers posed by a greatly increased population here to evacuation, since there are only two roads leading out of the Valley to the south and one to the north. We are already concerned about our ability to have adequate water from our well due to the ongoing climate crisis-fueled drought. We are concerned about plans that would massively increase the population and traffic, leading to dramatic changes to our town. Imagine if we proposed more than doubling the size of the town you lived in. And we are concerned about the ecological impact on our wildlife and watershed area.	This comment is noted. Please see MR-4 in regards to the disagreement with the wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Steve Sherer	Monday, August 22, 2022	C87-1	As a resident of Glen Ellen and, as a result, a neighbor of the Sonoma Development Center, we are writing to express our great concern over the lack of planning for the SDC being transferred from its present configuration and control. In spite of the Board of Supervisor's instructions to have a specific plan with fewer than 1,000 homes, the Drafts propose 1,000 residential units. In addition, substantial commercial development is proposed. Shouldn't we STOP and weigh the consequences of not having all the vital information related to the proposed SDC plan?? We think of the impact of 1,000 homes and commercial development with the potential population increase of between 2,000 and 4,000 people should make you take notice and consider the proposed change in the character of our community. This proposal will change the look and landscape of the entire Sonoma Valley. If this type of population density is permitted, it should take place among the already existing cities in our County.	This comment is noted. Please see chapter 3.1 starting on page 85 of the DEIR in regards to the potential impacts of the Proposed Plan on the environmental setting and MR-6 in regards to the adequacy of the housing and traffic analysis.
Steve Sherer	Monday, August 22, 2022	C87-2	We would also point out that the size of the proposed population increase would materially increase the traffic on Arnold Drive, downtown Glen Ellen and Highway 12. This could have a very serious impact on the ability of people to get out and emergency vehicles to get in whenever there was a fire or other emergency. I hope you will remember the traffic blockage at Oakmont that prevented people leaving at the time of the big 2017 & 2020 fires. Thank you for considering and passing on our concerns while taking action to prevent irreversible damage to our Sonoma Valley and its residents.	This comment is noted. Please see MR-4 in regards to the disagreement with the wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
sue rankin	Monday, September 19, 2022	C88-1	Regarding the Proposal to develop the Sonoma Developmental Center, the following reasons demonstrate why this ill-conceived idea is not feasible: Sonoma County has become heavily impacted by: Increased traffic & congestion Increased traffic violations & accidents – many of which go unnoticed & unprosecuted Excessive speed & traffic on Hwy 12, Bennett Valley Road, Sonoma Mountain Road, Grange, Pressley Roads Bikers cannot ride safely on Hwy 12, Bennett Valley Road, Pressley, Grange, Sonoma Mountain Roads – too much speed, too many cars, no enforcement – no one should risk their life on Bennett Valley Road! Clogged access streets, arteries and highways – causing unsafe situations Difficulty to access shopping centers, businesses & lack of parking Inability for first responders to readily access emergencies due to excessive traffic Inadequate funds for first responders, police, fire to handle the increasing volume of calls - if on the ballot, many people will not even contribute No, we don't need more traffic lights! They only impede the already slow, congested traffic!	This comment is noted. Please see MR-6 in regards to the disagreement with the traffic analysis.

Commenter	Date	Letter	Comment	Response
sue rankin	Monday, September 19, 2022	C88-2	More houses? More high density living? LESS WATER?? YOU'VE GOT TO BE KIDDING! We, in Bennett Valley & Rincon Valley, are already seeing our wells run dry; are being forced to move or drill new, more expensive, deeper wells, spending thousands and thousands of dollars to drill and maintain a small, private well system – while the developers, wineries and commercial growers should be paying their fair share! Talk about unfairness! The county could be making a fortune from those commercial developers and vineyards.. exactly like Sonoma Development Center! Where does the county actually think the necessary water supplies will come from by over-populating and over-building? Is it not the time to seriosuly prepare for the future? Is it not the time to be responsible and prepare for the global warming issues NOW?	This comment is noted. Please see MR-5 in regards to the disagreement with the analysis of the water supply.

Commenter	Date	Letter	Comment	Response
sue rankin	Monday, September 19, 2022	C88-3	The excuse for allowing wildlife to more freely is an excuse for the handful of nonprofits to channel private funds for collaring mountion lions and watching them roam onto private citizens/rancher properties for a free meal. This "political" issue should not be part of the decision to develop such a high density project. Wildlife management belongs to California Fish & Wildlife, not to those profiting from the wild animals that roam freely in Sonoma County! As for "historic preservation" or a "more reasonable footprint" that will not provide more open space. Even those developments will clog more streets, highways, require more water and cause more havoc within the county. Look at Fountain Grove and Coffey Park. Those high density houses burned to the ground! They did not reduce wildfire risk at all.. and will not do so in the future. If anyone understands basic psychology, they'd understand that a few rats living in a box can survive.. but when you put far too many rats in a box, they cannot prosper or survive. To many, this so-called "development" is, again.. all about money for the county and the rich & greedy developers! The Sonoma Developmental Center will certainly not enhance the lives or happiness of the residents who chose to live here first!	This comment is noted. Please see MR-6 in regards to the disagreement with the housing and traffic analysis.

Commenter	Date	Letter	Comment	Response
Sydney Randazzo	Saturday, August 20, 2022	C89-1	I sat in on the Zoom calls that were held prior to the development and release of the SDC Specific Plan and Draft Environmental Impact Report. I appreciate that on the surface it was determined that the major concerns of the Community and the Board of Supervisor's were considered, but not deemed to be in conflict with the Report. However, having lived in this area for 14+ years, traveling on Hwy 12 and/or Arnold daily+, both two-lane "highways," that traffic flow will absolutely be impacted by the increase in of 1,000 homes (with potentially 2.5+ residents per home) —particularly if/when there is need for evacuation. This disconnect highlights the inadequacy and inefficiency of our current approach to planning and development. The draft specific plan fails to respond to the challenges of our time—including wildfire, drought, and biodiversity loss.	This comment is noted. Please see MR-6 in regards to the disagreement with the housing and traffic analysis.
Sydney Randazzo	Saturday, August 20, 2022	C89-2	As a resident I encourage you to: Engage in meaningful planning for SDC by aligning the County Specific Plan process with the State's RFP process and by moving forward with the County Specific Plan and EIR only after the State announces the RFP selection on October 24, 2022. Re-draft in meaningful planning for SDC by aligning the County Specific Plan and EIR to describe and analyze the impacts of the actual proposal that the State selects for the SDC property. Only after a specific development proposal is identified can the County Specific Plan and EIR provide the streamlined process they are designed to provide.	Thank you for your comment letter. This comment is noted. Please see MR-2 regarding the need for more time and the selection of a developer before finalization of the Specific Plan.
Teri Shore	Thursday, September 8, 2022	C90-1	Please do not support the SDC Specific Plan or DEIR as proposed by Permit Sonoma. I will be submitting more detailed comments by the deadline. At this time, I urge you to please direct Permit Sonoma to: 1. REVISE DEIR TO MEET CEQA: Revise and strengthen the Draft Environmental Impact Report to meet the requirements of California Environmental Quality Act by analyzing and preventing or reducing all negative environmental impacts by scaling back project, avoiding impacts and providing legally enforceable mitigation measures in a Mitigation and Monitoring Program. As drafted the DEIR is not	The comment is noted. Please see MR-6 in regards to the traffic analysis and MR-8 in regards to the historic analysis.

Commenter	Date	Letter	Comment	Response
			adequate to meet CEQA. It has zero mitigations for any environmental impacts, including two that are “significant and unavoidable:” historic preservation and VMTs.	
Teri Shore	Thursday, September 8, 2022	C90-2	REVISE SELF-MITIGATED SPECIFIC PLAN: Revise and strengthen the Specific Plan Conditions of Approval to be legally enforceable requirements and recast as mitigation measures in the DEIR, as above. As drafted, the “self-mitigating” Specific Plan does not mitigate significant negative environmental impacts. The Conditions of Approval only apply to half of the environmental areas required for study under CEQA. And there are none for critical issues such as wildfire. Most of the C of As for biological resources apply only to construction, not operations or maintenance, and are based mostly on existing state law or Best Management Practices, which are not in statute. All Specific Plan Goals and Policies need to be specific, strong and enforceable. Otherwise, they are practically meaningless. Please remove vague words such as “promote” or “encourage” or “if feasible.” Replace with “require”, “shall” or “must.” These strengthened Goals and Polices then need to be made Conditions of Approval and recast as Mitigations in the DEIR in a Mitigation and Monitoring Program. If CofAs, policies or goals can’t be made specific, then remove them as they do not	This comment is noted. Please see MR-1 about the adequacy of the self-mitigating plan.

Commenter	Date	Letter	Comment	Response
			mitigate environmental impacts. Having a Self-Mitigated Plan is not part of CEQA and does not necessarily meet CEQA; and certainly not in the case of the SDC Specific Plan and DEIR.	
Teri Shore	Thursday, September 8, 2022	C90-3	SCALE BACK DEVELOPMENT AND CHANGE PREFERRED ALTERNATIVE: Scale back the development to 450 or fewer homes and require that most of them be affordable to the majority of people who live in Sonoma Valley. Eliminate the hotel, retail and commercial space that is already provided in Glen Ellen. Change the Preferred Alternative to the Historic Preservation Alternative, which is the most environmentally sound.	Thank you for your comment letter. This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Teri Shore	Thursday, September 8, 2022	C90-4	DEVELOP A NEW ALTERNATIVE – Climate and Conservation: All the alternatives are variations on a major mixed-use development that maximizes urban style use. In response to the public and elected officials, and to avoid and reduce significant environmental impacts per CEQA, the County of Sonoma must provide an alternative focused on keeping the entire property in public lands through donation or transfer to state or county parks, a non-profit, trust or other entity. This alternative would prioritize the permanent protection of the open space and the historic main campus to serve conservation, wildlife movement, natural resource protection, and climate benefits with no housing, no commercial development and no hotel or retail. The Marin Headlands and Presidio Trust are good examples of how public land was repurposed without overdevelopment.	This comment is noted. Please see the Historic Preservation Alternative crafted in response to commenters who requested an alternative that would maximize open space preservation.

Commenter	Date	Letter	Comment	Response
Teri Shore	Thursday, September 8, 2022	C90-5	PROVIDE SPECIFICS AND ADDRESS IMPACTS TO OPEN SPACE – The Specific Plan and the DEIR mentions open space protection in general terms in several places, in various ways, but fails to provide a clear definition of “preserved open space,” or to give the exact boundaries (other than in one general overlay map), or give details on how or when it will be protected, transferred or managed. Please direct Permit Sonoma to provide those details. Preserved Open Space and Agriculture: The Specific Plan and DEIR make sweeping statements about “historic agriculture” but do not explain the extend of past agriculture in terms of types or amount of acreage. The impacts of allowing agriculture on open space that is currently not in agriculture must be analyzed and the environmental impacts avoided or mitigated in the DEIR. Unacceptable New Uses in Preserved Open Space: Table 4-3 (attached) of the Land Use Section of the Specific Plan outlines many new uses in “preserved open space” including wine tasting rooms, timber conversion, wholesale nurseries, sports facilities and several others that have not been analyzed under CEQA or addressed at all in the goals, policies or C of As of the Specific Plan. These “permitted” new uses in Preserved Open space must be analyzed, avoided or prevented and mitigated as required under CEQA and in my view NOT ALLOWED OR PERMITTED in Preserved Open Space. SHOULD NOT ALLOW AS PROPOSED THESE USES IN PRESERVED OPEN SPACE TABLE 4-2 SPECIFIC PLAN Agricultural Crop Production and Cultivation Agricultural Processing	This comment is noted. The Proposed Plan's definition of Preserved Open Space is a land use designation intended to preserve open spaces outside of the Core Campus for habitat, recreation, ecological services, water resources and agricultural uses. The impacts listed within the DEIR include the consideration of these uses.

Commenter	Date	Letter	Comment	Response
			Animal Keeping: Beekeeping Animal Keeping: Confined Farm Animals Animal Keeping: Farm Animals Animal Keeping: Pet Fancier - Farm Retail Sales Farm Stands Indoor Crop Cultivation Mushroom Farming Nursery, Wholesale Timberland Conversions, Minor Nursery, Wholesale Tasting Rooms SHOULD NOT ALLOW AS PROPOSED IN SPECIFIC PLAN WITH CONDITIONAL USE PERMIT Recreation and Sports Facilities: Recreation Facility, Outdoor Recreation and Sports Facilities: Rural Sports and Recreation	
Teri Shore	Thursday, September 8, 2022	C90-6	SONOMA VALLEY WILDLIRE CORRIDOR AND RIPARIAN SETBACKS: Increase setbacks along Sonoma Creek, Riparian areas and the Sonoma Wildlife Corridor to at least 100 feet, instead of inadequate 50 feet as proposed.	Thank you for your comment letter. This comment is noted, however it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Teri Shore	Thursday, September 8, 2022	C90-7	WILDFIRE: Revise wildfire evacuation impacts to reflect on-the-ground experiences during recent wildfires and new county wildfire risk and hazard maps. Eliminate the shelter-place as there is no evidence it would save lives. Develop and add enforceable Conditions of Approval for Wildfire to reduce and prevent risk as there currently are none.	This comment is noted. Please see MR-4 in regards to the adequacy of the wildfire evacuation analysis.
Teri Shore	Thursday, September 8, 2022	C90-8	CLIMATE CRISIS: Given the County's Climate Crisis Resolution and commitments to reduce climate changing emissions (GHGS) from driving and other sources, revise the Specific Plan and DEIR with legally enforceable measures to reduce climate emissions, such as building fewer homes, reusing and demolishing fewer buildings, providing transit. If the county is really serious about the climate emergency, it would not propose building a new town in the middle of open space and a high wildfire area. It should maintain its commitment to city-centered growth and open space protection	This comment is noted. The DEIR is required to make findings on the impact the project could have on energy consumption and GHG emissions. Please see section 3.6 of the DEIR.

Commenter	Date	Letter	Comment	Response
Teri Shore	Thursday, September 8, 2022	C90-9	STATE STATUTE: The County of Sonoma needs to revisit its interpretation of the state statute in respect to the Specific Plan and EIR as follows: Housing: State Statute says the following: It is the intent of the Legislature that priority be given to affordable housing in the disposition of the Sonoma Developmental Center state real property. The agreement shall require that housing be a priority in the planning process and that any housing proposal determined to be appropriate for the property shall include affordable housing. It is further the intent of the state that priority be given to projects that include housing that is deed restricted to provide housing for individuals with developmental disabilities. Nowhere does the statute call for maximum urbanization of the SDC nor to create a new town, hotel, commercial or retail. The scale of housing and development is not appropriate for the rural property surrounded by ag land. Therefore, the County of Sonoma's Specific Plan and DEIR are not consistent with and misinterpret the state statute. Both need to be revised to align with state statute and public comment by scaling back the development, eliminating market rate housing and other development, and providing deed-restricted affordable housing to individuals with developmental disabilities.	This comment is noted, however it is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Teri Shore	Thursday, September 8, 2022	C90-10	Open Space: State Statute says the following: The Department of General Services recognizes the exceptional open-space, natural resources, and wildlife habitat characteristics of the Sonoma Developmental Center. It is the intent of the Legislature that the lands outside the core developed campus and its related infrastructure be preserved as public parkland and open space. The disposition of the property or property interests shall provide for the permanent protection of the open space and natural resources as a public resource to the greatest extent feasible and shall be upon terms and conditions the director deems to be in the best interests of the state. The state statute makes clear that the permanent protection of open space lands is for public parkland and natural resources as a public resource. The County's Specific Plan and DEIR are inconsistent with state statute as they propose introducing agriculture, sports fields and other uses without consider the negative environmental impacts of doing so. However, the state statute also conditions protection of the open space "to the extent feasible" and to "be in the best interests of the state." That is why the county Specific Plan and DEIR must provide details on how, when and with what entities that the open space will be protected. If not, then the state legislature will need to act to ensure the protection of the open space and that none of it is sold off for development or other inappropriate use.	This comment is noted, however it is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Teri Shore	Thursday, September 8, 2022	C90-11	Economic Feasibility: State Statute says the following: The planning process shall facilitate the disposition of the property by amending the general plan of the county and any appropriate zoning ordinances, completing any environmental review, and addressing the economic feasibility of future development. The County of Sonoma's entire Specific Plan and DEIR is tied to this one mention of economic feasibility to the exclusion of just about everything else. The state did not mandate that the project be economically feasible or financially feasible but to address it. Economic feasibility changes constantly with market conditions. Specific Plans and General Plans are written for long periods of time when economic feasibility is certain to change. The County is misinterpreting state statute to maximize urban development at the SDC site. The proposal could also be economically feasible if, for example, the state paid to clean up the site, then transferred it to state parks or another public conservation entity. A bond measure or initiative could be written. However, the County looked at only one option or alternative: making profits for a private developer. This lacks vision and is inconsistent with state statute and CEQA The Planning Commission must direct Permit Sonoma to revise the Specific Plan and DEIR to be consistent with state statute and public comment and provide new alternatives that don't focus entirely on urbanization and developer profits. Well, that's about it from me for now. Thanks for your consideration.	This comment is noted, however it is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Teri Shore	August 24, 2022	C91-1	ORAL TESTIMONY As two minutes isn't adequate time to make meaningful comments on the SDC Draft EIR and proposed Self-Mitigated Specific Plan regarding: the preservation and transfer of the open space, the proposed overdevelopment of the historic campus or the significant and unavoidable environmental impacts that will increase driving and exacerbate the climate crisis, prevent robust historic preservation, degrade biodiversity and compromise the wildlife corridor, increase wildfire risk and hazards and that it will do little to address the housing crisis or increase equity in Sonoma Valley, I will say that right now we members of the public and the community are overwhelmed and need professional legal advice to help us provide productive and detailed written comments. I urge the county, the city and elected officials to provide pro-bono legal advice now or help us fund raise to hire a legal advisor. I also call on interested members of the public to help us raise funds to hire an attorney with expertise in the California Environmental Quality Act. Please contact me at terishore@gmail.com and I will connect you with our SDC teams.	This comment is noted. Please see MR-1 in regards to the adequacy of the self-mitigating plan.
Teri Shore	August 24, 2022	C91-2	INITIAL DRAFT WRITTEN COMMENTS EIR MITIGATIONS VERSUS SELF-MITIGATED SPECIFIC PLAN The County of Sonoma must immediately provide a detailed and legally accurate written explanation, description and rationale for preparing a DEIR with no environmental mitigations at all; and instead relying on a "Self-Mitigating" Specific Plan that contains goals, policies and a few "conditions of approval" that are based almost entirely on existing state laws as "mitigation." The county must explain the legal enforceability of the goals, policies and "conditions of approval." My primary concern is that the goals and policies along with the Conditions of Approval that serve to "self-mitigate" the project do not meet the same level of legal and enforceable mitigation as in EIR mitigations and required Mitigation Monitoring and Reporting Programs. A CEQA expert I recently talked to informally indicated no familiarity with the term "self-mitigated" projects under CEQA, and it does not appear in the current CEQA manual.	This comment is noted. Please see MR-1 in regards to the adequacy of the self-mitigating plan.

Commenter	Date	Letter	Comment	Response
Teri Shore	August 24, 2022	C91-3	VMTs – Significant and Unavoidable: The DEIR finds that the proposed SDC Specific Plan will undermine local, regional and state policies and commitments to address the climate crisis as it found significant and unavoidable impacts in the areas of vehicle miles traveled. That means that there is NO WAY to offset or mitigate the extra driving generated by all the new housing, retail, commercial development proposed at SDC. The County must not approve this project as proposed with these impacts if it is serious about addressing the climate crisis.	This comment is noted. Please see MR-6 in regards to the traffic analysis.
Teri Shore	August 24, 2022	C91-4	PRESERVE OPEN SPACE: The DEIR and SDC Specific Plan states that the open space will be preserved in several places; and provides a general overlay map. There are also statements about "working with Sonoma County to preserve the Open Space" and several other general reference. However, it does not provide any specific information on exact open space boundaries or when or through what mechanism the preservation and transfer will occur. A timeline and approach for transferring and preserving the open space must be added to the DEIR and Specific Plan Conditions of Approval to ensure that the open space gets transferred to county parks, regional parks and/or a public conservation entity and does not get transferred to a developer or other private owner.	This comment is noted. The Proposed Plan's definition of Preserved Open Space is a land use designation intended to preserve open spaces outside of the Core Campus for habitat, recreation, ecological services, water resources and agricultural uses. The impacts listed within the DEIR include the consideration of these uses.
Teri Shore	August 24, 2022	C91-5	GENERAL PLAN AMENDMENT: If the county moves forward to approve the DEIR and Specific Plan as proposed, it will amend the General Plan to forever change the Zoning at SDC from public facilities to residential, commercial, retail and hotel even if the community opposes it; and even if the state fails to accept the Specific Plan. The county should not rezone the SDC lands and its land use and zoning until a final plan for SDC is adopted that is acceptable to the community and/or any lawsuits are resolved.	This comment is noted, however it is not related to the adequacy of the DEIR, thus no further response is required.
Teri Shore	August 24, 2022	C91-6	CONDITIONS OF APPROVAL: The Executive Summary states that the Conditions of Approval are listed in Appendix A. They are not or at least I can't find them with a search for "Conditions of Approval." It appears that they are scattered throughout the DEIR. They need to be listed together in one place. Right now, the COA only apply to a few categories such as Biological Resources, Hazards, Air Quality and Geology. Most are boilerplate text from existing state laws that would be required anyway. That does not seem adequate to address the environmental impacts as required under CEQA.	This comment is noted. Please see MR-9 on the implementation of the Conditions of Approval.

Commenter	Date	Letter	Comment	Response
Teri Shore	August 24, 2022	C91-7	WILDFIRE: There are no conditions of approval for wildfire; and the goals and policies are based on a future Emergency Response Plan that will be developed at some point. The Evacuation Time analysis seems unrealistic as it suggests that "added times" for travel during an evacuation range from 1 or 2 minutes to 37 minutes to get to Napa. It took people HOURS to evacuate from Kenwood and Sonoma Valley during recent fires. Also, the DEIR calls for the "requirement" for a shelter-in-place facility at SDC after 200 homes are built. There is no proven rationale for sheltering in place particularly in a High Fire Risk Area. The DEIR and Self-Mitigating SDC Specific Plan do not eliminate risk or wildfire hazard to insignificant levels.	This comment is noted. Please see MR-1 in regards to the self-mitigating plan and MR-4 in regards to the wildfire evacuation analysis.
Teri Shore	August 24, 2022	C91-8	HISTORIC ALTERNATIVE PREFERRED: If I had to choose one of the alternatives, I would choose the Historic Alternative as it is the environmentally preferred alternative. NO PROJECT ALTERNATIVE: The DEIR fails to provide a true No Project Alternative which fails to meet CEQA.	This comment is noted. Please see MR-2 in regards to the level of detail of analysis and programmatic nature of the Draft EIR.
Terry and Carolyn Harrison	Wednesday, September 14, 2022	C92-1	We keep encouraging more people to come into Sonoma County without any long range plans concerning transit, roads, water, energy and food (as we drive up the price of farmland). 300 new residences is plenty for SDC. Recondition present ones if possible. Regenerative grazing and wild animals and open space are compatible and exist in many parts of the world including the US. The sheep, cows or goats are within enclosed fields rotating from one to another, leaving plenty of open space where grasses and other feed have been consumed without destroying the plants which are recovering and getting ready for the next rotation. The upper part of SDC should be zoned for this.	This comment is noted, however it is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
The Filipello Family **The Thomsen Family** **F. Horne,** **A. Chavez,** **J. Hansen**	Wednesday, August 24, 2022	C93-1	Comments and Questions regarding the Draft EIR Water: Water availability concerns are at a crisis level. What exactly is the the water source for 1000 new homes or even for 450 new homes in the draft EIR? Housing versus Houses: Why is building new houses proposed when the SDC housed 3000 in existing structures? Why not renovate, restore and repurpose the historic, beautiful buildings on the SDC campus before any new construction? The EIR must be modified to insure the first use of existing buildings. Fire Prevention: New home construction is a magnet for wild fires. What special fire resistant construction will be used if these homes are built? Will this include fire resistant tile roofs and heavy plaster walls like those found on most of the historic buildings which were built to last and have lasted? Wildlife: The SDC campus is an extension of an important wildlife corridor and passage between Sonoma Mountain and the Mayacamas Range. The area must remain open to wildlife coming through Jack London Park and traveling to the Audubon and Oak Hill preserves. What plans insure wildlife safe passage? We look forward to hearing your response to our concerns.	This comment is noted. Please see MR-5 in regards to the lack of, or inadequacy of, or disagreement with water supply analysis.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	27-Aug-22	C94-1	Though Permit Sonoma worked hard, produced >4000pgs, & created many potential alternatives within their Specific Plan/EIR process, they have overshot the mark creating a plan for the past, “fighting the last war” as we often do, and not taking advantage of the opportunity to present a plan for the future. Why does it appear the SDC EIR and associated Specific Plan (characterized by the County’s preferred Proposed Project Alternative) have defined and committed the County of Sonoma, as Lead Agency under CEQA, to a series of specific decisions, plans, and/or alternatives without fully considering other acceptable plans (under legislation 14670.10.5), alternatives, mitigation measures, and the Null Project. Please explain why the County (Permit Sonoma) has allowed the EIR to be produced which does not address the mitigatable cumulative effects of waste generated by the proposed alternative over the Null Project hypothesis, to the extent where recommended building demolition of ~1.2M sq-ft produces a minimum of 161,000 cy of debris equal to 67 years of operation of the Proposed Project Alternative in addition to the equal amount of debris produced by the eventual demolition of the Proposed 1.2M sq-ft Project (Σ=322,000 cy, or 134 years at the rate of the Proposed Project at completion); together with the project waste there will be an average cumulative waste of 19.8 tons/day or 1.5% of daily averages (2016-2020, per SP pg 603) ? Since we are already transferring all our solid waste away from Sonoma County because we do not have local landfill capacity, and our waste charges ($135/ton) are double the charge for Hazardous Waste ($50.97/ton asbestos waste) taken to Kettleman Hills landfill, this must be considered a significant mitigatable impact by Reuse and Historic Preservation of the existing buildings. At the local waste costs, this represents >$960,000/yr = ~$65M over the 67 years, from these 3 sources.	As noted on page 486-487 of the DEIR regarding solid waste generation from construction and operation, "Demolition and construction activities associated with implementation of the Proposed Plan would result in a temporary increase in solid waste generation periodically during construction. However, the increase would be minimal and temporary. Standard Conditions of Approval UTIL-5 is included to ensure preservation of top soil removed during construction for reuse in revegetation.The Proposed Plan would not generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure during construction. This impact would be less than significant. Additionally during site operation, "the daily solid waste generated by the Proposed Plan would be approximately 0.27 percent of the permitted daily capacity of the landfill. The Proposed Plan would not be a substantial contributor to the County’s solid waste at the Central Disposal Site." Therefore, the impact of construction and operational waste generation is less than significant.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	27-Aug-22	C94-2	Why is no mention made in the EIR or SP of GHG's which were imbedded and carried within the existing constructed buildings which will be released into the atmosphere by their demolition, nor is any men-tion made of the GHG emissions which are imbedded in the production of the new materials and resour-ces which are expected to replace the demolished SDC buildings, these are significant long term mitigat-able cumulative effects? Why has the EIR not addressed either of these cumulative GHG effects, from demolition, neither the before demolition GHG emissions sequestered in the existing buildings which will be released, nor the GHG emissions released in the production of the replacement 1.2M sq-ft of buildings together with their own lifecycle emissions released upon their demolition? These GHG's must be considered a significant mitigatable impact by their Reuse. TCEFINANCIAL 154 Butterfly Ln, #232 Santa Rosa, CA 95407 Phn 707-508-8011 thomasells40@gmail,com Why is no mention made in the EIR or SP of the cumulative effects of the opportunity lost to lead this community and the Global Community in re-visioning the future, from the past that we have, into the future that we need while using the existing buildings and infrastructure you demolish?	This comment is noted. Please see MR-3 in regards to level of detail of analysis and programmatic nature of the Draft EIR
Thomas Chase Ells	27-Aug-22	C94-3	Why is Historic Preservation of the existing buildings considered by the EIR & SP to be financially infeasible and unmitigatable? This is not a fact, nor is it a reasonable conjecture from any basic set of reasonable assumptions, other than a prejudice against Historic Buildings in preference to the Cult-of-the-New. Historical Preservation and Reuse of these buildings is relatively simple. In particular, historic lumber is dimensionally greater and structurally superior, providing more insulative cavity, and other materials were more dense historically. History teaches us that the oldest buildings are the most energy efficient for their locations; such as Kiva & Adobe Structures of the America Southwest are stone or adobe to insulate against the heat, raised pole structures in the Indus Valley Civilization and Mounded Structures of the Mississippian Culture prevent flood inundation, Northern Long Houses of the Iroquois in the East and the Suquamish of the West are large multifamily dwellings and made of wood frames and bark covering to insulate against the cold, even Igloos of the Eskimo. Why have you neglected the consideration that almost every older building uses less energy than that which replaces it, despite the efficiency of the New Building?	This comment is noted, however it is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	27-Aug-22	C94-4	Why is scant consideration, even superficial avoidance, of the topic of Hazardous Materials mitigation and removal given within the EIR and SP as a direct consequence of the building demolition, as opposed to "In-Situ" mitigation in place through reuse and Historic Preservation of the existing buildings; Diesel Tanks, Film Development, Chemical Storage, Paint Shops, Corporate Yards and Transportation buildings, all have significant potential for Hazardous Materials impacts, as well as, the asbestos insulation and lead based paint in the buildings? Each of the above considerations, taken individually are significant impacts not covered by the EIR and SP, but there is also a cumulative effect of the above neglectful preparation of the EIR and SP, "a death by 1000 cuts" to the Historic Preservation (stated to be unmitigatable). Why has the cumulative effect of this neglectful preparation not been addressed within the EIR and SP, which then augers for and streamlines the process for replacement by the preferred Proposed Project Alternative as opposed to Historic Preservation? Can you explain how you are mitigating this neglect, in producing a cycle of demolition and reconstruction which has a cumulative effect on the environment due to exploitative expectations, the expectation that 'everything I have should be new', 'we need the new', 'I need the new'? Again, why does the EIR and SP neglect the positive environmental impact the development could have by leading, rather than following old worn-out traditions of thinking, that have cumulatively placed us in our Climate Crisis?	This comment is noted, however it is not related to the adequacy of the DEIR, thus no further response is required.
Thomas Chase Ells	26-Aug-22	C95-1	Galen's Gardens/Samaritan Housing Society's offer is $1B for "Improvements to the Environment" at Sonoma Developmental Center (SDC) to such an extent as to offset the value & price of any other offer. The current process has gone off track, while Permit Sonoma's efforts at creating an EIR & Specific Plan process for development of SDC have produced Yeomen's effort of planning & exceptional avenues for creative visioning at SDC, they have shot clear past the demarcations of the community's desires/needs. Galen's Gardens/Samaritan Housing Society offer is a "Null Hypothesis Project" proposal for "Improve-ment of the Environment" at SDC and Historic Restoration of the Historic main building ("Professional Education Building/PEC"), which exempts the proposal from CEQA. We in America suffer from a lack of vision, we have been convinced that the proper thing to do is to	This comment is noted, however it is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			"Think Globally, but Act Locally" only. This is not correct, this is unscientific, it is anti-scientific and anti-American, we need to "Think Locally, and Act Globally", because that is scientific. What we want locally around us, we should want for all, and similarly with what we don't want near us. We've lost the Public will. See Appendix"A"Term Offer Sheet.	
Thomas Chase Ells	Aug 26, 2022	C95-2	Our offer is simple: create a Climate Crisis Center; establish a Polytechnic Environmental Institute; reuse as many of the buildings and facilities as possible; prevent waste & GHG emissions in the demolition of the County Proposed Project Alternative (CPPA) of ~161,000 tons waste along with the replacement of these same buildings with another ~161,000 tons of future waste (Σ=134yrs waste); establish 6-Agencies with 100units/ each of affordable housing, with each reserving 10 of these units for "short term rentals". We will use Camp Via as an RV site, and re-establish the water & waste treatment systems for wetlands. The value of this proposal to the State is $1.133 Billion, and we would return all the property to the State at any time they wish (subject to the Housing & School Leases, and $100M Rehab Loan). Our only conditions for the creation of the Climate Crisis Center, the Polytechnic Environmental Institute and the affordable housing is $100M Endowment from California Coastal Conservancy, $25M/yr Operating Budget (per CalPoly Humboldt) for the Polytechnic Institute, and the use of the property until it's return to the State. Please see attached Appendices for details.	This comment is noted, however it is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	18-Sep-22	C96-1	Why has County Staff/Consultants done the following, and what are your mitigation recommendations?: The EIR & SP preparation violates BPC6731, without a Civil Engineer in responsible charge of Planning? The EIR has committed the County to a course of action, new development, prior to EIR's Certification? Historic Reuse appears proper, yet each price consequence results in expanded project impacts. What is the economic obsolescence impact to the Springs/Glen Ellen of the proposed project? The EIR and SP propose demolition of 1.2M sq-ft of buildings, along with the 1M+0.35M gal fresh water tanks, see Figure 4.3-1: "Historic Assets", without reference to local Wildfire protection. Why? The EIR & SP propose demolition of Historic Firehouse (c1932) without wildfire impact consideration? EIR & SP neglect wildfire consideration, as not "High Fire Risk", though analysis excluded SDC?	This comment is noted. Please see MR-9 in regards to mitigation monitoring, MR-7 in regards to the adequacy of impacts on wildlife movement or disagreement with analysis/findings, and MR-4 in regards to Inadequacy or disagreement with wildfire evacuation analysis.
Thomas Chase Ells	Sept 18, 2022	C96-2	Why does EIR & SP use uncalibrated (unrealistic) models, eg without reference to actual fire evacuation? The EIR develops a series of conclusions as analysis, beginning after point in time of project completion? The EIR assumes no cumulative effects to the proposed project; eg. GHG's and solid waste, but does not include project specific demolition, nor constructed lifecycle, GHG's & wastes? Why? The EIR assumes no cumulative effects from combining the proposed project wastewater into a down-stream waste treatment facility when a historic facility is located on site to recharge the wetlands/creek. SDC is an Historic opportunity to propose and develop an integrated environmental & climate protective response to wildfire, in a traumatized and sensitized area, without which this proposal has a significant cumulative negative impact to the local & regional environment due to unrealized wildfire protections. Why is EIR & SP preparation biased in favor of Standard-Operating-Procedure for new development? There is, at great expense, no Professional caliber analysis within these documents, explain?	This comment is noted. Please see MR-3 in regards to level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	Sept 18, 2022	C97-1	Though Permit Sonoma worked hard, produced >4000pgs, & created many potential alternatives within their Specific Plan/EIR process, they have overshot the mark creating a plan for the past, “fighting the last war” as we often do, and not taking advantage of the opportunity to present a plan for the future. Why does it appear the SDC EIR and associated Specific Plan (characterized by the County’s preferred Proposed Project Alternative) have defined and committed the County of Sonoma, as Lead Agency under CEQA, to a series of specific decisions, plans, and/or alternatives without fully considering other acceptable plans (under legislation 14670.10.5), alternatives, mitigation measures, and the Null Project.	This comment is noted. Please see MR-3 in regards to level of detail of analysis and programmatic nature of the Draft EIR.
Thomas Chase Ells	Sept 18, 2022	C97-2	Please explain why the County (Permit Sonoma) has allowed the EIR to be produced which does not address the mitigatable cumulative effects of waste generated by the proposed alternative over the Null Project hypothesis, to the extent where recommended building demolition of ~1.2M sq-ft produces a minimum of 161,000 cy of debris equal to 67 years of operation of the Proposed Project Alternative in addition to the equal amount of debris produced by the eventual demolition of the Proposed 1.2M sq-ft Project (Σ=322,000 cy, or 134 years at the rate of the Proposed Project at completion); together with the project waste there will be an average cumulative waste of 19.8 tons/day or 1.5% of daily averages (2016-2020, per SP pg 603) ? Since we are already transferring all our solid waste away from Sonoma County because we do not have local landfill capacity, and our waste charges ($135/ton) are double the charge for Hazardous Waste ($50.97/ton asbestos waste) taken to Kettleman Hills landfill, this must be considered a significant mitigatable impact by Reuse and Historic Preservation of the existing buildings. At the local waste costs, this represents >$960,000/yr = ~$65M over the 67 years, from these 3 sources.	As noted on page 486-487 of the DEIR regarding solid waste generation from construction and operation, "Demolition and construction activities associated with implementation of the Proposed Plan would result in a temporary increase in solid waste generation periodically during construction. However, the increase would be minimal and temporary. Standard Conditions of Approval UTIL-5 is included to ensure preservation of topsoil removedduring construction for reuse in revegetation. The Proposed Plan would not generate solidwaste in excess of State or local standards or in excess of the capacity of localinfrastructure during construction. This impact would be less than significant.", and "the daily solid waste generated by the Proposed Plan would be approximately 0.27 percent of the permitted daily capacity of the landfill. The Proposed Plan would not be a substantial contributor to the County’s solid waste at the Central Disposal Site." Therefore the impact from solid waste produced at the site would be less than significant.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	Sept 18, 2022	C97-3	Why is no mention made in the EIR or SP of GHG's which were imbedded and carried within the existing constructed buildings which will be released into the atmosphere by their demolition, nor is any men-tion made of the GHG emissions which are imbedded in the production of the new materials and resour-ces which are expected to replace the demolished SDC buildings, these are significant long term mitigat-able cumulative effects? Why has the EIR not addressed either of these cumulative GHG effects, from demolition, neither the before demolition GHG emissions sequestered in the existing buildings which will be released, nor the GHG emissions released in the production of the replacement 1.2M sq-ft of buildings together with their own lifecycle emissions released upon their demolition? These GHG's must be considered a significant mitigatable impact by their (building) Reuse. Why is no mention made in the EIR or SP of the cumulative effects of the opportunity lost to lead this community and the Global Community in re-visioning the future, from the past that we have, into the future that we need while using the existing buildings and infrastructure you demolish?	This comment is noted. Please see MR-8 on the GHG effects of the Historic Preservation Alternative.
Thomas Chase Ells	Sept 18, 2022	C97-4	Why is Historic Preservation of the existing buildings considered by the EIR & SP to be financially infeasible and unmitigatable? This is not a fact, nor is it a reasonable conjecture from any basic set of reasonable assumptions, other than a prejudice against Historic Buildings in preference to the Cult-of-the-New. Historical Preservation and Reuse of these buildings is relatively simple. In particular, historic lumber is dimensionally greater and structurally superior, providing more insulative cavity, and other materials were more dense historically. History teaches us that the oldest buildings are the most energy efficient for their locations; such as Kiva & Adobe Structures of the America Southwest are stone or adobe to insulate against the heat, raised pole structures in the Indus Valley Civilization and Mounded Structures of the Mississippian Culture prevent flood inundation, Northern Long Houses of the Iroquois in the East and the Suquamish of the West are large multifamily dwellings and made of wood frames and bark covering to insulate against the cold, even Igloos of the Eskimo. Why have you neglected the consideration that almost every older building uses less energy than that which replaces it, despite the efficiency of the New Building?	This comment is noted. Please see MR-8 on the ability of the Historic Preservation Alternative to meet project objectives.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	Sept 18, 2022	C97-5	Why is scant consideration, even superficial avoidance, of the topic of Hazardous Materials mitigation and removal given within the EIR and SP as a direct consequence of the building demolition, as opposed to “In-Situ” mitigation in place through reuse and Historic Preservation of the existing buildings; Diesel Tanks, Film Development, Chemical Storage, Paint Shops, Corporate Yards and Transportation buildings, all have significant potential for Hazardous Materials impacts, as well as, the asbestos insulation and lead based paint in the housing, hospital, and office buildings? Lack of consideration of this impact has direct impacts of needlessly and costly filling existing hazardous waste landfills, both individually and cumulatively, though mitigatable.	The comment is noted. As noted on page 261 of the DEIR, the Hazards and Hazardous Materials Impact Analysis considers the nature of foreseeable hazardous materials use, storage and disposal resulting from the redevelopment of the Sonoma Developmental Center. It also identifies ways that hazardous materials could be exposed to the environment or individuals. The analysis includes a qualitative evaluation of impacts associated with the presence or hazardous materials. The analysis is based on a review of materials ranging from online databases such as Envirostar and Geotracker, hazard maps, Phase I & II Site Assessments (see Appendix G), and relevant plans and regulations at the Federal, State, and local levels. Therefore, upon implementation of the Specific Plan and regular operations of the site, compliance with the regulations for hauling hazardous substances would continue to reduce the potential of an accidental release of hazardous materials (Impact 3.8-1) to a less than significant level. Further, Standard Condition of Approval HAZ-3 would require implementation of Best Management Practices to reduce exposure of workers to contaminated materials during construction, icluding a soil management plan and a health and safety plan. Compliance with the Standard Conditions of Approval Measure HAZ-3 and existing regulations would reduce impacts related to the release of hazardous materials due to foreseeable upset or accident conditions to less than significant. Therea are no

Commenter	Date	Letter	Comment	Response
				schools located or are proposed to be located within one-quarter mile of the Planning Area. Thus, implementation of the Proposed Plan would have no impact regarding hazard emissions or materials in within one-quarter mile of an existing or proposed school. Regarding Impact 3.8-4, implementation of HAZ-3 prior to construction would reduce the potential risks associated with releases of contaminated media as a result of Proposed Plan to a less-than-significant level.
Thomas Chase Ells	Sept 18, 2022	C97-6	Each of the above considerations, taken individually are significant impacts not covered by the EIR and SP, but there is also a cumulative effect of the above neglectful preparation of the EIR and SP, "a death by 1000 cuts" to the Historic Preservation (stated to be unmitigatable). Why has the cumulative effect of this neglectful preparation not been addressed within the EIR and SP, which then augers for and streamlines the process for replacement by the preferred Proposed Project Alternative as opposed to Historic Preservation (HP)? Can you explain how you are mitigating these neglected impacts which should be further compared to the environmentally preferred HP, in producing a cycle of demolition and reconstruction which has a cumulative effect due to volume of waste, and on the environment due to exploitative expectations, the expectation that 'everything I have should be new', 'we need the new', 'I need the new'? Again, why does the EIR and SP neglect the positive environmental impact the development could have by leading, rather than following old worn-out traditions of thinking, that have cumulatively placed us in our Climate Crisis?	This comment is noted. Please see MR-3 in regards to level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	29-Aug-22	C98-1	Why has County Staff/Consultants done the following, and what are your mitigation recommendations?: The EIR & SP preparation violates BPC6731, without a Civil Engineer in responsible charge of Planning? The EIR has committed the County to a course of action, new development, prior to EIR's Certification? Historic Reuse appears proper, yet each price consequence results in expanded project impacts. What is the economic obsolescence impact to the Springs/Glen Ellen of the proposed project? The EIR and SP propose demolition of 1.2M sq-ft of buildings, along with the 1M+0.35M gal fresh water tanks, see Figure 4.3-1: "Historic Assets", without reference to local Wildfire protection. Why? The EIR & SP propose demolition of Historic Firehouse (c1932) without wildfire impact consideration? EIR & SP neglect wildfire consideration, as not "High Fire Risk", though analysis excluded SDC?	This comment is noted. Please see MR-9 in regards to mitigation monitoring, MR-7 in regards to the adequacy of impacts on wildlife movement or disagreement with analysis/findings, and MR-4 in regards to Inadequacy or disagreement with wildfire evacuation analysis.
Thomas Chase Ells	Aug 29, 2022	C98-2	Why does EIR & SP use uncalibrated (unrealistic) models, eg without reference to actual fire evacuation? The EIR develops a series of conclusions as analysis, beginning after point in time of project completion? The EIR assumes no cumulative effects to the proposed project; eg. GHG's and solid waste, but does not include project specific demolition, nor constructed lifecycle, GHG's & wastes? Why? The EIR assumes no cumulative effects from combining the proposed project wastewater into a down-stream waste treatment facility when a historic facility is located on site to recharge the wetlands/creek. SDC is an Historic opportunity to propose and develop an integrated environmental & climate protective response to wildfire, in a traumatized and sensitized area, without which this proposal has a significant cumulative negative impact to the local & regional environment due to unrealized wildfire protections. Why is EIR & SP preparation biased in favor of Standard-Operating-Procedure for new development? There is, at great expense, no Professional caliber analysis within these documents, explain?	This comment is noted. Please see MR-3 in regards to level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Tim Portwood	Wednesday, August 24, 2022	C99-1	I am writing to urge you to pause any further review or action on the Specific Plan and EIR for the Sonoma Developmental Center. This is necessary in order to ensure that: 1. The County Specific Plan process is aligned with the State's RFP process (i.e., after the State announces the RFP selection on October 24), and 2. The County Specific Plan and EIR describe and analyze the impacts of the actual proposal that the State selects rather than a hypothetical plan. Even though I live in West Sonoma County, I know that the SDC property is of vital importance as open space and as a critical part of a wildlife corridor, benefitting the entire county, region, and state. It would be disastrous and shameful for Sonoma County and the State of California to rush forward with a development plan that fails to adequately and meaningfully address climate change, wildfire, drought, and biodiversity loss. Thank you for your consideration of my input.	This comment is noted. Please see MR-2 in regards to the need for more time/selection of a developer before finalizing the Specific Plan.
Vicki Hill	13-Sep-22	C100-1	I am a land use planner and CEQA specialist in Sonoma County and have many concerns regarding the proposed large-scale SDC Specific Plan and the adequacy of the SDC Specific Plan Draft EIR. I am still reviewing the Plan and EIR and will submit detailed comments by the comment due date. However, I wanted to bring to your attention a few of the many issues that need to be addressed. Overall, the DEIR reflects a bias towards the proposed dense development and tends to dismiss the proposed plan's environmental disadvantages when comparing it to other reduced-scale alternatives. Substantial revisions are necessary to the EIR and Specific Plan to make the EIR adequate, under CEQA, and to create a plan that represents sound land use planning.	This comment is noted. Please see MR-3 in regards to level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Vicki Hill	13-Sep-22	C100-2	Specific Plan Scale The planning process has failed to result in a plan that even remotely resembles a community-supported alternative. The promised community-driven process has not occurred. Despite widespread, valid public concerns about the proposed high-density plan and the Board of Supervisors direction to evaluate a plan with 450 to 800 residential units, the proposed Specific Plan still includes an extreme amount of development (1000 plus homes, 410,000 square feet of commercial), which is totally out of scale for this location outside of an urban growth boundary and in the middle of the semi-rural village of Glen Ellen. There is no project comparable to this size in the entire Sonoma Valley. This urban sprawl development, including a 120-room hotel and potential conference center, will, in effect, create a new city, in direct conflict with good land use planning principles and County growth policies. Yes, we need and want housing, but there must be a balanced approach that factors in site constraints, impacts, surrounding land uses, historic resource values, and limited transportation network. This balanced approach is even reflected in the plan's guiding principles (see DEIR page 5-6) but the plan fails to conform to these principles. Project objectives to "balance redevelopment with existing land uses" and "balance development with historic resource conservation" have been ignored. The Draft EIR identifies significant, unavoidable impacts on historic resources and traffic from the proposed Specific Plan due to its size. There is no mitigation identified for destroying so many historic buildings and converting the site to a new urban development. These issues could be addressed with a smaller alternative.	This comment is noted. Please see MR-8 for an explanation of how the historic preservation alternative was considered.

Commenter	Date	Letter	Comment	Response
Vicki Hill	13-Sep-22	C100-3	Environmentally Superior Alternative DEIR page 570 states: "Overall, the Historic Preservation Alternative is the environmentally superior alternative…" The text goes on to dismiss this alternative and minimize its environmental benefits. To say that the proposed plan's impacts are "largely comparable" to the impacts of smaller alternatives is false and misleading. The types of impacts may be the same, but the magnitude of impacts on traffic, climate change, historic resources, noise, biological resources, public services and land use would be much less with a reduced-scale alternative. The Historic Preservation Alternative is feasible and its size and scale should be pursued as the preferred plan. Some modifications to this alternative could be incorporated to further reduce impacts, such as even more adaptive reuse and more compact development design. It appears that some impact-reducing elements included in the proposed plan were arbitrarily excluded from this alternative (e.g., the road connection to Highway 12 for emergency access), thus making this alternative appear less environmentally advantageous. Also, there is no reason to conclude that this alternative couldn't achieve affordable housing goals. Compared to current and projected high construction costs for new development, adaptive reuse can be an effective strategy to reduce overall project costs and impacts.	This comment is noted. Please see MR-8 for an explanation of how the historic preservation alternative was considered.
Vicki Hill	13-Sep-22	C100-4	Deferral of Analysis The Draft EIR defers analysis of impacts on some resources to a future time when individual projects are proposed. However, most if not all future projects will be exempt from CEQA under permit streamlining legislation so there will be no means to limit full buildout or implement much-needed future mitigation measures.	This comment is noted. Please see MR-3 in regards to the level of detail of analysis and programmatic nature of the Draft EIR.
Vicki Hill	13-Sep-22	C100-5	Specific Plan Phasing SDC Planning Advisory Team (PAT) members and public comments stressed the importance of project phasing to reduce impacts on the environment and on the community. There is only one requirement for phasing (Policy 4-3, which requires completion of at least 10,000 square feet of retail businesses and at least 200 housing units west of Arnold Drive before beginning construction of any housing east of Arnold Drive) and this policy does not reduce any environmental impacts. The Specific Plan itself has a section on "Recommended Phasing" but these provisions are advisory and not mandatory. The EIR must identify phasing as mitigation to help further reduce traffic and other impacts.	This comment is noted. Please see MR-3 in regards to the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Vicki Hill	13-Sep-22	C100-6	Need for Performance Standards Project phasing should be based on performance standards adopted for each environmental issue area. In this way, impacts can be monitored and additional mitigation measures developed, as needed. For example, there is no certainty that massive demolition and construction activities, as well as the introduction of a large mobile population to the site, will not dramatically affect the surrounding open space resources. Before proceeding with full buildout, it should be proven that the site can actually accommodate the projected buildout.	This comment is noted. Please see MR-9 in regards to mitigation monitoring and performance standards.
Vicki Hill	13-Sep-22	C100-7	Specific Plan Policy Language and Enforceability Many of the policies in the proposed plan are intended to reduce/avoid impacts but the wording is such that it is not mandatory and many policies are not carried forward to Appendix A, Standard Conditions of Approval. Thus, these policies cannot be relied on to be implemented and fully mitigate impacts. Any policy that does not have a strong "shall" statement is not enforceable.	This comment is noted. Please see MR-9 in regards to mitigation monitoring and performance standards.
Vicki Hill	13-Sep-22	C100-8	Jobs/Housing Growth (DEIR Section 5.1.1.2) It is completely inaccurate to say that the proposed job growth of 940 jobs outside of an urban growth boundary is a "modest" number. The number of jobs cannot be compared to the county-wide number – this methodology purposefully minimizes the impact. Compared to the rest of Sonoma Valley, which is a distinct planning region, the addition of 940 jobs is significant and is growth-inducing. Also, there is no documentation of the need for these jobs in Sonoma Valley. The market study conducted as part of the Specific Plan alternatives report (November 2021, see sdcspecificplan.com/documents) determined that non-residential development did not generate overall revenues and did not contribute to financial feasibility. The alternatives report states: "Commercial and industrial uses may support building construction costs but are unlikely to have a significantly positive impact on overall development feasibility." Also, the EIR (page 11) states: "…the market demand for non-residential uses (with the exception of a hotel) is limited and higher employment levels will reduce financial feasibility." While there is a large demand for affordable housing in Sonoma Valley, creating over 700 market-rate homes is definitely a significant growth-inducing impact because there is no existing demand for this high number. These housing units will not serve	This comment is noted, however it is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			the existing Sonoma Valley population – they will attract people from outside the valley and outside of Sonoma County.	
Vicki Hill	13-Sep-22	C100-9	Comparison to Previous Institutional Use The EIR analysis, including the growth-inducing section as well as other sections, attempts to justify the large-scale plan by erroneously comparing the proposed plan population and employee growth to the previous institutional use and number of clients/employees. This comparison is invalid and should not be used as a basis for over-developing the site due to the fact that: • As an institution, SDC tread very lightly on the environment and adjacent community. At its most populous, most of the residents of SDC did not leave the property. They did not drive cars, they didn't go offsite to schools, doctors, restaurants, etc. • Vehicle trips were primarily limited to employees divided into three shifts so that traffic was spread out, rather than concentrated at peak hours. There were no retail commercial uses or a hotel to generate trips. • Because of the limited outdoor activities and absence of constant vehicle traffic onsite, people and cars did not interfere with wildlife movement; the campus was open, peaceful, and not occupied with uses that generated a substantial amount of traffic (e.g., hotel, restaurants, etc.). • Employment and resident numbers at SDC reached a peak during a time over 50 years ago when there was very little cumulative growth in Sonoma Valley and both Arnold Drive and Highway 12 were still well-functioning roadways.	This comment is noted. Please see Impact 3.12-1 on page 376 regarding impacts on induced population growth and buildout of the Proposed Plan would help fulfill State legislature requirements to develop affordable housing within the Planning Area and help mitigate the severe housing shortage facing Sonoma County. Further, the Sonoma County General Plan 2020 Housing Element specifies that future re-use of the SDC facility should include affordable housing. Therefore, given that the Proposed Plan's projected population growth is commensurate with State legislative requirements to prioritize affordable housing development as well as General Plan goals and policies, the Proposed Plan would not induce substantial unplanned population growth in the Planning Area and the impact would be less than significant. Please see also Section 5.1 on page 579 of the DEIR for further analysis on growth-inducing impacts.

Commenter	Date	Letter	Comment	Response
			Nor is it valid to compare existing building square footage to proposed square footage in an attempt to minimize impacts, as it is the proposed use of the buildings that drives most of the impacts.	
Vicki Hill	13-Sep-22	C100-10	EIR Traffic Assumptions There is no guarantee that people who live onsite will work there. That cannot be assumed for purposes of analyzing traffic impacts. Also, it cannot be assumed that the roadway connection to Highway 12 will be developed. Therefore, the traffic impacts are substantially underestimated in the EIR.	This comment is noted. Please see MR-6 in regards to the traffic analysis.
Vicki Hill	13-Sep-22	C100-11	Wildlife Corridor Impacts Despite many scoping comments, impacts on wildlife movement through the campus are not addressed in the EIR. The campus itself is part of the wildlife corridor and must be acknowledged as such. Furthermore, there is no overall prohibition or restrictions on fencing within the campus (only prohibition on wooden fences) so wildlife will likely be blocked from movement through the campus . There will be significant impacts on wildlife movement from the introduction of thousands of people and vehicles, as well as fences.	This comment is noted. Please see MR-7 in regards to the adequacy of impacts on wildlife movement or disagreement with analysis/findings.
Vicki Hill	13-Sep-22	C100-12	No Project Alternative Definition Under the No Project alternative, it cannot be assumed that the state will take control of the site and that the county will have no land use authority. If the state proceeds with sale of the property, any private developer would be subject to county land use controls. The RFP issued by the State clearly states that the property is being offered for sale. The RFP contains no reference to the possibility	This comment is noted, however it is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			for a long-term ground lease with private developers. Therefore, this is not a reasonable assumption.	
Vicki Hill	13-Sep-22	C100-13	Financial Feasibility Despite making references to financial considerations, there is no definition or accurate assessment of the financial feasibility of the proposed plan or alternatives. While financial feasibility is required, there is no mandate to maximize revenues at the cost of other resources and values, or at the cost of reasonable land use planning. Thank you for considering my comments. Please feel free to contact me if you have any questions or need clarification on any of these comments. Regards,	This comment is noted. Please see page 18 which states the Proposed Project fulfills the project objectives most completely, including providing greater levels of housing including affordable housing, and superior financial feasibility, with overall environmental impacts that are largely comparable between the Proposed Plan and the alternatives, with the exception of greater preservation of historic resources in the Historic Preservation Alternative.

Commenter	Date	Letter	Comment	Response
Victor Gonzalez	Monday, August 29, 2022	C101-1	I previously sent you some excerpts from the body and Appendix of the DEIR regarding the treatment of the water situation (attached). The reason for my interest in this specific topic is 2-fold: 1. We are in a severe and long-term drought environment due to increasing temperature and climate changes 2. SDC is blessed with an abundance of water resources which is highly unusual for any new development. The language in the water section uses term “assumes”. You cannot assume anything about utility services. Without all clear & adequate utility services development is challenged. Buried in the appendix is a definitive statement that VOMWD can serve the full buildout over the next 25 years so why is the Department not being crystal clear about this in the water section? The bulk of the Water Study (Appendix and paid for by the State) concerns obtaining the State Water rights and the existing water facilities (reservoirs & presumably pipes/pumps) which have held 800 ac feet or more every year since records have been recorded. SDC needs only 340 at full build out so there is a surplus available for the district to mitigate the long-term drought scenarios. This benefits the whole County. Now I understand that the water facilities are “off-site” and not part of the core campus DEIR discussion so I think a declarative paragraph should state that rather than mixing up the “surface water” discussion between off-site and on-site is required. There is no discussion of what it would take financially and personnel wise to operate the Water Treatment Plant (“WTP”) so use of the actual water resources is still a very open question. As it stands publicly there are no plans to turn all that water into a potable resource for the district. If true, that should be stated. It is just the weirdest discussion of a major utility for a major development that I have ever read so being clear and straightforward about it will aid the defense of the document and better inform the public. Just one last thought: I wrote a letter to the editor of the Sonoma Index Tribune that was published this Wednesday that might interest you.	This comment is noted. Please see MR-5 for clarification of the water supply analysis.

Commenter	Date	Letter	Comment	Response
Victor Gonzalez	Monday, August 29, 2022	C101-2	Pg. 465 The District's most recently adopted Urban Water Management Plan (UWMP) acknowledges the District's plans to annex and serve the Proposed Project site. It is assumed the Planning Area will be served by local, on-site surface water sources, and the District will be the water service provider.122 122 Water Supply Assessment for the SDC Specific Plan. EKI / VOTMWD July 2022. Pg 466 All riparian water rights shall remain with the property. The state owns riparian water rights and pre-1914 and post-1914 appropriative water rights and owns and operates a municipal water supply, treatment, and distribution system on the property. These rights may be held by the state for existing and future domestic uses on the property. Pg 467 Raw water transmission lines from the Sonoma Creek diversion and pump house to Suttonfield Lake, the lakes to the treatment plant, and water transmission lines between transfer tanks may need to be replaced based on the age of the piping, however an assessment of their condition is needed to determine if they can continue to be used to serve the Planning Area. The water treatment plant will be evaluated for re-use by the water system operator.	This comment is noted. Please see MR-5 for clarification of the water supply analysis.
Victor Gonzalez	Monday, August 29, 2022	C101-3	Water Supply Assessment Sonoma Developmental Center Specific Plan Valley of the Moon Water District – July,2022 However, details of the Proposed Project were not known at the time that the 2020 UWMP was published, and thus the Proposed Project was not included in the 2020 UWMP demand and supply analyses. It is assumed that the Proposed Project will be served by local, on-site surface water sources, and VOMWD will be the water supplier for the Proposed Project. This WSA concludes that, provided that all surface water rights associated with the SDC Property are available to be utilized by VOMWD to serve the Proposed Project, the Proposed Project will not adversely affect water supply reliability within the VOMWD Service Area. Based on currently available information and conservative estimates of projected demand, the VOMWD expects to be able to meet all future demands within its existing service area, inclusive of the Proposed Project in normal and multiple dry hydrologic years from 2025 through 2045. The shortfalls that are currently projected during single dry years will be addressed	This comment is noted. Please see MR-5 for clarification of the water supply analysis.

Commenter	Date	Letter	Comment	Response
			through planned implementation of the VOMWD Water Shortage Contingency Plan (WSCP).	
Victor Gonzalez	Monday, August 29, 2022	C101-4	Specific Plan 6.2 it is anticipated that following the adoption of this Specific Plan the site will be served by the Valley of the Moon Water District (VOMWD). The majority of water distribution pipes in the Core Campus will need to be replaced, a cost assumed to be borne by the development 6.3 The existing infrastructure is primarily located outside of the Core Campus, so determining the ongoing operations and ownership of the assets will be a critical discussion between the State, County, and eventual master developer or developers. The State owns a variety of water rights associated with the SDC property, including riparian water rights and pre-1914 and post-1914 appropriative water rights. State legislation mandates that the riparian water rights—rights to the water that physically touches the land, such as from Sonoma Creek—remain with the property and limit water usage to within the site, and that the State may continue to hold the other rights for existing and future uses on the property. Determining the ownership and use of these water rights will be another critical decision for SDC's water supply going forward. GOALS 6-E Water Supplies: Safeguard SDC's water supplies and water rights, ensuring adequate availability of water for residents, businesses, fire suppression needs, ecosystem services, and groundwater recharge.	This comment is noted. Please see MR-5 for clarification of the water supply analysis.

Commenter	Date	Letter	Comment	Response
Victor Gonzalez	Monday, August 29, 2022	C101-5	EKI Stud 2207 "This WSA concludes that, provided that all surface water rights associated with the SDC Property are available to be utilized by VOMWD to serve the Proposed Project, the Proposed Project will not adversely affect water supply reliability within the VOMWD Service Area. . Based on currently available information and conservative estimates of projected demand, the VOMWD expects to be able to meet all future demands within its existing service area, inclusive of the Proposed Project in normal and multiple dry hydrologic years from 2025 through 2045. The shortfalls that are currently projected during single dry years will be addressed through planned implementation of the VOMWD Water Shortage Contingency Plan (WSCP)."	This comment is noted. Please see MR-5 for clarification of the water supply analysis.
Victor Gonzalez	Monday, August 29, 2022	C101-6	6.2.2 Surface Water Rights Associated with the SDC Property The State of California Department of Developmental Services - Sonoma Developmental Center holds several water rights at multiple PODs on the SDC Property. The watercourses and PODs present on the property are identified in Figure 4. As summarized in Table 7, the water rights associated with the SDC Property include two appropriative rights and three combined riparian rights and pre-1914 rights.7 Each water right includes specific temporal and/or volumetric restrictions, described further in Appendix B, which govern diversions at each respective POD. The restrictions associated with the water rights summarized in Table 7 govern how much water can be diverted from each POD on the Proposed Project site, when it can be diverted, and how the water can be beneficially used. The statements on the Hill/Mill Creek, Roulette Springs, and Asbury Creek (Applications #S019164, #S019167, #S019167) have claims to both riparian and pre-1914 use. The pre-1914 claim is currently being used to divert from Hill/Mill Creek and Asbury Creek to Fern Lake for regional fire storage. The other two sources are used pursuant to appropriative water rights (License #3082 and #2451). By actively managing the on-site water rights, the SDC has historically been able to provide reliable year-round domestic water supply to serve all uses on the SDC site at least up to the recorded peak historical demand of 1,143 AFY (Appendix A). In 2019, the State of California enacted Government Code Section 14670.10.5 (SDC Legislation) that outlines the State's goals and objectives for the SDC Property, including the language pertaining to the existing water rights. Paragraph (f) states the following: (f) All riparian water rights shall remain with the	This comment is noted. Please see MR-5 for clarification of the water supply analysis.

Commenter	Date	Letter	Comment	Response
			property. The state owns riparian water rights and pre-1914 and post-1914 appropriative water rights and owns and operates a municipal water supply, treatment, and distribution system on the property. These rights may be held by the state for existing and future domestic uses on the property. Based on the SDC Legislation, this WSA assumes that the water rights associated with the SDC Property and associated water supply infrastructure will be available to be utilized by VOMWD to serve water demands associated with the Proposed Project	

Commenter	Date	Letter	Comment	Response
Victor Gonzalez	Monday, August 29, 2022	C101-7	As discussed above, this WSA assumes that all existing water rights and water supply infrastructure associated with the SDC Property will be available for use by VOMWD to serve the Proposed Project demands on the occasion that the SDC Property is annexed into VOMWD's service area. Given that the total annual water demand for the Proposed Project at full buildout and occupancy is estimated to be 342 AFY, it is assumed that the local surface water supplies at the SDC Property will be sufficient to meet the demands associated with the Proposed Project under all conditions (i.e., current and projected, and for normal, single dry, and multiple dry years including a five-year drought period) based on the estimated 100% reliable yield of 356 AFY 6.6 Thus, this WSA assumes that all existing water rights associated with the SDC will be available to be utilized by the VOMWD to serve the Proposed Project on the occasion that the SDC Property is annexed by the VOMWD. As discussed in Section 6.2.3, the available volume of local surface water is conservatively estimated to be 356 AFY in all year types, which is assumed to be supplemental to the VOMWD's collective supply portfolio for purposes of serving the Proposed Project. VOMWD has no current plans to develop groundwater supplies on the SDC Property. Table 11 Projected Normal Year Water Supply and Demand (Scenario C) Sonoma Developmental Center Specific Plan, Sonoma County, California Scenario C: Inclusive of Local SDC Supplies and Proposed Project Demands Table 12 Comparison of Single Dry Year Water Supply and Demand (Scenario C) Sonoma Developmental Center Specific Plan, Sonoma County, California Scenario C: Inclusive of Local SDC Supplies and Proposed Project Demand	This comment is noted. Please see MR-5 for clarification of the water supply analysis.

Commenter	Date	Letter	Comment	Response
Victor Gonzalez	Monday, August 29, 2022	C102-1	Brian you requested comments on the DEIR and I focused on what I believe to the one on the most important topics that is treated in a casual and unclear way. Attached are sections of the water discussion that requires clarification: 1. If Valley of the Moon Water District is committed to serving and capable of serving the full buildout of the Specific plan that should be clearly stated rather than being buried in the Appendix of a recent report. 2. ". It is assumed the Planning Area will be served by local, on-site surface water sources, and the District will be the water service provider." a. This is the wariest and vaguest statement I have ever read in in an EIR on such an important topic. EIR cannot "assume" utility services for a development site. b. What does "on-site water source's" mean? Are these sources limited to the project area – the 200-acre campus? If so, there are no such sources. If it means the 800+ acre feet stored off campus and the water rights that provide that water than that should be made clear that VOM is committed to develop that tremendous source of water. i. To me the later should happen: 1/3rd of the stored water can be sold to the core campus customers and 1/3 can be sold to existing customers leaving 1/3 to in reserve. This would decrease the burden on the SCWA aqueduct which provides most of VOM's water currently. ii. Utility District's can float revenue anticipation bonds for the upfront costs and after that it is long term revenue and a proven long-term source of water.	This comment is noted. Please see MR-5 for clarification of the water supply analysis.

Commenter	Date	Letter	Comment	Response
Victor Gonzalez	Monday, August 29, 2022	C102-2	The conclusion from the water discussion is that the treatment plant and transfer pipes/pumps are to be abandoned and possibly those reservoirs will be drained or left to silt up. If so be clear about it. i. There is no estimate of the cost to repair the treatment plant or distribution system outside of the core campus. ii. The likelihood that that the ultimate developer will be about to take on that responsibility is not discussed and probably unrealistic d. If as the State says that the water rights go with the "land" which land do they mean: core campus or future park property. i. I do not believe that any park district is going to want the responsibility of 2 reservoirs and certainly are not in the water rights business so why can this not be made clearer? So why not be clear or describe the options for any future buyer.	This comment is noted. Please see MR-5 for clarification of the water supply analysis.
Victor Gonzalez	Monday, August 29, 2022	C102-3	3. On the "straight face" test when the district report of July, 2022 says that they can serve the campus for the next 25 years I would appreciate it if I did not get threatening letters from them about the dire need to cut back irrigation to 3 days a week and only after midnight. Everybody knows we are going to have decades of drought going forward so this statement does not pass the "straight face" test unless SCWA steps ups and backs it up…	This comment is noted, however it is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Vivien MacDonald	Thursday, September 15, 2022	C103-1	I am STRONGLY opposed to the selling of the Sonoma developmental Center to a developer. The land must be contributed to state or county Parks and protected for the public enjoyment and for a wildlife corridor. The housing should be appropriate for a rural village setting with the smallest number of houses possible. I believe there is one proposal for 450 houses. The county roads CANNOT support the amount of traffic that will be generated by more housing. I live on Bennett Valley Rd and there is already a dangerous amount of fast moving traffic and MANY accidents a year as you perfectly well know. The more traffic, the more deaths and they will be on your and the other officials that approve an outscaled plan's hands. Your traffic analysis does not even include BVR which shows it's inadequacy because cars heading into Santa Rosa will divert onto BVR to avoid the traffic build up elsewhere. The voices of the community must be heard. Thank you	This comment is noted. Please see MR-6 in regards to the adequacy of the traffic analysis.

Commenter	Date	Letter	Comment	Response
Will Shonbrun	Monday, September 12, 2022	C104-1	In its official Specific Plan/ DEIR, Permit Sonoma is proposing the building of 1000 houses, plus a hotel, plus an indeterminate number of businesses at the former Sonoma Developmental Center. This means anywhere from 2500 to 3000 people living there. All these people will be using cars. All these people will be needing goods & services. How many of these commercial businesses will also be on the SDC land or travelled to by homeowners daily? Many of these people will have pets. I'd like to know how all these fine folks and their adorable animals will safely evacuate their homes at SDC? In the 2017 wildfire in the City of Sonoma and its environs it took an hour and a half to two hours to go a few miles on Hwy. 12 and Arnold Drive (the only roads going south in and out of Sonoma Valley). That's not anecdotal, that's a plain fact. In this same Specific Plan, it boldly states that these additional 3000 folks and their cars will add 1 to 2 minutes travel time in that evacuation from a raging wildfire. When questioned in a previous meeting about its projections about fire evacuation from the new town the county is proposing on Sonoma Mountain, its planners, Permit Sonoma, cite that its numbers and conclusions are all based on statistics they've compiled, regardless of the reality we have all experienced. So how does one logically argue with this? This begs the question ... why should we, the public, accept at face value anything stated in this Specific Plan, including their data regarding environmental impacts on the wildlife corridor, the traffic studies, the re-use of many buildings and the preservation of 750 acres of open space from future development? In addition, how are our schools going to absorb another thousand or so students?	This comment is noted. Please see MR-6 in regards to the adequacy of the traffic analysis and see MR-7 in regards to the adequacy of impacts on wildlife movement or disagreement with analysis/findings.
William B Hirsch	Tuesday, August 23, 2022	C105-1	I live on Arnold Drive, just below the church. I have now read the SDC Specific Plan Draft Environmental Impact Report and am quite disturbed by many of the assumptions and conclusions included in the report. I was initially struck by how little the authors understood the impact this project will have on the community, by the cavalier statements about how this plan would "benefit local communities and residents." The authors disengenuously make claims about consulting the community to "better understand community priorities," but in fact little regard was given to the overarching concerns of most community members that this plan will adversely impact the character of the community and, more importantly, the safety of the residents due to the monumental scope of the proposed project. Although I am	This comment is noted. Please see starting on page 15 of the DEIR, Table ES-3: Summary of Impacts and starting on page 45, the Public Involvement chapter.

Commenter	Date	Letter	Comment	Response
			appalled by the thought of creating a new town at the SDC site that dwarfs Glen Ellen and rivals Sonoma itself, my chief concerns are how that new town will impact traffic, wildlife, water, and most importantly, fire evacuation plans.	
William B Hirsch	Tuesday, August 23, 2022	C105-2	The Vision and Guiding Principles are full of references to “well-planned evacuation routes” and "proactively planning for community safety in natural disasters,” but in fact they somehow conclude that pouring a couple of thousand cars onto Arnold Drive in the event of a disastrous fire will somehow not have a significant impact on emergency evacuation plans. Oddly, the analysis of traffic during a massive explosive fire emergency focuses only on daily traffic patterns and employees and residents of the new town, but ignores the significantly increased volume of traffic that would occur from all the other residents of Glen Ellen and along Arnold Drive. The DEIR also does not take into account the guests at the proposed 120 room hotel or the visitors to the new commercial and recreational space they seek to build. I take little comfort in their conclusion that only 25% of the residents will flee when they get the first alert - it seems risky and irresponsible to bet the lives of so many people on that assumption, rather than assuming that there will most likely be widespread panic if disaster strikes, especially now that we all know about what happened in Paradise and other communities.	This comment is noted. Please see MR-4 in regards to the adequacy of the wildfire evacuation analysis and MR-6 in regards to the traffic analysis.
William B Hirsch	Tuesday, August 23, 2022	C105-3	Despite these unrealistic assumptions, the authors conclude that travel time in the event of an evacuation will increase by only 1.2 minutes - actually, in my experience, even during normal traffic, sometimes it takes several minutes before I can even get onto Arnold Drive, so it seems unlikely that a huge influx of traffic will delay me, and many others, no more than a minute. It seems that the DEIR overlooks the basic fact that Arnold Drive is a two lane country road with hundreds if not thousands of residents on either side if the road with no other escape route. The authors' decision to ignore the fire danger from the west is also hard to understand, since even the lower likelihood of a fire coming from the west is based on historical records that are less and less relevant given the	This comment is noted. Please see MR-4 in regards to the adequacy of the wildfire evacuation analysis and MR-6 in regards to the traffic analysis.

Commenter	Date	Letter	Comment	Response
			impact of climate change. A fire from the west, through Jack London Park and down Sonoma Mountain, would hit the SDC with devastating force.	
William B Hirsch	Tuesday, August 23, 2022	C105-4	Finally, the issue is not how the project impacts an approved Emergency Response Plan, but how it impacts the safety of the entire community in the event of a fire emergency and evacuation. All this is to say that this DEIR should not be approved until there is a serious evidentiary based Emergency Response Plan in place and only after there has been a comprehensive and objective study of how this project will impact public safety and traffic conditions on Arnold Drive during a fire emergency. Moreover, to save time and resources, the entire process should be delayed until the State of California completes its RFP and chooses a development proposal - the DEIR and the Specific Plan should then be aligned with the State's development plan, I have other concerns with the proposed plan, and seek specific details about the preservation of open space, more realistic analysis of water resources during times of ongoing drought, and serious consideration of the overall environmental impact due to increased VMT. I am especially concerned about the questionable conclusion that a smaller, less grandiose project would not be economically feasible. That is a highly dubious assumption, which seems to be self-serving and reductive. The various alternative plans - with reduced housing, lodging and commercial space - need to be more carefully analyzed and considered in light of the constant threat of a devastating fire and the public's need for a sensible and workable evacuation plan on Arnold Drive.	This comment is noted. Please see MR-2 in regards to the need for more time/selection of a developer before finalizing the Specific Plan

Commenter	Date	Letter	Comment	Response
Andrew Harper	Wednesday, September 14, 2022	C106-1	Sonoma. Instead, please direct Permit Sonoma to: 1. Scale Back Size of Development to 450 or fewer homes and require that most of them be affordable to the majority of people who live in Sonoma Valley. Eliminate the hotel, retail and commercial space that is already provided in Glen Ellen. In the DEIR, analyze the impacts of and add enforceable measures to reduce impacts of proposed new uses in the open space including agriculture, agricultural processing, tasting rooms, farm stands, recreation, parking lots, geothermal development and sports facilities (see Table 4-3 of Specific Plan). b. Increase setbacks along Sonoma Creek, Riparian areas and the Sonoma Wildlife Corridor to at least 100 feet, instead of inadequate 50 feet as proposed.	This comment is noted. Please see MR-3 in regards to the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Andrew Harper	Wednesday, September 14, 2022	C106-2	Wildfire: Revise wildfire evacuation impacts to reflect on-the-ground experiences during recent wildfires and new county wildfire risk and hazard maps. Eliminate the shelter-place as there is no evidence it would save lives. Develop and add enforceable Conditions of Approval for Wildfire to reduce and prevent risk as there currently are none. 5. Climate Crisis: Given the County's Climate Crisis Resolution and commitments to reduce climate changing emissions (GHGS) from driving and other sources, revise the Specific Plan and DEIR with legally enforceable measures to reduce climate emissions, such as building fewer homes, reusing and demolishing fewer buildings, providing transit. 6. DEIR is Inadequate While the so-called self-mitigated Specific Plan contains many general policies, goals and conditions of approval to address environmental impacts, the DEIR falls short of CEQA requirements. The DEIR does not adequately analyze and prevent or reduce environmental impacts in most if not all of the areas studied as evidenced by few actual requirements and many vague words such as "promote" or "encourage" or "if feasible." The DEIR needs to be revised and the Conditions of Approval strengthened and moved into a legally enforceable Mitigation and Monitoring Program. On a personal note, this place is special to my family, as we have enjoyed hiking in the area and love all the nature. Please don't spoil this pristine space!	This comment is noted. Please see MR-1 in regards to the self-mitigating plan.

Commenter	Date	Letter	Comment	Response
Arthur Dawson	13-Sep-22	C107-1	I am a thirty-three year resident of Glen Ellen and the owner of a small business. My wife Jill grew up in Glen Ellen and is a teacher. Together we raised our two children here. We lost our home in the 2017 fire and have subsequently rebuilt. I currently serve as the Chair of the North Sonoma Valley Municipal Advisory Council as well as the Vice Chair of Sonoma Mountain Preservation, a local non-profit. Despite their daunting page count, I believe the Draft Environmental Impact Report (DEIR) and Specific Plan for the redevelopment of Sonoma Developmental Center (SDC) are inadequate. They fail to fully evaluate and reasonably describe the severity and extent of impacts from the proposed project. Many of the DEIR's conclusions lack factual support and many of the Specific Plan policies intended to serve as mitigation measures are deferred and not enforceable. In spite of soliciting extensive input, Permit Sonoma and the consultants have continued to push a proposal that does not have broad support in the community and ignores the well-documented preference of the public for a smaller project. This public recognizes the many significant site constraints on the development at SDC, including: the wildlife corridor, traffic, cultural resources, population, wildfire hazards and others.	This comment is noted. Please see MR-9 in regards to mitigation monitoring and performance standards. Please see MR-6, MR-7, and MR-8 in regards to the site constraints listed.
Arthur Dawson	13-Sep-22	C107-2	Before commenting on specific aspects of the DEIR, I would like to make a request and an observation: I encourage Permit Sonoma and/or the Planning Commission to revise the DEIR and Specific Plan to create a multi-phased project with a mitigation monitoring program. The Specific Plan touches briefly on this idea (SP 4-22): of completing "at least 200 housing units west of Arnold Drive before beginning construction of any housing east of Arnold Drive." No other phases are mentioned and there is no mention at all of a mitigation monitoring program. The DEIR analysis points to a lot of uncertainty in the impacts, making the proposed mitigations uncertain as well. Such uncertainty suggests the need for a robust monitoring program. Downsizing provides the most obvious mitigation. Impacts from wildfire hazards, traffic, the wildlife corridor and other issues are all improved with a smaller project. The DEIR states that "the Historic Preservation Alternative is the environmentally superior alternative." This was also the smallest project analyzed in the DEIR.	This comment is noted. Please see MR-9 in regards to mitigation monitoring and performance standards.

Commenter	Date	Letter	Comment	Response
			Given time limitations, I will restrict my comments and questions to a few specific aspects of the DEIR and Specific Plan:	

Commenter	Date	Letter	Comment	Response
Arthur Dawson	13-Sep-22	C107-3	It goes without saying that an Environmental Impact Report is site specific. A project's location is fundamental to the analysis of its impacts. A poorly framed site location potentially skews the impacts identified and analyzed in the EIR. This is as true for a site's human geography as it is for biological and other aspects. Local residents have repeatedly affirmed the Planning Area analyzed in the Draft Environmental Impact Report (DEIR) is in the middle of Glen Ellen and completely surrounded by that community. Based on our shared geography, history and common interests, Glen Ellen as a 'place' forms a cohesive part of our community identity. Local citizens have supported this identification through numerous public comments and a petition circulated during the Specific Plan process. In response to the concerns of our citizens, the North Sonoma Valley Municipal Advisory Council (NSVMAC) passed a "Declaration of Glen Ellen Boundaries" in April of this year, affirming our historic and commonly recognized boundaries, which include the Planning Area. The U.S. Census Bureau recognizes and supports this viewpoint, stating, "a commonly used community name and the geographic extent of its use by local residents is often the best identifier of the extent of a place." https://www.govinfo.gov/content/pkg/FR-2008-02-13/pdf/E8-2667.pdf The DEIR consistently misplaces the project's location as "between the unincorporated communities of Glen Ellen and Eldridge" (e.g. Section 2.1.1, page 51). Eldridge is a 'census-designated place' (CDP) but does not exist as a community according to the Census definition. Glen Ellen is also the name of a CDP, but that CDP is only a small part of the much larger Glen Ellen community, as defined by local residents. The Census Bureau defines CDPs as "statistical geographic entities" and, as stated above, leaves the question of the extent of named places to local citizens rather than to government agencies. It should "not be a name developed solely for planning or other purposes." https://www.federalregister.gov/documents/2018/11/13/2018-24571/census-designated-places-cdps-for-the-2020-census-final-criteria. 1. Why were the requests of citizens pertaining to the project's location, given in public comments, letters, a petition and a declaration by the Municipal Advisory Council, not incorporated into the Planning Area description in the Draft Environmental	This comment is noted. The DEIR uses the census designated place name Eldridge because the project falls within its boundaries. It is not within the scope of the EIR to address community names and boundaries.

Commenter	Date	Letter	Comment	Response
			Impact Report? 2. Why was the more accurate term ‘census-designated place’ not used in the EIR? Why was this term replaced with the word ‘community’? 3. Placing the project “between communities” suggests it is outside of an existing community. Did you make this assumption? If so, how did it affect the DEIR’s analysis? If not, how did you avoid this bias in your analysis? I strongly request that the project’s location be accurately and consistently described in the Final EIR as: “Surrounded by the existing community of Glen Ellen as defined by local residents.”	
Arthur Dawson	13-Sep-22	C107-4	This section states that “New development complements” the surrounding community of Glen Ellen (p. 64). In this context, ‘complement’ appears to mean “adding to something in a way that enhances or improves it.” 1. How was the ‘complementary’ nature of the new development evaluated? Please provide details about how this development will enhance or improve the existing local community.	This comment is noted, however it is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			2. What evidence (or metrics) on population, housing density, and community scale are being used to back up this statement?	
Arthur Dawson	13-Sep-22	C107-5	The assessment of wildfire hazards in the DEIR appears to have a number of errors and omissions, the most serious of which lead to unwarranted conclusions that underestimate this hazard ("Impact 3.8-7 Implementation of the Proposed Plan would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. (Less than Significant)" p. 268). Page 503: "Primary responsibility for preventing and suppressing wildland fires in Sonoma County is divided between local firefighting agencies and the State of California, Department of Forestry and Fire Protection. The SDC Planning Area is currently located in an area identified as a State Responsibility Area (SRA)." 1. The Planning Area "includes the approximately 180-acre SDC Core Campus…" (DEIR, pg. 51) According to the State Fire Marshall's map: https://osfm.fire.ca.gov/media/6822/fhszs_map49.pdf, the Core Campus is within a Local Responsibility Area (map on following page), not the State's. Is this correct? Page 503: "Under the Fire and Resources Assessment Program (FRAP) "the Planning Area…includes areas of high to very high Fire Hazard Severity Zones west of Highway 12, areas of high fire hazard severity in the hills, and areas of moderate fire hazards severity zones in the vicinity of Suttonfield Lake and Fern Lake (Figure 3.16-2). The Core Campus is not included in any of these FHSZs " While it is true that "The Core Campus is not included in any of these FHSZs," the State Fire Marshall's final map is not intended to show moderate and high FHSZs within the Local Responsibility Area. The State's draft map (next page), however does show moderate and high FHSZs covering a substantial portion of the Core Campus. While not finalized, this appears to be the best available fire risk data for the Planning Area.	This comment is noted. Please see MR-4 in regards to the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Arthur Dawson	13-Sep-22	C107-6	Goal PS-3 from the Sonoma County General Plan 2020 (DEIR, page 497), reads: “Prevent unnecessary exposure of people and property to risks of damage or injury from wildland and structural fires,” with Objective PS-3.1 stating, “Continue to use complete data on wildland and urban fire hazards.” 2. The Sonoma County General Plan How was the data gap between the SRA and the LRA within the Planning Area addressed during the DEIR’s analysis of wildfire threat? What evidence was the statement about the Core Campus (DEIR, pg 503. See above) based on? Was this conclusion reached because there is data showing low fire risk there or because lack of data was equated with low risk? 3. The Fire Constraints map (13.16-2) shows the Core Campus being almost entirely outside of any Fire Severity Hazard Zones. How would the Fire Severity Hazard data for the Core Campus, shown in the State’s draft map, change the analysis of fire hazards there? Does this change the calculus for significance under 16.1.3.1 Criterion 2: “Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.”? 4. In addition, the Sonoma County Community Wildfire Protection Plan Update 2022 states that: “Wildland fires that start in the woods and spread into adjacent areas with relatively dense housing often result in the greatest losses of property and life. Efforts to save lives and property will take precedence over losses of wildland resources, so firefighters’ response must focus on protecting populated areas rather than fighting a fire in the most efficient way.” Even if we assume there are no FHSZs within the Core Campus, this suggests that building dense housing at SDC adjacent to wildlands could result in high “losses of property and life.” Responding to such a fire might prevent firefighters from efficiently working to prevent further fire spread. How was this scenario taken into account during the DEIR analysis?	This comment is noted. Please see response to comment B3-27.

Commenter	Date	Letter	Comment	Response
Arthur Dawson	13-Sep-22	C107-7	The two scenarios chosen for evaluation accurately represent historical fire patterns. However, the goals stated on page 507 include "Provide protections at the site against the growing risk of climate change exacerbated wildfire hazards and limit the potential impacts of wildfire to development through intelligent site and building design, and open space management." If the 2017 Nunn's Fire (and other recent wildfires) is an indication, predicting future fire patterns is highly uncertain, given that many homes in moderate FHSZs (including my own), in places with no recorded history of wildfire, burned in that conflagration. 1. How would a third scenario, with a fire starting in the Planning Area near the Core Campus, change the calculus for wildfire risk and evacuation? How would this change the calculus for wildfire risk and evacuation for the neighborhood between the Core Campus and Madrone Road, and the Rancho Madrone neighborhood (south of Madrone)? 2. Wildfire ignitions are known to increase with the size of a population. How was this relationship evaluated in the calculation of fire risk in the Planning Area?	This comment is noted. Please see response to comment B3-27.

Commenter	Date	Letter	Comment	Response
Alex Krem	Sunday, September 25, 2022	C108-1	You have invited comments from the public on the future of the Sonoma Development Center, with a deadline of Monday 9/25 at 5pm. I write as a person with more than 60 years professional and personal experience with the developmentally disabled. My views follow: 1. SDC was created for the benefit of the vulnerable and should remain so. There was a time when State legislators saw their duty to protect the vulnerable. Frank Lanterman was a visionary in this regard. Now, it seems that Susan Gorin is the rare leader who understands the original purpose and true value of the Sonoma Development Center. She was joined by the SDC's Parent Hospital Association which fought to keep the center open, and by many others who are able to understand that there truly are people whose intellectual or developmental condition requires full time care. for the benefit of people with intellectual or developmental disabilities, or (at the least) retained for similar charitable purposes: housing for the homeless, for battered women, for our disabled veterans, for the mentally ill or for others in need. These vulnerable populations have been disenfranchised and ignored. The property is now at risk of being carved up by hungry property developers. I view the current potential transformation of Sonoma Development Center as a land grab that would make Christopher Columbus or Andrew Jackson proud	Thank you for your comment letter. The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Alex Krem	Sunday, September 25, 2022	C108-2	Safe places for our must vulnerable The word “institution” means a respected place that meets the needs of society. Universities are institutions. Courts of law are institutions. Somehow the meaning has changed when applied to institutions which house intellectually, developmentally or physically or mentally ill people. Such institutions are now seen differently. Robert Kennedy, who carried his own tragic understanding, described Willowbrook in New York as a "snake pit" because … it was. Smart solution to fix it? Fund it fully and staff it generously. Dumb solution? Close it and wishfully assume the residents have another place to go. We went dumb. Since the Nixon era, institutional care of the severely disabled has been steadily eliminated. Dark Joke: Q. What were California’s homeless called before Ronald Reagan was Governor? A. Patients! Ha ha. Not funny. But, sadly, true.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Alex Krem	Sunday, September 25, 2022	C108-3	And, as the joke says, the prior patients are now homeless. Estimates hold that 40% of the homeless are intellectually or developmentally disabled. People now living in the beautiful modern property development where Agnews Development Center once stood in San Jose, witness disoriented people with special needs occasionally wandering the streets looking for the home they once shared with others like them. These are the lucky ones. Those who are men are less likely to be raped each night than the women. They are alive and out of jail. A tragic fact is that jails have become warehouses for the mentally disabled and vulnerable. As tragically, a significant portion of those killed by police – perhaps as many as one-quarter -- are people with intellectual or developmental disabilities, the very people once safely housed at SDC and other similar places. They are simply unable to read body language or respond appropriately to police demands. A young man with disabilities was recently confronted by a policeman who ordered him to raise his hands. The policeman squatted in a shooter's stance. The boy imitated him. The policeman wrongly assumed that the unarmed simple-minded boy was about to shoot… and shot him. Another was at the movies and tried to sneak into another multiplex theater, ignored requests to leave and was strangled to death by the security guard in the ensuing struggle (despite the fact that the boy's caregiver was there unsuccessfully attempting to intercede). The cold, mean streets of America are no place for such innocents – mature men and women with minds of three-year old's. The current concept that	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			they can be better cared for on a one-on-one basis is simply not true – even if we could afford it, and even if there were sufficient numbers of trained caregivers. Frank Lanterman understood this and managed to get enough of his colleagues to agree to create the wonderful laws we now have that distinguish us (as do our universities) from the rest of the US. Question: Does beautiful Sonoma County really need more McMansions, more nice shopping arcades, more golf courses? Or does it need a safe place for its vulnerable? The answer seems easy. Doesn't it?	

Commenter	Date	Letter	Comment	Response
Alex Krem	Sunday, September 25, 2022	C108-4	Swept up with the noble but misguided believe that institutions were per se bad, California closed its Sonoma Development Center at the end of 2018. No longer would SDC provide shelter to the disabled. More than 300 residents were forced to leave. Food, clothing, care and comfort would be provided by the cold, cruel free market. Fat chance! Reliable estimates indicate that the mortality rate among medically fragile residents increased 500% once they left SDC. The babies were thrown out with the bathwater. The reality that many with I/DD were incapable of caring for themselves is clearly not understood by well-meaning people who have no direct experience with the severely disabled. Post hoc eugenics are now in play. How do we protect and care for our disabled? Civilizations have grappled with these issues since towns were first formed in the mists of pre-history. The intellectually, developmentally and physically disabled, the mentally ill, the dangerous, the walking wounded our many wars have produced, the old, the demented all need care. The way we care for our vulnerable, like our support for the arts, is the true measure of our civilization. California normally gets high marks.Until recently, institutional settings were identified as ideal solutions to protect the vulnerable. These institutions provided a place for birds of a feather to flock together, impressive economies of scale, the ability to concentrate experts and the opportunity to create pleasant, comfortable, safe places for our vulnerable. Families with disabled children once had the choice of caring for these vulnerable children as long as they could and then rely on friends or	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			relatives or the state to take the job – or placing these children as wards of the court in fine, well established and well-run institutions like the Sonoma Development Center. No longer! Using examples of bad apples (and there were plenty) to spoil the barrel (mostly good apples), California accepted the flawed thinking that institutions are pariah. Agnews Developmental Center serving people with developmental disabilities since1965 was closed in 2011. SDC has followed suit.	

Commenter	Date	Letter	Comment	Response
Alex Krem	Sunday, September 25, 2022	C108-5	: In 1883, the California Home for the Care and Training of Feeble Minded Children was established at White Sulphur Springs, near Vallejo. After a short stay in Alameda and then Santa Clara counties, the home moved to its current location in Eldridge in 1891. It became the Sonoma State Home in 1909, the Sonoma State Hospital in 1953and was finally rebranded as the Sonoma Developmental Center in 1986. I first visited it in 1960 and several times thereafter to meet the residents and give them presents collected from wellwishers in Alameda County. It was a nice place then. Residents were cared for by professionals. They were healthy, happy, fed, clothed, warm, safe and loved. Now all is changed. The zeitgeist no longer allows such safe places. The Lanterman Developmental Disabilities Services Act was passed in 1969. This visionary California law establishes a service system to meet the needs of developmentally and intellectually disabled people (and their families). No other state in America has such a generous and comprehensive system; one that should make all Californians proud. For our brightest, our public and private university system is the best in the world. For our disabled, too, we have ourselves proud. Assembly member Frank D. Lanterman was a visionary. Would that we had more like him in Sacramento. His Mental Retardation Services Act (AB 225) became law in 1969 and mandated services and supports for individual with intellectual or developmental disabilities. This was followed by Lanterman Developmental Disabilities Act (AB 846) initially proposed in 1973 and passed in	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			1977. The Lanterman Act declares that persons with developmental disabilities(expanded to include persons with cerebral palsy, epilepsy, autism) are protected. "The State of California accepts a responsibility for persons with developmental disabilities and an obligation to them which it must discharge." Section 4501. Susan Gorin, County Supervisor of District 1 where SDC is located, did her best to stop the Land Grab. She voted to keep SDC open. But she was out-voted. Public hearings have been few and far between. My efforts to reach appropriate state officials we ignored. I personally made numerous attempts to identify the time and location of public hearings, without success. I can provide numerous examples of my emails, most of which were not answered – except by others as frustrated as I am that this process was happening behind closed doors. 5.	

Commenter	Date	Letter	Comment	Response
Alex Krem	Sunday, September 25, 2022	C108-6	Recommendations A. Preserve this beautiful property for its intended use as a “home for life” for the vulnerable. Ensure permanent housing for those with I/DD (at a minimum), and possibly extended to include other vulnerable people who require housing and care (battered women, homeless, disabled veterans, mentally ill, etc.). B. If the Land Grabbing momentum is inexorable, then (at a minimum) reserve a significant portion of the property for its intended population, a large portion also for affordable housing in general, some for other civic uses, then retain title to the remaining property and lease it to commercial groups at a rate that provides full financial support to those with disability. As Jack London, who knew the Sonoma State Home well and knew politics even better, once wrote: “An institution like this oughtn't to be run on politics.”	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Alexandra D. Syphard	26-Sep-22	C109-1	I have been asked to review and comment on the Sonoma Developmental Center (SDC) Specific Plan and associated Draft Environmental Impact Report (DEIR). I write this as a research scientist who has spent more than two decades studying wildfire science and fire ecology, global change, and conservation biology. From this perspective, I appreciate the intention to balance human welfare and economic development with plans for preservation of historical and natural resources in the area. Nevertheless, my review of the plan and DEIR have led me to conclude that many issues relative to wildfire risk have been overlooked. The discussion of fire risk in the DEIR reflects several misconceptions concerning fire ecology, fire history, and the consequences and effectiveness of different fire mitigation strategies. The SDC property is situated within a highly fire-prone landscape, and based on evidence from the scientific literature, the Proposed Plan has high potential to significantly increase fire risk even further to new and existing structures at the SDC property as well as to the surrounding communities. A rise in human-caused ignitions due to increased population growth and expansion of human infrastructure could increase fire frequency to the point that wildfire would significantly affects public health, ecological functioning, and provision of ecological services (e.g., erosion and flood control). Unfortunately, research on recent destructive fires shows that the proposed mitigation strategies to reduce fire risk are unlikely to eliminate these significant impacts. Below please find an explanation for my conclusions summarized in three main points.	Thank you for your comment letter. The comment is noted. This is introductory text that doesn't relate to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Alexandra D. Syphard	26-Sep-22	C109-2	RELIANCE UPON FIRE HAZARD SEVERITY ZONES IS INAPPROPRIATE FOR CONCLUDING THERE IS NO FIRE RISK. The reliance upon existing Fire Hazard Severity Zones as the basis of the findings reflects a misunderstanding of the purpose of the maps, their scale of accuracy, and their potential for uncertainty at specific locations. They are also out of date. The Cal Fire maps were not designed with the intention of indicating precisely where structures are most at risk for wildfire. Instead, the objective for these maps is for use in general planning and policy guidance. For example, defensible space practices are only enforceable within high hazard zones; homeowners are required to disclose upon sale whether the property is in a in high hazard zone; and county governments can use the zones to enforce building codes or other fire safety measures. The maps were developed in 2007 using a simple set of variables, map overlays, and general assumptions to delineate the relative degree of fire hazard across the landscape – that is, areas where fire behavior is likely to become extreme given a fire occurs. In other words, the hazard areas shown on Fire Hazard Severity Zones are delineated in very broad classes and have limited precision. Given the uncertainty and coarse scale of these maps, they are not appropriate for predicting where buildings are likely to be destroyed. This is something that Cal Fire has been transparent about (Sapsis 2018), as the appropriate use of these maps has been misinterpreted elsewhere.	The comment is noted. Please see response to comment B3-25.

Commenter	Date	Letter	Comment	Response
Alexandra D. Syphard	26-Sep-22	C109-3	Part of the reason they are inappropriate to predict structure loss is that the location and behavior of fire is stochastic and unpredictable at any given time or location. Fire occurrence, behavior, spread, and eventual destruction of a house depends upon a large suite of random factors, such as where and when an ignition occurs; what the fire weather at the time of ignition is; what direction the wind is blowing; what the fuel and topography conditions are at the point of ignition; what kind of housing density and arrangement are in the surrounding area; whether any other fires are burning and the availability of firefighters, etc. This does not mean that the maps of fire hazard are useless. It means that they need to be interpreted with an understanding of what they can or cannot do; and that they are not completely accurate. This is true of fire mapping in general. For example, a map delineating probability of ignition will look completely different than a map delineating probability of a large fire (e.g., Syphard et al. 2019). Unlike the Cal Fire maps, some maps are designed with the specific objective of delineating fire risk to structures (e.g. Syphard et al. 2012), but even these maps have substantial uncertainty given the random nature of wildfire. A study comparing maps of fire risk to structures in southern California with the Cal Fire maps in the same regions found significant differences in the areas mapped as high risk, and the Cal Fire maps performed poorly compared to the other maps (Syphard et al. 2012).	The comment is noted. The DEIR adequately details baseline conditions and recognizes that the site's physical setting is prone to wildfires and details the site's wildfire history and potential for wildfire risk in the Environmental Setting starting on page 500 of the DEIR. This information is also incorporated into the Wildfire Impact Analysis.
Alexandra D. Syphard	26-Sep-22	C109-4	Another source of uncertainty in the Cal Fire maps is the assumption that hazard is likely to be governed by the same factors in the same way across the state. Science shows that the relative weighting and direction of variables that influence the locations of fire occurrence, size, and risk vary from region to region (e.g., Syphard et al. 2019). Therefore, accuracy of the Cal Fire maps is likely to vary from place to place, and there is no guarantee that the maps near the SDC are accurate, even in a general sense or for their intended purpose. There are examples of recent highly destructive fires where substantial structure loss occurred in areas not mapped as high risk in the Cal Fire maps (e.g., Coffee Park in the Tubbs Fire, Malibu City in the Woolsey Fire). This should serve as an important illustration of why the maps should not be the final word in a conclusion about fire risk to structures. An important point is that the current maps - the ones used for the DEIR - were developed in 2007. The current landscape reflects	The comment is noted. The DEIR uses the most up to date CAL FIRE FRAP mapping data which represents the best and most currently available information. See also response to comment B109-3.

Commenter	Date	Letter	Comment	Response
			very different environmental and housing conditions than those that were there 15 years ago. The factors used to create the 2007 the maps, such as fuel type, fire history, and housing, have all changed substantially. Cal Fire has been putting significant effort into updating their maps with new variables and assumptions, and these may be more appropriate for future decisions. However, those maps are not available yet - and maps developed in 2007 should not be trusted to assess the fire risk for a development to be constructed after 2022.	
Alexandra D. Syphard	26-Sep-22	C109-5	The Proposed Plan Is Likely To Increase Regional Fire Risk Although the DEIR acknowledges that the location of the proposed development is in a fire-prone part of the landscape, it does not thoroughly establish the baseline conditions that this is an area with a long history of wildfires that have already resulted in serious impacts. It was only a few years ago that structures were destroyed by wildfire at this very site and many more structures were destroyed nearby. Even without the new residents and visitors proposed for the site, the evacuation situation has apparently been extremely problematical in recent fires - and evacuation is often the time when people lose their lives to wildfires. These baseline conditions have not been adequately described in the DEIR despite the need to establish them before assessing the impact of the project. Based on data regarding repeat fires in the same locations, there is reason to believe that the area proposed for development on the SDC site is susceptible to more wildfires in the future. There is also reason to believe that the SDC development will lead to an increase in the number of wildfires in the region, not only due to the potential for climate change to exacerbate fire risk, but also because of the probable increase in human-caused ignitions. In addition, the DEIR lacks a description of how the Proposed Project will not only be impacted by fire, but also how it will impact fire in the vicinity in the future.	The comment is noted. See MR-4 regarding the adequacy of the wildfire evacuation analysis. See also response to comment B109-3. The DEIR adequately anlayzes wildfire risk through the impact thresholds provided by CEQA. The DEIR does not state that there is no wildfire risk from development under the Proposed Plan, but compliance with State, regional, and local regulations as well as proposed policies and Standard conditions of Approval would mitigate these impacts to a less than significant level. See also response to comment B3-27. See also section 5.2 on page 584 of the DEIR for a discussion of wildfire cumulative impacts.

Commenter	Date	Letter	Comment	Response
Alexandra D. Syphard	26-Sep-22	C109-6	As evidenced by the almost perfect overlap of the nearby 2017 Tubbs fire with the 1964 Hanley Fire (Keeley and Syphard 2020), fires often recur in the same locations. This is because certain locations are more fire-prone than others given their topography, location within a wind corridor, climate, and vegetation. Research on structure loss in California has demonstrated that structures located in areas with a history of recurring fire are among those that are most likely to be destroyed by fire (Syphard et al. 2012). Although the 1964 Hanley Fire occurred in nearly the same location as the 2017 Tubbs Fire, there were only about 100 structures lost, and there were no fatalities. However, in 2017, more than 5500 structures were destroyed and 22 people lost their lives. The difference is the rapid growth of human population and housing in the footprint of the fire during the interim.	The comment is noted. See response to comment C109-5.
Alexandra D. Syphard	26-Sep-22	C109-7	The placement of new housing in fire-prone locations, like the proposed Project, not only increases the exposure of those structures to wildfire, but it also increases the likelihood of more fire occurring in the surrounding region due to human-caused ignitions. As recognized in the DEIR, humans cause more than 95% of the fire ignitions in Sonoma County, and studies repeatedly show that fire frequency is highest in low-intermediate-density development patterns, particularly when surrounded by wildland vegetation (i.e., the Wildland Urban Interface) (Syphard et al. 2007, Syphard et al. 2019, Radeloff et al. 2018). This is because, as low-medium density housing development expands (the kind proposed for this development), there is an increase in the number of people and opportunities for fires to ignite; and there is still ample continuous vegetation in the surrounding landscape for wildfires to spread. Larger numbers of people also increase the odds of fires starting during severe fire-weather conditions that lead to the most catastrophic outcomes. Recent research shows that human-caused ignitions are the top-ranking reason for area burned in Santa Ana wind-driven fires; and that human-caused fires have worse outcomes than lightning-caused fires.	The comment is noted. See response to comment B3-27.

Commenter	Date	Letter	Comment	Response
Alexandra D. Syphard	26-Sep-22	C109-8	Extensive research also shows that the location of human ignitions tends to occur closest to roads and human infrastructure (Syphard et al. 2008, Molina et al. 2019, Chen and Jin 2022). Therefore, the addition of people coming into and out of the region because of the new development increases the likelihood of more fires starting near the area. The lack of public transport is a concern not only in terms of greenhouse gas emissions, but also in terms of ignitions and increasing fire risk. Given that the most likely form of transportation to and from the development is via automobiles, many more people will be on the roadways, and thus, many more opportunities will arise for fire ignitions to occur. The increased access to open space areas also would provide more opportunities for humans to unintentionally start fires. In turn, the type of low-medium density development proposed in the plan is not only where fire frequency tends to be highest, but this is also where structures are most likely to be destroyed by fire (Syphard et al. 2012, 2019, Kramer et al. 2018). Also, it is not just housing location and density that drives risk exposure; it is the overall location and pattern of development (Syphard et al. 2012). Isolated or remote clusters of development are particularly vulnerable (Syphard et al. 2013). In other words, fire risk is a multi-scale issue (Syphard and Keeley 2021), and the landscape context is critical. Developments surrounded by large amounts of continuous wildland vegetation, such as is the case here, are particularly dangerous because they are exposed to potential fire on all sides. This scenario is similar to what happened in the town of Paradise in the 2018 Camp Fire. To that end, “community separation” of urban areas seems like a risky design strategy in the proposed plan - that adds edge between development and wildland. As acknowledged in the EIR, the potential for destructive wildfires is increasing in many parts of California due to climate change. Recent research also shows that proximity to the WUI is the top explanation for why fires have become destructive in the project region (Syphard et al. 2022).	The comment is noted. See response to commebt B3-27. Further, the Proposed Plan aims to support other modes of travel not dependent on automobiles by developing Complete Streets (Goal 3-C). See also polices 3-22 to 3-26 which would also serve to help mitigate this impact. As noted in Goal 3-B, development would support greater connectivity with the surrounding region and Policyy 6-1 would construct a new fire station in the Core Campus to conitinue to reduce risk.

Commenter	Date	Letter	Comment	Response
Alexandra D. Syphard	26-Sep-22	C109-9	Policies For Mitigation Do Not Eliminate Fire Risk Although studies show that community planning and fire-safe design and landscaping can significantly enhance fire resilience, statistics from recent wildfires indicate that these actions are not guaranteed to reduce impacts to less than significant levels (Syphard and Keeley 2019, Baylis and Boomhower 2022). While having a strong and well-enforced community wildfire resilience plan is critically important for reducing fire risk to the largest extent possible, constructing a significant number of residences and businesses will add more frequent ignitions to an already highly fire-prone region. This will exacerbate fire risk in the region regardless of the mitigation policies put in place. Therefore, although the DEIR relies on policies and mitigation measures to conclude that the project would not exacerbate wildfire risk, the initiation and enforcement of these measures do not ensure that significant impacts would be sufficiently mitigated.	The comment is noted. See response to comment B3-27.
Alexandra D. Syphard	26-Sep-22	C109-10	Vegetation Management One of the measures that the DEIR relies upon to claim no significant wildfire impacts is vegetation management to reduce fire risk. Vegetation management includes mechanical fuel breaks surrounding the development, clearance of woody shrublands or understory woody trees, defensible space, and controlled burning of vegetation. There are several common misconceptions about, and overestimations of the relative effectiveness of, these measures for reducing structure loss, especially during severe fire weather when most structures are destroyed. Fuel reduction through vegetation management is often viewed as a means of stopping or slowing the spread of fire; however, treatments typically only do this under mild weather conditions. In severe fire weather, with strong winds, vegetation treatments generally do not prevent or stop fires on their own. Policy 2-31 would require construction and maintenance of a managed landscape buffer along western and eastern edges of the Core Campus to aid in fire defense, consisting of a shaded fuel break in wooded areas and grazed or mown grassland. The construction of these types of fuel breaks can be helpful for protecting communities, when done strategically, by providing safe fire-fighter access. They may also slow fire spread enough to buy time for defensive activities (Syphard et al. 2011).	The comment is noted. Vegetation management is only one such strategy of a plethora of strategies in the Proposed Plan to reduce wildfire risk. See response to comment B3-27. Policy 2-31 is adequate in mitigating wildfire risk. The Goveror's Office of Planning and Research published the Wildland-Urban Interface Planning Guide in August 2022 located here: https://opr.ca.gov/docs/20220817-Complete_WUI_Planning_Guide.pdf. Best practices identified in this document include denfisble space guidelines to maintain managed landscape buffers. Thus, Policy 2-31 is in accordance with State planning guidance.

Commenter	Date	Letter	Comment	Response
Alexandra D. Syphard	26-Sep-22	C109-11	Despite these benefits, the big issue with placing too much trust in fuel breaks and other forms of vegetation management is that most structures are destroyed because they are exposed to the millions of wind-borne embers that are generated during severe fire-weather. Although woody vegetation is the primary source of firebrands, wind-borne embers are known to fly kilometers ahead of a fire front, crossing vegetation treatments, and landing on or near structures. In fact, wind-borne embers often jump California's widest freeways. Therefore, although fuel breaks can facilitate safe firefighter access in some circumstances, they cannot prevent embers from flying past them. Furthermore, despite the role of fuel breaks for providing safe firefighter access, it is often unsafe for firefighters to be present during the worst fire-weather conditions. In a historical survey of fires and fuel breaks in southern California national forests, 22- 47% of fires stopped at fuel breaks when they encountered them (Syphard et al. 2011).	The comment is noted. See response to comment C109-10.
Alexandra D. Syphard	26-Sep-22	C109-12	The creation of defensible space around structures at the parcel level, as suggested in policies 2-34 and 2-36, is a mitigating policy proposed for the DEIR, and I concur that this should be implemented to increase community resilience. Studies show that properly created defensible space (https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/) can significantly reduce the probability of a structure being destroyed in a fire (although there is no additional benefit to extending the distance of defensible space beyond 100 feet (Syphard et al. 2014, Miner 2014)). Nevertheless, as with other vegetation treatments, defensible space should not be considered as something that can definitively prevent structure loss. Many embers directly penetrate a structure without vegetation playing a role, and many structures with well-designed defensible space have been destroyed in recent wildfires. If embers land near the property, they may ignite new fires depending upon the flammability of the surroundings. While the recommended reduction of biomass near the property lowers flame lengths and enhances firefighter safety, the fuel moisture of the vegetation in the vicinity of structures is often more important than the amount of vegetation. Evergreen shrubs and trees are often referred to as "ember catchers" because of this – because the embers may be extinguished if they land on green vegetation. This argues for retaining some green vegetation near the structure and across the landscape.	The comment is noted. See response to comment C109-10.

Commenter	Date	Letter	Comment	Response
Alexandra D. Syphard	26-Sep-22	C109-13	Research in Australia also shows significant protective effects of irrigated land (Gibbons et al. 2018). Thus, a concern I have about the vegetation management approach described in the DEIR is the proposal to remove chaparral and other woody shrublands and to allow establishment and expansion of grass. Although fire in grass has lower flame lengths, grass is the most flammable and easily ignitable vegetation type in California (Syphard and Schwartz 2021, Syphard et al. 2022). Grass is dryer for a much longer period in the year than chaparral, and when it does ignite, it is the fastest spreading vegetation type. Most firefighters who lose their lives in fires have been killed in grass fires. Therefore, while the practice of mowing or grazing grass can enhance fire safety (if mowing does not occur during severe fire weather), removing shrublands and converting them to grass is likely to make the landscape more flammable.	The comment is noted. See response to comment C109-10.
Alexandra D. Syphard	26-Sep-22	C109-14	Compliance With Fire-safe Building Codes In addition to defensible space, the DEIR relies upon class A roof retrofits and the compliance with fire-safe building codes in the construction of new buildings to mitigate fire risk. Although fire-safe building practices, such as those required in new building codes, increase the possibility that structures will survive wildfires (Syphard and Keeley 2019), they also do not guarantee prevention of structure loss. The extent to which enforcement of building codes increases the rate of structure survival in wildfires is yet unknown. For example, one study shows that building codes that enforce fire-safe construction helped to decrease rates of structure loss compared to rates of loss before the codes were enforced (Baylis and Boomhower 2021). On the other hand, an analysis of the Camp Fire, where more than 18,000 structures were destroyed, showed that homes built before and after the enforcement of building codes were destroyed at roughly equal rates (Knapp et al. 2021). Therefore, as with defensible space, many new homes with fire-resilient construction have been destroyed in recent California wildfires.	The comment is noted. Compliance with fire-safe building codes is only one such strategy of a plethora of strategies in the Proposed Plan to reduce wildfire risk. See response to comment B3-27.

Commenter	Date	Letter	Comment	Response
Alexandra D. Syphard	26-Sep-22	C109-15	Although fire-safe building practices improve the odds of survival for new homes, these codes do not protect the existing homes at the site and in the surrounding areas. The increase in population and human activity in the region at large increases the odds for more human-caused fires to start, as people will be moving in and out of the area, engaging in more activities that could generate sparks, and spending more time recreating in flammable open-space areas. Given that humans are mobile, ignitions are numerically more likely to occur anywhere in the surrounding area that experiences an increase in human presence and activity, and this exposes more existing structures to wildfires at a landscape scale. In other words, because wildfires occur over large areas, with the most destructive wildfires becoming very large (Syphard et al. 2022), impacts can be expected to occur in areas much larger than the project footprint. Furthermore, new building codes will not benefit the older structures within the project footprint, some of which have significant historical and cultural value. Policy 2-38 suggests retrofits of new roofs, siding, and windows for existing structures, but this is not a complete list of needed retrofits for fire safety, and the details of this policy are vague. Would these retrofits be applied to all existing buildings, even the historical ones? They also would not apply to buildings outside of the SDC site.	The comment is noted. See response to comment C109-14. Policy 2-38 would apply to all new construction and properly retrofit adaptive reuse buildings.
Alexandra D. Syphard	26-Sep-22	C109-16	Shelter in Place The DEIR relies in part on proposed Policy 2-54, which requires the Project proponent to build or designate an on-site shelter-in-place facility. DEIR at pages 510 and 511. This alternative of sheltering in place is a dangerous proposition, as evidenced by the Black Saturday Fires in Australia in 2009. In those fires, 173 people lost their lives, and more than half of those people had been sheltering in place. (https://www.sciencedirect.com/science/article/abs/pii/S221242091730050X). As a result of these fires, the Australians have now shifted thinking away from their stay and defend policy and now have a system in which all residents are encouraged to evacuate when weather conditions meet a “catastrophic threat” level. In short, buildings are replaceable, but human lives are not. While having a shelter-in-place facility may benefit those who are simply unable to evacuate, this should be a last resort, and the SDC project should not rely on this method as mitigation for wildfire risk related impact. Finally, I question the enforceability and endurability of many of	The comment is noted. An on-site shelter-in-place facility is only one such strategy of a plethora of strategies in the Proposed Plan to reduce wildfire risk. See response to comment B3-27. See also Impact 3.16-1 on page 511 of the DEIR. Development under the Proposed Plan would not significantly impair an adopted emergency response plan or emergency evacuation plan if evacuation is needed in the event of a wildfire. Please see MR-9 regarding mitigation monitoring/performance standards.

Commenter	Date	Letter	Comment	Response
			the proposed policies. Who is ultimately responsible for ensuring that the policies are followed? Activities such as fire-safe education, defensible space maintenance, or maintenance of buildings require ongoing, permanent attention. Who will ensure that these activities will continue after the structures have been built? Will a permanent staff position be created to ensure ongoing compliance? In short, people will move in and move out over time, but the houses and the landscape will remain.	
Alexandra D. Syphard	26-Sep-22	C109-17	Conclusion In conclusion, contrary to the assertions made in the DEIR, there is a strong likelihood that the proposed development, and its alternatives, will have significant impacts relative to wildfire. The potential for increased numbers of wildfires – and more wildfires during severe fire weather - are likely to significantly affect public health and ecological functioning. There are also likely to be increased economic costs for management and suppression, from damage/destruction to human infrastructure or agricultural lands, and from post-event hazards such as mudslides or debris flows. Sufficient homeowners insurance for wildfire, which is becoming increasingly expensive, will also be difficult to attain, particularly for the low-income residents that are supposed to be supported by this plan. Public health may be threatened not only from direct injury and mortality during a fire, but from smoke. The evacuation plans described in the DEIR only account for fires coming in two directions and spreading through other towns before reaching the project site. These analyses should also incorporate scenarios in which fires are spreading directly from the roads east of or from Sonoma Mountain west of the project site. In these cases, if the fire weather is severe and the fires are burning toward the project site, there would likely be less time for residents to evacuate, and this	The comment is noted. See MR-4 regarding the adequacy of the wildfire evacuation analysis. See also response to comment B3-23 regarding a fire from the west. See also Impact 3.16-4 on page 521 of the DEIR regarding potential secondary impacts from a wildfire.

Commenter	Date	Letter	Comment	Response
			puts human lives at risk. Another potential impact to public health and safety is that, if fire frequency increases regionally due to additional opportunities for human-caused ignitions, secondary hazards may occur post-fire, such as flooding, landslides, runoff, or debris flows. Not only may these secondary events be potentially harmful during the event, but there may be subsequent impacts to water quality.	
Alexandra D. Syphard	26-Sep-22	C109-18	While my letter is aimed at explaining the wildfire-related potential and costs associated with the project, there are also ecological impacts that may result from the increased fire risk in the area. For example, there are ecological costs associated with vegetation management and construction of fuel breaks. There are also potential ecological impacts that will result from the potential for increased fire frequency in the area. Many vegetation types in the western USA are experiencing fire-driven conversion, often from native vegetation to invasive species (Guiterman et al. 2022). Therefore, the DEIR's conclusion that the project would result in no potential loss of forest is inaccurate because it fails to account for the potential effects of increased wildfire. While the policies to reduce fire risk at the site may work to lessen some of these impacts, the proposed policies are unlikely to offset the increase in fire risk to the property and surrounding area that results from the project. Fire hazards will nevertheless likely be significant.	The comment is noted. The DEIR adequately anlayzes impacts on forest land pursuant to CEQA thresholds. As noted on page 135 of the DEIR, proposed Goal 2-A will preserve the open space surrounding the core campus in perpetuity, preventing further development in undeveloped areas and ensuring ongoing stewardship in partnership with neighboring State and regional parks and other institutions and organizations. Further, proposed policies 2-20 and 2-22 require that new development preserve existing trees to the fullest extent feasible and leave standing or downed dead trees in place for wildlife habitat whenever they do not present a hazard for fire safety or recreational users. Therefore, implementation of the Proposed Plan would preserve forest lands to the greatest extent feasible with respect to the loss of forest land or

Commenter	Date	Letter	Comment	Response
				conversion of forest land to non-forest use in the Planning Area, resulting in a less than significant impact. Please see response to comment B3-27 regarding the policies and regulations that would help mitigate wildfire risk to a less than significant level.
Alexandra D. Syphard	26-Sep-22	C109-19	Finally, in my reading of the DEIR, I was unable to understand some of the statements. Therefore, it would be helpful to have additional clarification on the following questions: 1) Why does the plan state that the Historic Preservation Alternative leads to higher fire risk? Based on its reduced population and housing, the Historic Preservation alternative appears to be more fire-safe than the proposed project or its other alternatives. 2) On what basis does the DEIR assume that low-lying creeks and riparian areas would increase fire safety? While these areas are less flammable in general, they do not appear to be close to the proposed housing. Also, when riparian areas dry out, they can burn rapidly at high intensity. 3) On what basis does the DEIR assume that the housing in low-elevation or flat areas would not be at high risk? While it is true that topographically complex areas can often have highly erratic fire behavior, many structures are lost in low-elevation, low-relief areas (Syphard et al. 2021).	The comment is noted. The Historic Preservation Alternative does not include a connector road to Highway 12 which would impair evacuation in the event of a wildfire. As noted on page 500 of the DEIR, low-lying areas near yearround creeks such as Sonoma Creek have higher moisture contents reducing fire potential. In upland areas, slopes tend to become drier and more likely to be a wildfire hazard earlier and for more of the year. The Sonoma Creek does run through the Core Campus which is where development will be located. The DEIR does not assume that the housing in low-elevation areas or flat areas would not be high risk. The DEIR does note that development under the Proposed Plan could result in potentially significant impacts from exacerbating wildfire risks. See response to comment B3-27.

Commenter	Date	Letter	Comment	Response
Alice Horowitz	26-Sep-22	C110-1	Participation in the grassroots effort to shape the future of the SDC has opened our eyes to the fact that, like an intricate spiderweb, the strength of our community lies in our interconnectivity. While frame threads connect multiple anchor points and give the spiderweb its shape, it is the radius threads, from center to frame, that hold the web together, give it strength, and make it a home. Like radius threads every heartfelt action taken to further the cause of protecting the SDC, no matter how small, has made this movement that much stronger and helped define a vision for a future Eldridge that, if realized we can all be proud of. Unfortunately given overwhelming community opposition to the inclusion of 1 000 housing units and a boutique hotel in the preferred alternative, Permit Sonoma's proposed SDC Specific Plan including these very things can hardly be seen as an action of which anyone involved in this years-long process can be proud. Furthermore, and continuing with the spiderweb metaphor, the Draft EIR appears to be wielded by Permit Sonoma as if it were a broom with which bureaucrats and planners hope to simply destroy the entire web with one swift stroke: no significant or unavoidable impacts here, let's just sweep this mess away, spiders be damned.	Thank you for the comment letter. The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Alice Horowitz	26-Sep-22	C110-2	But, like the industrious legion of determined web spinners that we are, Permit Sonoma can rest assured - community opposition to this faulty plan is not going away. We will not scamper for the exits in the face of hollow threats of the State taking over the property and cramming even more housing units down our throats. We will not be mollified by offers of counterintuitive wildfire shelter-in-place facilities. We will not be placated by the touting of low-wage hospitality jobs in a boutique hotel that those hoping to occupy the plan's paltry percentage of affordable housing units could H1 afford to book a room. Nor will we be tempted by bright shiny objects such as the grandiose growth-inducing Climate Center for which Permit Sonoma just received a timely $250,000 grant to carve out a space on the SDC core campus. Until Permit Sonoma comes up with a scaled-down plan around which we can all rally, we will continue to spin our web of community opposition, and that is something of which we are and will forever be incredibly proud. We were disheartened to learn that verbal comments submitted during the 8/24/22 special meeting of the NSVMAC, Springs MAC, and SVCAC will not be accepted as comments to which Permit Sonoma is legally obligated to respond in the Final EIR To that end, it is our understanding that submission of said comments in the form of this link to the digital recording of that meeting, will suffice as official submittal, thus requiring response from Permit Sonoma in the Final EIR: https://www.youtube.com/watch?v=LvE6dSvf9Y g&t=3s	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Alice Horowitz	26-Sep-22	C110-3	Some key points we would like planners to re-examine: 1) Apply all of the financial tools listed as part of the preferred specific plan to the Historic Preservation alternative, which has been identified as the environmentally superior alternative and most closely resembles the scale of development advocated for by the North Sonoma Valley Municipal Advisory Council and other stakeholders. 2) Fix the Figure 1.1-3 in the preferred Specific Plan document so that it shows the Eldridge Cemetery in the correct location by the curve of Orchard Road near its base, not up by the water treatment facility. 3) Require any developer/property owner, now and in the future, to ensure public access to the surrounding open space both during construction and after. 4) Re-examine the traffic analysis, particularly in view of wildfire	This comment is noted. Please see MR-4 for clarification and explanation of the traffic analysis for wildfire evacuation.

Commenter	Date	Letter	Comment	Response
			evacuation. It makes absolutely no sense that adding 2,000 cars to the property would add only a minute of extra evacuation time. Minimizing the impacts of adding that many vehicles to the roadways no matter a connection between Arnold Drive and Highway 12 is potentially a death sentence and certainly guarantees a good deal of post-traumatic stress, for the people who will be inside those cars as they attempt to flee disaster.	
Alice Horowitz	26-Sep-22	C110-4	We agree with and support the comments submitted by the Sonoma Land Trust (SLT). We also agree with and support the comments identified in the North Sonoma Valley MAC comment letter. In addition to the issues identified in those two letters, we agree with comments identified by Sonoma Mountain Preservation (SMP), the Sonoma County Transportation & Land-Use Coalition (SCTLC) the State Alliance for Firesafe Road Regulations (SAFRR), the Bennet Valley Community Association (BVCA), Vicki Hill (Environmental Land-Use Planner), and Teri Shore (Environmentalist) among others, all of which have been submitted to Permit Sonoma and posted on eldridgeforall.org: https://eldridgeforall.orn:/ p-%26-deir-talking-points In closing, as our logo proclaims, the Glen Ellen Forum SDC Committee is collaborative, determined, and hopeful. Time and time again, we have shown up, we have participated, and we have persisted in our efforts to educate and mobilize our community for the creation of an acceptable SDC Specific Plan and to act in good faith for the greater good. We will continue to do so, and we urge Permit Sonoma to commit to doing the same.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Arthur Dawson,	Thursday, September 15, 2022	C111-1	Note that the MAC letter included with the email below was endorsed by the Sonoma City Council, Sonoma Land Trust, Valley of the Moon Association, Sonoma Valley Citizens Advisory Commission, Sonoma Mountain Preservation, Glen Ellen Historical Society, Painter Preservation, the Oakmont Village Association as well as Steve Akre, Fire Chief, Sonoma Valley District.	Thank you for the comment letter. The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	Thursday, September 15, 2022	C111-2	As Chair of the North Sonoma Valley MAC I'm attaching the letter and appendix that was approved by our council and sent to the Supervisors in January pertaining to SDC. This letter details the community's vision for SDC, which has remained quite consistent since the first large community meeting in 2015 and represents years of thinking and work by hundreds of people. Its broad support has been demonstrated by a petition circulated early in the year, which at the time (January) had been signed by a thousand people, the vast majority in Sonoma Valley and elsewhere in the County. It now has over 2500 signatures. The MAC is intended to serve as our community's voice and this is a strong and clear expression of that voice. Thank you for taking this letter under serious consideration as you deliberate the Sonoma Developmental Center Specific Plan and EIR.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Arthur Dawson,	Thursday, September 15, 2022	C111-3	In view of your meeting on the Sonoma Developmental Center Specific Plan draft EIR tomorrow, I would like to share a link to the comment letter being drafted by the North Sonoma Valley Municipal Advisory Council in response to this document. This is a draft and will be finalized at our next meeting on September 21: https://sonomacounty.ca.gov/Main%20County%20Site/Administrative%20Support%20%26%20Fiscal%20Services/BoS/BCCs/Documents/NSV%20Municipal%20Advisory%20Council/September%202022 /NSV-MAC-DEIR-Comment-Letter-Draft4-09-12-22.pdf Given the timely nature of this letter we wanted to make sure you could review our draft. Once finalized I will submit our letter to Permit Sonoma and include the Planning Commission as a recipient.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	Friday, September 23, 2022	C112-1	On behalf of the North Sonoma Valley Municipal Advisory Council (NSV MAC), I respectfully submit the attached comments pertaining to the Public Review Draft of the Sonoma Developmental Center (SDC) Specific Plan (Proposed Plan) and the SDC Specific Plan Draft Environmental Report (DEIR), issued in August 2022. As the NSV MAC serves as the voice of the community within county government, we intend this letter to be reflective of community input. However, it is not intended to be exhaustive or to take the place of individual comments from community members and other interested parties. As you will read in the attachments, we do not believe this DEIR adequately and completely evaluates the environmental and safety impacts of the Proposed Plan. Furthermore, we remain committed to the Sonoma Valley community's consistent input calling for both affordable housing and a lower density plan alternative. A plan closer to the Historic Preservation Alternative –determined as "environmentally preferred" in the DEIR analysis – successfully meets the project objectives and the established Guiding Principles for this project and should be given strong consideration. Thank you for your attention to the issues raised. We look forward to your response	This comment is noted. Please see MR-4 for clarification and explanation of the traffic analysis for wildfire evacuation, and MR-8 for explanation of why the historic preservation alternative does not meet the project objectives.
Arthur Dawson,	Septembe r 21, 2022	C113-1	On behalf of the North Sonoma Valley Municipal Advisory Council (NSV MAC), we respectfully submit the following comments pertaining to the Public Review Draft of the Sonoma Developmental Center (SDC) Specific Plan (Proposed Plan) and the SDC Specific Plan Draft Environmental Report (DEIR), as issued by Sonoma County in August 2022. While this letter is reflective of community input, it is not intended to be exhaustive or to take the place of individual comments from community members and other interested parties. Given the tremendous amount of input from Sonoma Valley residents and business owners concerned about the project size and its impacts, as well as this MAC's own request and the Board of Supervisors' direction to scale back the Specific Plan, it is surprising that the proposed Specific Plan still contains over 1,000 homes and approximately 940 jobs. It appears that the DEIR fails to disclose the full extent of impacts that will result throughout Sonoma Valley from this large-scale development outside of an urban growth area, as is further detailed in this letter. The Specific Plan represents one of the largest, if not THE largest,	This comment is noted. Please see MR-3 for clarification of the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
			developments in the history of Sonoma Valley and is in conflict with County General Plan policies calling for city-centered growth. Furthermore, the proposed plan is inconsistent with its own guiding principles calling for a balance between redevelopment and historic preservation; the plan will destroy the very qualities that make the historic SDC site unique and its implementation will have far-reaching, significant adverse impacts on Sonoma Valley residents. With this in mind, we provide the following comments, by general category. Please explain the following inconsistencies in the DEIR:	
Arthur Dawson,	September 21, 2022	C113-2	PROJECT SCALE & HOUSING Increasing the supply of affordable and workforce housing is broadly supported by the Sonoma Valley Community, but not at any cost to the environment and the health and safety of Sonoma Valley residents. Our understanding is that the DEIR should help the community better understand the scale of the environmental impacts of the Specific Plan, how they will be mitigated, what options were considered, and why these options were dismissed. We do not believe the DEIR has yet met these objectives. For example, the DEIR identifies the smaller-scale Historic Preservation Alternative (Historic Alternative) as the environmentally superior alternative. It is not ruled out in the DEIR because it meets the required objectives, but it is dismissed from full consideration. Why?	This comment is noted. Please see MR-8 for an explanation of how the historic preservation alternative was considered.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	September 21, 2022	C113-3	If this alternative is environmentally superior and substantially reduces impacts of the proposed plan; if it more effectively meets some of the fundamental project objectives as outlined in the Specific Plan guiding principles, including Preservation of Historic Resources and Balancing Redevelopment with Land Use (DEIR pages 5 and 6); if it provides 450 new homes (still the largest project in Sonoma Valley); and meets the state's statutory objectives regarding the disposition of the SDC site, why is this alternative (or a version of it that addresses some of the issues identified) not being put forward as the proposed plan? "Overall, the Historic Preservation Alternative is the environmentally superior alternative, although significant impacts of the Proposed Plan and the two alternatives are largely comparable, and the Historic Preservation Alternative would be less superior in some environmental features such as energy use, biological resources, and wildfire risks. Additionally, this alternative would not support key project objectives related to increased housing supply, varied housing opportunities, community vibrancy, and long-term fiscal stability to the same degree as the Proposed Plan." (DEIR page 14)	This comment is noted. Please see MR-8 for an explanation of how the historic preservation alternative was considered.
Arthur Dawson,	September 21, 2022	C113-4	We do not find adequate data in the DEIR that supports the "less superior" distinctions above, or any reason why these couldn't be readily addressed. There is no requirement that maximum housing be developed, especially if it means significant impacts in several issue areas. In terms of biological resources, the analyses on page 563 of the DEIR indicates that the Historic Preservation Alternative would be "similar or slightly better" than the Specific Plan. In terms of energy use, the older historic buildings are presumed to be less energy efficient, but it's not clear how the net calculation was made since "energy use" is also cited in conjunction with construction and demolition GHGs, which would be significantly higher in the Specific Plan. The increased wildfire risk with this lower density plan is presumably solely because of the arbitrary exclusion of the Hwy 12 connector road in this alternative. How would the proposed Specific Plan fare in comparison to the Historic Preservation alternative if it also excluded the Hwy 12 connector road, or if both included the Hwy 12 connection? Scale is the most obvious way to mitigate impact. While the types of impacts of the Historic and proposed Specific Plans may be the same, they are not equal in magnitude.	This comment is noted. Please see MR-8 for an explanation of how the historic preservation alternative was considered.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	September 21, 2022	C113-5	FEASIBILITY If the Historic Preservation alternative was dismissed because of an assumption that feasibility will require higher development densities, how is a feasibility analysis considered in the DEIR and shouldn't this be more transparently addressed in the Proposed Plan? Since it's unclear what "economic feasibility" means for the SDC campus at this time, shouldn't there be an economic feasibility analysis as part of this evaluation process? The market demand study that was prepared for the alternatives report does not fill this need (and is inconsistent with the Specific Plan in any case in that it reports little demand for non-residential uses).	This comment is noted. Please see MR-8 for an explanation of how the historic preservation alternative was considered. Economic feasibility is addressed within the Specific Plan and is not an analysis area for an Environmental Impact Report; please see MR-3 for an explanation of the analysis and level of detail for a programmatic EIR.
Arthur Dawson,	September 21, 2022	C113-6	MITIGATION MONITORING / PERFORMANCE STANDARDS It's of concern to the community that most of the policies in the proposed Specific Plan are not enforceable, generally because of the use of "should" in the descriptive language rather than "shall" in many instances. Terms such as "if feasible" and "assumed" are also used repeatedly and the DEIR analysis acknowledges considerable uncertainly in the impacts and thus in the mitigation measures as well. Will the policies and conditions of the approval of the Specific Plan be put into a mitigation monitoring plan or program to ensure mitigation compliance for the project? Given the scale of the proposed Specific Plan and absence of any phasing requirements, it's critical that performance standards be developed and tied into the phasing of the project, especially since the DEIR calls for future studies and mitigations that are not yet identified. Will performance standards be put into place, potentially to consider impacts that might include Traffic, Wildlife Function, Resources, Noise?	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Arthur Dawson,	September 21, 2022	C113-7	HOUSING NUMBERS The Specific Plan states that it will result in 1,000 units and the DEIR uses that assumption, but as noted in Specific Plan Table 4.2 more units are suggested, even without likely density bonuses. That means that most of the environmental impacts in the DEIR are underestimated for the number of units permitted. If the analysis is limited to 1,000 units, why is the possibility of 1,100 or more of units included in the Specific Plan?	This comment is noted. Please see MR-3 for an explanation of the analysis and level of detail for a programmatic EIR, particularly for how a programmatic EIR does not assess project-specific impacts of potential future projects under the proposed Plan, all of which are required to comply with CEQA as applicable.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	September 21, 2022	C113-8	CULTURAL RESOURCES / HISTORIC PRESERVATION Isn't it true that the Historic Alternative meets the fundamental project objectives listed on pages 5-6 of the DEIR? Isn't it true that the proposed Specific Plan is inconsistent with the fundamental project objective calling for balancing development with historic resource conservation? Regarding policies and impacts on cultural resources, isn't it true that the DEIR does not specifically address impacts on Contributing Resources. Please amend the EIR to include such impacts in its own section, not embedded in the discussion of impacts on the district as a whole or explain why not. Isn't it violative of CEQA for the EIR to assume that the project will be approved as proposed, without mitigations and alternatives to reduce impacts on historic resources having been determined feasible or infeasible? Wouldn't the loss of eligibility for the National Register of Historic Places remove protections for contributory resources? What environmental impacts would attend such losses of eligibility? What mitigations could avoid that loss? Please consider and analyze the benefits of the pending efforts to list SDC in the National Register.	The comment is noted. Please see MR-8 for a discussion of why the historic preservation alternative does not meet project objectives, and MR-3 for an explanation of the level of detail and programmatic nature of the Draft EIR. Impacts to contributing historic resources are addressed in pages 294-296 of the Draft EIR. Per State CEQA Guidelines Section 15126.6(a), (c) & (f), the Lead Agency is not obligated to select the Environmentally Superior Alternative for implementation if it would not accomplish the basic project objectives and/or is infeasible. State law stipulates that the SDC Specific Plan prioritize housing at the site per Government Code Section 14670.10.5.
Arthur Dawson,	September 21, 2022	C113-9	What are the performance-based standards to determine which buildings can feasibly be restored or adaptively reused? How is demolition of any building to be decided? What type of analysis and performance-based standards will be applied to permit demolition under the Specific Plan? Please amend the Specific Plan so that demolition of any qualified historic resource will require a Plan amendment based on codified criteria. If not, why not? Isn't protection of National Register eligibility required by CEQA if feasible? Regarding the Sonoma House and the main building, Specific Plan Policy 2-47 uses terms like "consider" and "if feasible." How will feasibility be determined? In light of significant impacts, why are mitigation measures not identified or analyzed? Doesn't CEQA disallow deferral of analysis and mitigation of the Specific Plan's foreseeable impacts on historic resources? Isn't it true that projects consistent with the Specific Plan, including those involving demolition of currently listed or eligible historic resources will not be subject to discretionary CEQA review? If not, under what circumstances would CEQA review be required?	The comment is noted. Please see MR-8 for an explanation of historic resource analysis and MR-3 for an explanation of further CEQA review that would be required following this Draft EIR.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	September 21, 2022	C113-10	UTILITY INFRASTRUCTURE The Valley of the Moon Water District (VOMWD) consistently contacts customers requesting a 20% reduction in water use, further stating that penalties will be assessed if the reduction is not met. Yet, for the purposes of the DEIR and the water assessment section, the DEIR and VOMWD assert they have the resources to serve the SDC project. What assumptions underpin this assertion? There are contradictions that should be addressed in the DEIR. For example: VOMWD's own estimates for future water deliveries and shortages are based upon single dry years, not the multiple dry year shortfalls we are already experiencing. Additionally, the Sonoma Valley Groundwater Sustainability Agency has made increasing projections for the need for groundwater re-charge throughout the Sonoma Valley, but the VOMWD has not estimated its own required contribution to groundwater re-charge and has maintained an increased groundwater "draw down" in the SDC water assessment report. What are the groundwater re-charge assumptions for the SDC site and are they included in the DEIR?	This comment is noted. Please see MR-5 for clarification of the water supply analysis.
Arthur Dawson,	September 21, 2022	C113-11	Additional areas of the water assessment report that require clarification in the DEIR: The report assumes the planning area will be served by local, on-site surface water sources. However, for Fern and Suttonfield Lakes, the treatment plant and the pipes/infrastructure are not a part of the core campus development. For the purposes of the DEIR and water assessment, those resources do not exist. - What, specifically are the surface water sources the DEIR is stating are available for use? - What becomes of those "non-available" water sources (the lakes, treatment plant)? - Who is responsible for the evaluation of the dams that contain all of that water? - Are the lakes going to be drained, filled in, maintained? The riparian rights contradict the findings of both the Sonoma Ecology Center and the Sonoma Valley Water Sustainability study that urges an elimination of riparian water rights in order to provide groundwater recharge to diminishing Sonoma Valley aquifers. Who maintains the riparian water rights? The VOMWD, the state, the developer? The SDC water treatment plan has not been licensed for operation in many years. The DEIR states it will be evaluated for re-use by the water system operator. - Who will pay for the evaluation? If the plant requires re-construction, or is not	This comment is noted. Please see MR-5 for clarification of the water supply analysis.

Commenter	Date	Letter	Comment	Response
			salvageable, who pays for these updates? - Where, on the Specific Plan, will it be located?	
Arthur Dawson,	September 21, 2022	C113-12	ENERGY MICROGRIDS: The DEIR language is vague in the section that pertains to an electrical microgrid. By definition, a microgrid is a locally controlled and maintained electrical grid with defined electrical boundaries. It is able to operate in both a grid-connected and “island” mode. A stand-alone or isolated microgrid only operates off-the-grid and cannot be connected to a wider electric power system. - Which type of system is being proposed, grid-connected or stand alone? - Will the system have localized generating capacity? - Where is the dedicated space on the Specific Plan for any proposed generation? - Who pays for it and maintains it? - Where is the electrical use projection data for microgrid design?	The comment is noted. The projected energy use used for Draft EIR analysis is an estimate of future operations (e.g. land use and transportation) outlined in the Specific Plan. As the Specific Plan is a programmatic land use plan, it does not have specific information about how/where future development would interface with the microgrid; these decisions would be made later as the development progresses. Moreover, actual electrical usage is highly dependent on a multitude of factors including individual behavior and environmental conditions. In the absence of highly specific electrical usage information, CalEEMod, a statewide land use emissions model designed to provide a uniform platform to quantify potential air emissions, was used to analyze the impact of Project operations. As a conservative estimate, a microgrid has potential to reduce GHG or reliance on electricity providers but it is very difficult to say to what extent. Please see MR-3 for more information about the level of detail contained in a

Commenter	Date	Letter	Comment	Response
				programmatic EIR. Please also see the Specific Plan policies on page 6-11 of the Public Draft Specific Plan for more details about the type of microgrid envisioned for SDC.
Arthur Dawson,	September 21, 2022	C113-13	VEHICLE MILES TRAVELED (VMT) The Specific Plan indicates that there will be no free parking on campus. Has the DEIR studied the VMT and traffic safety impacts of this policy with respect to visitor vehicle trips to find parking off-site; the impacts on the narrow streets in the adjacent neighborhoods, particularly the Glen Ellen streets south of the SDC (Martin, Lorna, Burbank, Sonoma Glen Circle, Marty and Madrone) where parking is free; or the public safety or emergency evacuation impacts of this policy? Has the potential limit on public access been evaluated? In addition, was there analysis done on the safety implications of increased VMT on the routes used by cyclists and commuters to travel from Glen Ellen to other county locations (Santa Rosa and Rohnert Park), specifically Warm Springs and Bennett Valley Roads. These narrow, winding roads are commonly traveled at relatively high speeds; their road shoulders are significantly deteriorated (no shoulder at all for significant portions). The safety implications on these roads due to the increased VMT in the Proposed Plan must be considered in the DEIR.	The presence of priced parking near an area with free parking can cause motorists to search for spaces on those free streets (commonly known as "spillover"). However, there is a limited distance motorists are willing to walk from their vehicles. In the case of SDC, on-street parking pricing would only be considered in non-residential areas, primarily in the "core campus". The core campus is located roughly one-third mile from the nearest residential uses in Eldridge and almost two-thirds mile to Glen Ellen, walking distances that would be too lengthy and inconvenient for most motorists. Thus, the potential for spillover parking is minimal. The presence of free parking often leads to many motorists seeking spaces in the same highly- desired locations, resulting in vehicles circling the area. This can have the unintended effect of marginally increasing VMT and creating potential safety issues as drivers spend a greater amount of time searching for parking spaces. Additionally, VMT is a measure of the amount of automobile travel

Commenter	Date	Letter	Comment	Response
				occurring in a region, as measured in miles. Consistent with State requirements, the VMT effects of the Proposed Specific Plan's land uses and Highway 12 road connection were assessed using performance metrics including VMT per capita, VMT per employee, total VMT per service population, and total regional VMT. VMT is a measure of distance and does not directly affect bicyclists, though increased use of bicycling as a travel mode does reduce automobile VMT. With respect to broader bicycling conditions on Warm Springs Road and Bennett Valley Road, the 2010 Sonoma County Bicycle and Pedestrian Master Plan identifies a proposed Class II (bike lanes) facility along the length of Warm Springs Road, a proposed Class III (bike route) facility on Bennett Valley Road between Warm Springs Road and Grange Road, and a proposed Class II (bike lanes) facility on Bennett Valley Road between Grange Road and the City of Santa Rosa. With respect to bicycle commuting to and from Santa Rosa, the Bike Plan identifies the future Central Sonoma Valley Trail along the Highway 12 corridor, to which the proposed Specific Plan would include connections. The Central Sonoma Valley Trail bicycling route is anticipated to be the primary regional connection for commute and recreational travel, and will establish a much more comfortable route for bicyclists than Warm Springs and Bennett Valley Roads since it would be off-street, flatter, and straighter. Please see MR-6 for more explanation of VMT analysis.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	September 21, 2022	C113-14	There is no evidence at this juncture that anyone living on the SDC site will be employed at the site so this cannot be assumed. Has the DEIR considered this in one of its VMT scenarios? On a related note, while it's noted that institutional uses associated with the former SDC have been removed from the SCTM19 model's existing land use database (DEIR page 426), historical VMT numbers are still cited in the Historical Use section (DEIR 427-428) and implied to be relevant. VMT under the Proposed Plan will not be directly comparable to the historic SDC site in terms of either resident (non-driving) or single-employer shift work VMT per capita; any assumptions made pertaining to historical VMT need to be made clearer in the DEIR analysis and narrative. Finally, the DEIR cites a VMT increase of ~631, with the existing VMT at 59,654, and the Proposed Plan VMT at 60,285 in 2040 (DEIR, page 183). How can this be accurate based on the anticipated population and the VMT summaries cited throughout the DEIR? The DEIR's Project trip generation estimate was developed using the SCTM19 travel demand forecasting model maintained by the Sonoma County Transportation Authority (SCTA). The specific trip generation factors are not included in the DEIR. Thus, it is impossible to evaluate the reasonableness of either those factors or the resulting trip generation numbers.	The VMT analysis was conducted using the Sonoma County Travel Model 2019 (SCTM19) operated and maintained by the Sonoma County Transportation Authority (SCTA). The model includes extremely sophisticated algorithms to predict traveler behavior, and has been calibrated against real-world observations both through comparison of traffic volume projections versus observations, as well as aggregated "big data" obtained through mobile devices that provides real-world data on how residents, employees, and visitors travel within and beyond Sonoma County. As with all travel demand models, SCTM19 considers the proximity of housing, jobs, and services to one another, and accordingly does assume that some persons will both live and work within the proposed Specific Plan boundaries or adjacent areas. Such travel synergies are expected in areas with a mix of housing and employment, and attempting to override these assumptions in the VMT analysis would not only be speculative, but would substantially overstate potential impacts and mischaracterize the proposed Specific Plan's design, land use mix, and policies. The applied VMT analysis is a superior approach that reflects application of the best-available tools and information. Please see MR-6 for additional information about VMT analysis that was performed as part of this Draft EIR analysis. Lastly, The VMT analysis contained in the transportation section of the DEIR relies on no comparisons to the historical VMT generated at the former SDC facility. The VMT analysis treats all land uses proposed by the Specific Plan as

Commenter	Date	Letter	Comment	Response
				new. Any references to historical traffic characteristics contained in the DEIR are provided solely for informational purposes.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	September 21, 2022	C113-15	Can the DEIR appropriately consider the completion of the Sonoma Valley Trail multi-use path, connecting the SDC site with Santa Rosa, as part of the SDC site VMT mitigation if this is a Caltrans controlled project? Why is the downscaling or elimination of the hotel not considered part of VMT mitigation? The hotel is no identified as a priority in the state legislation pertaining to the SDC site and will contribute significantly to VMT. In Table ES-2, the DEIR determines that VMT reduction measures cannot be guaranteed, and they may be insufficient to reduce VMT per capita below the applicable significance threshold or fully offset the effect of induced VMT. "There are no other feasible mitigation measures available." Why is this an allowed conclusion when there are certainly mitigation measures available that might justifiably be considered, even if reductions might not reduce impacts to levels that are less than significant? Examples of mitigation include a reduced scale alternative or elimination (or reduction of size) of the hotel or other commercial development.	The comment is noted. The DEIR includes no mitigation measures related to VMT impacts, so does not rely on completion of the Sonoma Valley Trail as part of a VMT mitigation strategy. VMT reductions intended to reduce the Specific Plan's VMT impacts are tied to Specific Plan Policy 3-41, which requires all development allowed by the proposed Specific Plan to implement TDM strategies. This requirement will be enforced through standard conditions of approval. VMT reductions intended to reduce impacts will also be achieve through implementation of Specific Plan Policy 3-42, which requires establishment of a Transportation Management Association (TMA) that will develop and oversee trip reduction strategies for uses within the proposed Specific Plan. Neither of these approaches require or rely upon implementation of the Sonoma Valley Trail. The hotel use identified in the proposed Specific Plan would contribute to the project's total VMT per service population as well as employee-related VMT per worker. Both of these VMT performance metrics would achieve the applied significance thresholds. The proposed Specific Plan would not meet VMT significance thresholds for residential uses; however, this performance metric is unaffected by the hotel use. Because downscaling or eliminating the hotel would have no beneficial effect in reducing residential VMT per capita, it was not considered as a mitigation strategy. VMT reductions intended to reduce the Specific Plan's VMT impacts are incorporated in Specific Plan Policies 3-41 and 3-42, which

Commenter	Date	Letter	Comment	Response
				require development to implement TDM strategies, and the establishment of a TMA to develop and oversee trip reduction strategies. Policy 3-41 calls for development to reduce its daily trip generation by 15 percent below standard ITE rates, allowing individual developments flexibility in determining how those reductions are achieved. This strategy allows developments and the TMA to effectively design trip reduction strategies that are tailored to the characteristics of each project as well as the synergies among individual uses that will evolve over time. This approach allows a wide range of VMT reduction strategies to be implemented as long as their effectiveness can be supported by evidence, and the DEIR's conclusion that there are no other feasible VMT mitigation measures must be considered in the context that the applied strategy already allows any viable measure(s) to be applied. Regarding the VMT reduction mitigations suggested by the commenter, please see MR-6 which addresses the viability of reducing scale as a VMT mitigation strategy, and the response above addressing removal or elimination of the hotel as a VMT reduction strategy (commercial development is similar to the hotel, in that reducing scale or uses would not improve the impacts related to residential VMT per capita and induced VMT that are identified in the DEIR).
Arthur Dawson,	September 21, 2022	C113-16	WILDLIFE CORRIDOR There is no analysis of the impacts on the wildlife corridor through the campus and no acknowledgement of the fact that animals currently use the campus and will be impacted. Also, there is no assessment of the impacts of fencing on wildlife. (Only wooden fences are prohibited on the campus.) The fencing policies appear	The comment is noted. Please see MR-7 for more detail on wildlife movement within the Core Campus.

Commenter	Date	Letter	Comment	Response
			to apply only to the open space and human/wildlife interface areas, not the campus.	
Arthur Dawson,	September 21, 2022	C113-17	LAND USE IMPACTS The proposed Specific Plan is both inconsistent with several project objectives, as noted above, and inconsistent with existing County General Plan policies encouraging growth in transit-oriented, urban areas. It is also inconsistent with General Plan policies calling for an overall reduction in VMT since it introduces urban uses in a non-urban area; this will necessarily increase vehicle trips to reach services in either Sonoma or Santa Rosa.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Arthur Dawson,	September 21, 2022	C113-18	COMMERCIAL SPACE / JOB CREATION There appears to be no policy saying that the hotel can't be built first. Is there anything in the proposed Specific Plan requiring the developer to build housing first? Why is such a large-scale hotel being proposed when it's not a defined project objective, and when VMT is listed as a challenge?	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Arthur Dawson,	September 21, 2022	C113-19	POPULATION and GROWTH ASSUMPTIONS The DEIR analysis of growth-inducing impacts is based on a comparison of the project size to county-wide population and employment numbers, which is an unrealistic and invalid comparison. As a distinct planning unit, Sonoma Valley should be the region of comparison. Given the relatively small population of Sonoma Valley, the proposed plan represents a substantial growth-inducing project. Alone, it will double (triple?) the community housing numbers and draw population and employees from other parts of the county as well as from outside the county. Given its location away from necessary goods and services, it will generate pressure for additional urban land uses on surrounding and nearby unincorporated lands. This urban sprawl growth scenario is in direct conflict with climate change policies to encourage compact, in-city growth.	The comment is noted. As described in pages 579-584 of the DEIR, the Proposed Plan is consistent with the overarching regional need for both market rate and affordable housing in the Sonoma Valley and throughout the Bay Area, as well as with historic residential and employment uses of the site: SDC has facilities that housed up to 3,700 clients, and SDC was one of the largest employers in the County and the largest in Sonoma Valley. Further, the new development would be entirely concentrated within the existing urbanized footprint of the historic campus, with all surrounding open space acreage preserved as open space.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	September 21, 2022	C113-20	MPACTS ON NEIGHBORHOODS SOUTH OF SDC The Glen Ellen neighborhoods adjacent to SDC will take the brunt of both the construction and operation impacts – not to mention the ongoing impacts of traffic and safety related to parking if there is no free parking on the SDC campus. The over 200 apartments and small lot single family homes directly south of the SDC property will be subject to the aggregate effects of noise, traffic, air emissions, and visual effects. These residents' daily routines will be disrupted during a very long-term construction period. This area is home to many low to moderate-income families who have arguably not had an adequate voice in this planning process. Has the DEIR adequately studied the effect of the Specific Plan on this neighborhood, to include the narrow Glen Ellen streets from Martin Street south to Madrone Road and along Madrone Road?	The comment is noted. Please see MR-3 for an explanation of the scope of a programmatic EIR, and MR-6 for an explanation of traffic and VMT analysis.
Arthur Dawson,	September 21, 2022	C113-21	CUMULATIVE EFFECTS There are several foreseeable projects within 15 miles of the SDC site that will contribute to cumulative growth and related impacts, including but not limited to: the Graywood Ranch Hotel, Elnoka Village Senior Citizens housing project, Milestone Siesta Senior Citizens housing project, Donald Street housing development project, Verano hotel and housing project, Hanna Boys Center residential development program, and the proposed ~70% membership license increase at the Sonoma Golf Club. In the Transportation Methodology section (page 432), the DEIR states," The model's 2040 cumulative year includes growth that is consistent with adopted general plans within the County and with regional projections contained in Plan Bay Area 2040." Were the above-mentioned projects, and any additional foreseeable projects, considered either in the general plans or by Plan Bay Area 2040? Is Permit Sonoma able to share what was included in the model?	The comment is noted. The potential impacts to vehicular travel that may occur with the proposed Specific Plan are assessed using a VMT performance metric, which considers the amount of vehicular travel (measured in miles) that would be generated on a per-person basis, rather than a LOS metric which measures the amount of traffic congestion and delays occurring on a given roadway or intersection. VMT is assessed using the Sonoma County Transportation Authority's SCTM19 travel demand model. While regional travel and land use characteristics play a key role in how the model estimates VMT, the influences of individual development projects such as those listed by the commenter would not measurably influence the number of miles that future residents and employees within the proposed Specific Plan area drive on an average day. Stated another way, while the projects would be expected to increase traffic volumes, they would not individually or collectively result in substantial changes to existing or cumulative travel patterns with respect to

Commenter	Date	Letter	Comment	Response
				the number of daily miles that residents or employees typically drive. The DEIR transportation analysis is consistent with guidance provided by OPR on how to assess potential VMT impacts, and examines the per-person VMT levels that the proposed Specific Plan would result in as compared to existing levels as well as levels forecast to be present under cumulative conditions. In summary, while the approved and proposed development identified by the commenter would be expected to increase traffic volumes in the Sonoma Valley area (and potentially have an effect on congestion levels), they would have no discernible effect on the proposed Specific Plan's VMT analysis as presented in the DEIR.
Arthur Dawson,	September 21, 2022	C113-22	FIRE / EMERGENCY PREPAREDNESS The DEIR did not consider a fire scenario in which the fire comes in from the west, down from Sonoma Mountain. "Historically, a fire approaching from the west may be less likely, and therefore did not warrant further specific analysis" (DEIR page 515). We know that fires are now burning in ways that are outside of historical precedent due to climate change and related impacts, and that this area has not burned in recent history. With this in mind, we believe a west-approaching fire scenario west must be considered. Did the DEIR consider an evacuation scenario where broadband and/or cell service is out, or is unreliable, affecting receipt of alerts? This occurred in both the 2017 and 2020 fires – land lines and cell service were knocked out or overloaded and people had limited information to guide evacuation. In Section 16.1.3.4 (page 511), the DEIR states that to further mitigate potential impacts, Policy 2-54 requires that the project sponsor proactively plan for emergency wildfire safety by building or designating an on-site shelter-in-place facility, to be open to both SDC residents and the general public. In our community conversations to date, Sonoma County fire and emergency experts have not condoned or recommended this as appropriate for the SDC site, so we question this as an appropriate mitigation measure.	This comment is noted. Please see MR-4 for an explanation of the wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	September 21, 2022	C113-23	The DEIR indicates no significant increases in evacuation times with the Specific Plan. Tables show evacuation times in the order of 15-20 minutes, with and without the proposed project. The Evacuation Time analysis suggests that "added times" for travel during an evacuation range from 1 or 2 minutes to 37 minutes to get to Napa. These hypothetical scenarios defy residents' reality and the actual evacuation times experienced during recent fires: Nuns Canyon fire (2017) resulted in evacuation times out of Sonoma Valley of 1 hour or more; Glass Fire (2020) resulted in evacuation times from nearby Oakmont onto Hwy 12 of one to two hours; evacuations from Kenwood during recent fires took hours, not minutes; adding thousands of vehicles will exacerbate the problem. Page 520 of the DEIR states that, "The additional SR 12 connector road will provide additional fire access and evacuation routes." However, during a wildfire, it's quite possible that residents and workers in the proposed project area will not be able to take this connector route east toward highway 12 due to the high probability of a wildfire advancing from the highway 12 direction (see Specific Plan, figure 2.3-1). Has this possibility been considered in the DEIR analysis of evacuation times? Also, can the analysis assume the Hwy 12 roadway connection when it will be subject to a separate CalTrans review and approval process and might not be approved? The DEIR indicates that the SDC core campus is in the Local Responsibility Area (LRA) versus the State Responsibility Area (SRA) with respect to fire-related development governance. In Figure 3.16-2, it appears that the LRAs are outside of any fire hazard severity zone. However, given that parts of the LRA are immediately adjacent to medium, high and very high fire hazard severity potential zones (FHSZs), can this be accurate?	This comment is noted. Please see MR-4 for an explanation of the wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	September 21, 2022	C113-24	The assessment of wildfire hazards in the DEIR appears to have a number of errors and omissions, the most serious of which lead to unwarranted conclusions that underestimate this hazard ("Impact 3.8-7 Implementation of the Proposed Plan would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. (Less than Significant)" p. 268). Page 503: "Primary responsibility for preventing and suppressing wildland fires in Sonoma County is divided between local firefighting agencies and the State of California, Department of Forestry and Fire Protection. The SDC Planning Area is currently located in an area identified as a State Responsibility Area (SRA)." The Planning Area "includes the approximately 180-acre SDC Core Campus…" (DEIR, pg. 51) According to the State Fire Marshall's map: https://osfm.fire.ca.gov/media/6822/fhszs_map49.pdf, the Core Campus is within a Local Responsibility Area (LRA. See map on page 4), not the State's. Is this correct? Page 503: "Under the Fire and Resources Assessment Program (FRAP) "the Planning Area…includes areas of high to very high Fire Hazard Severity Zones west of Highway 12, areas of high fire hazard severity in the hills, and areas of moderate fire hazards severity zones in the vicinity of Suttonfield Lake and Fern Lake (Figure 3.16-2). The Core Campus is not included in any of these FHSZs. " The State Fire Marshall's final map is not intended to show moderate and high FHSZs within the Local Responsibility Area. The State's draft map (page 4), however does show moderate and high FHSZs covering a substantial portion of the Core Campus. While not finalized, this appears to be the best available fire risk data for the Planning Area.	The comment is noted. On page 518, the DEIR does note that development under the Proposed Plan could result in potentially significant impacts from exacerbating wildfire risks. This increased risk can be due to the site's history of wildfire and proximity to VHFSZs or from increasing the potential for wildfire ignition and spread with development. However, the Proposed Plan includes a plethora of policies and Standard Conditions of Approval to adequately mitigate potentially significant wildfire risks to a less than significant level. Such measures, as described under the Wildfire Impact Analysis starting on page 551 of the DEIR, require the Proposed Plan to construct and maintain a managed landscape buffer to aid in fire defense; enhance creek buffers; remove surface and aerial fuels; implement fuel management methods (such as fuel separation, defensible space with continuous tree canopy, and irrigated agriculture); plant fire resilient landscaping; include a five-foot buffer of defensible space around all developments; prohibit wooden fencing; require all new construction and retrofitting of existing buildings use Class A fire-rated roofing materials, fire-resistant siding, and dual-paned tempered glass windows; prohibit the storage of flammable materials under decks or porches; prune branches of trees; cover all building vent openings with wire mesh screens to prevent infiltration from embers of sparks; and ensure that all property owners are informed and educated about wildfire resiliency requirements at the site at the time of purchase. Further, Policy 6-21 would

Commenter	Date	Letter	Comment	Response
				require all new and existing utility lines be buried underground to mitigate additional wildfire risk. Policy 2-40 would reduce ember ignitions and fire spread by requiring trimming of branches that overhang the home, porch, and deck and prune branches of large trees up to 6 to 10 feet (depending on their height) from the ground. Policy 2-40 would remove dead vegetation and debris from under decks and porches and between deck board joints.The Proposed Plan would also comply with all State and local codes and regulations, such as the California Fire Code and Sonoma County Code, which would further mitigate potential impacts. There are several proposed policies that would serve to mitigate impacts from wildland-urban interface areas. Such policies would implement managed landscape buffers, limit surface fuels, minimum clearances between fuels and each building or structure, defensible space, fire resilient landscaping, and fire-resistant construction practices. Further, development would comply with Fire Code Section 4906 which contains existing regulations for vegetation and fuel management to maintain clearances around structures. This code includes provisions for ignition-resistant construction standards for new buildings.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	September 21, 2022	C113-25	Goal PS-3 from the Sonoma County General Plan 2020 (DEIR, page 497), reads: "Prevent unnecessary exposure of people and property to risks of damage or injury from wildland and structural fires," with Objective PS-3.1 stating, "Continue to use complete data on wildland and urban fire hazards." 2. How was the data gap between the SRA and the LRA within the Planning Area addressed during the DEIR's analysis of wildfire threat? What evidence was the statement about the Core Campus (DEIR, pg 503. See above) based on? Was this conclusion reached because there is data showing low fire risk there or because lack of data was equated with low risk? 3. The Fire Constraints map (13.16-2) shows the Core Campus being almost entirely outside of any Fire Severity Hazard Zones. How would the Fire Severity Hazard data for the Core Campus, shown in the State's draft map, change the analysis of fire hazards there? Does this change the calculus for significance under 16.1.3.1 Criterion 2: "Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire."?	This comment is noted. Please see response to comment C113-24.
Arthur Dawson,	September 21, 2022	C113-26	In addition, the Sonoma County Community Wildfire Protection Plan Update 2022 (referenced in the DEIR, 16.1.1.3. Regional and Local Regulations, p. 496) states that: "Wildland fires that start in the woods and spread into adjacent areas with relatively dense housing often result in the greatest losses of property and life. Efforts to save lives and property will take precedence over losses of wildland resources, so firefighters' response must focus on protecting populated areas rather than fighting a fire in the most efficient way." Even if we assume there are no FHSZs within the Core Campus, this suggests that building dense housing at SDC adjacent to wildlands could result in high "losses of property and life." Responding to such a fire might prevent firefighters from efficiently working to prevent further fire spread. How was this scenario taken into account during the DEIR analysis?	This comment is noted. Please see response to comment C113-24.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	Septembe r 21, 2022	C113-27	3.16.1.3.4. Wildfire Evacuation 1. Wildfire ignitions are known to increase with the size of a population. How was this relationship evaluated in the calculation of fire risk in the Planning Area? CLOSING COMMENTS As evidenced through the comments above, we do not believe this DEIR yet adequately and completely evaluates the environmental and safety impacts of the Proposed Plan. Furthermore, we remain committed to the Sonoma Valley community's consistent input calling for both affordable housing and a lower density plan alternative. A plan closer to the Historic Preservation Alternative – determined as "environmentally preferred" in the DEIR analysis – successfully meets the project objectives and the established Guiding Principles for this project and should be given strong consideration. We remain committed to a plan that we can all support and appreciate this opportunity to provide comment. The NSV MAC letter process did not allow to adequately address all topic areas. Please respond to the public comments in the attached addendum that we received in advance of the NSV MAC meeting on 9/21/22, relating to the Specific Plan and the DEIR, which we are incorporating by reference, and give them full consideration.	This comment is noted. Please see MR-4 on the wildfire evacuation analysis and MR-8 on the Historic Preservation Alternative.
Arthur Dawson,	Friday, September 23, 2022	C114-1	The North Sonoma Valley Municipal Advisory Council (NSV MAC) has prepared this letter for consideration by the Board of Supervisors (Board) and Sonoma County planning staff regarding the proposed land use and design alternatives for the SDC Specific Plan. The primary purpose of this letter is to summarize public input received by the NSV MAC in response to the SDC Specific Plan Alternatives Report prepared by Dyett & Bhatia and published by the County in early November 2021. This letter incorporates the extensive community input from public meetings on November 17, 2021, December 15, 2021 and January 5, 2022, the Sonoma Valley community survey, as well as written correspondence and NSV MAC comments, and synthesizes this information into several main themes to create the framework for a community-supported land use alternative. The intent of this exercise is to provide sufficient information to enable the Board to direct Permit Sonoma staff to develop a preferred alternative that truly reflects the community vision for SDC as articulated in the January 2021 Draft Vision and Guiding Principles.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	Friday, September 23, 2022	C114-2	As reflected in the hundreds of comments received since publication of the Alternatives Report, the Sonoma Valley community does not support any of the three alternatives proposed by the County; 71% of participants rejected all three alternatives when polled during the SDC Alternatives Workshop on November 13, 2021. We also reference a non-affiliated Sonoma Valley survey (community survey) conducted by Sonoma Valley resident Dr. Shannon Lee, Biology Department Faculty at Sonoma State University in December 2021. The survey received 672 responses, 95% of which were from Sonoma Valley and Sonoma County residents. The SDC is not suitable as an "urban infill site" and the community's rejection of the proposed alternatives reflects the incompatibility of the scale of proposed development with the adjacent Glen Ellen communities and the site's environmental constraints.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Arthur Dawson,	Friday, September 23, 2022	C114-3	Request for Community-Driven Process for Preferred Alternative On behalf of the community, the NSV MAC requests the Board to delay the initiation of the California Environmental Quality Act (CEQA) process to prepare an Environmental Impact Report (EIR) for a preferred alternative until after a new alternative reflective of site constraints and community input is developed as promised in the December 17, 2019 agreement between the State of California and Sonoma County. The NSV MAC requests the Board to direct staff to pursue this new alternative as outlined in this letter.	The comment is noted. Please see MR-2 for an explanation of the State-mandated project timeline.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	Friday, September 23, 2022	C114-4	Community Input as Framework for a Preferred Alternative The community continues to support the January 2021 Vision and Guiding Principles that have underpinned community workshops, Sonoma County requests for proposals for preparation of the Specific Plan, and related efforts during this multi-year SDC redevelopment process. These principles are most recently expressed on pages 10-11 of the Specific Plan Alternatives Report. The community feedback conveyed in this letter reflects these principles through an integrated vision of development at an appropriate scale, with an intention to balance affordable, inclusive housing and related commercial development with the protection of SDC's open space (a California public trust resource), the Sonoma Valley Wildlife Corridor, the historic district portions of the SDC campus, fire safety and climate resiliency, and the rural character of the surrounding region. An alternative with substantially reduced density is necessary to ensure that the negative impacts of development on traffic, public safety, wildlife corridors, water/water treatment, and related issues do not cause environmental and social harm. The nine community priorities are summarized below and detailed in the Appendix to this letter. OPEN SPACE. Community input consistently emphasizes the singular opportunity the SDC campus represents in terms of protecting the open space and wildlife corridor in the context of a vibrant, sustainable community. Over 90% of community survey respondents ranked "preservation of open space" as the highest priority; this is consistent with the state's 30x30 goals. This concern goes beyond setting aside open space lands and creating creek and sensitive habitat setbacks. The density of development planned within the SDC campus must not exceed the carrying capacity of the site's resources. In other words, it must not result in overuse of open space resources or interference with wildlife movement and permeability.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Arthur Dawson,	Friday, September 23, 2022	C114-5	HOUSING DENSITY. The community unequivocally supports the creation of additional housing on the SDC site, particularly affordable housing, however at a lower density (450 or fewer housing units) than that included in any of the alternatives published to date. Higher housing density will move the surrounding communities from a "rural" to "urban" designation based on current U.S. census definitions (see Appendix) and is a	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			primary driver of unacceptable impacts, including environmental, infrastructure, traffic and related public safety issues.	
Arthur Dawson,	Friday, September 23, 2022	C114-6	AFFORDABLE HOUSING. The community supports a considerably higher percentage of affordable housing than the approximately 25% included in the published alternatives, with 76% of community survey respondents indicating a preference for 50-75% (or more) affordable units. Use of available funding mechanisms and incentives—including revisiting the State's obligations for SDC site cleanup and remediation—must be included in the financial feasibility assumptions to maximize the affordable housing percentage (see Site Governance / Funding below). ADAPTIVE REUSE OF EXISTING BUILDINGS. Public and NSV MAC member comments indicate that the County should revisit the potential reuse of existing buildings to satisfy some of the housing needs on the East Side of the SDC campus. UTILITY INFRASTRUCTURE. An energy sustainability plan, including a microgrid design, should accompany any SDC development, as should a thorough review of the potential benefits of an on-site sewage treatment facility in light of the challenges to the existing Sonoma Valley infrastructure.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Arthur Dawson,	Friday, September 23, 2022	C114-7	FIRE SAFETY/ CLIMATE RESILIENCY: Fire safety and climate resiliency will be impacted by the other elements of the site plan—water use/recycling, energy grids, housing density—and their impacts on traffic and public safety. These interconnected factors must be more intentionally considered in any preferred alternative for this site. The Sonoma Valley community has expressed particular concern that fire risk, evacuations and related community preparations have evolved significantly during the course of the SDC re-development process. 71% of community survey respondents indicated that the County has not adequately addressed fire hazard, traffic and other impacts to the community in the proposed alternatives.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	Friday, September 23, 2022	C114-8	HISTORIC PRESERVATION. The community recognizes the importance of preserving the historic, architectural, and aesthetic character of the SDC campus, and envisions permanent protection, preservation and management of selected buildings and structures within the historic district. More specifically, the community has consistently supported the preservation of an historic district on the west side of the SDC campus which could include a museum, library, research hub and visitor center, all of which would be linked with the cemetery and open space. COMMERCIAL SPACE / JOB CREATION: The community supports innovative use of commercial space (education, training, research) and inclusive job creation at a scale suitable for this semi-rural site. In addition, the community wants to see commercial space set aside for COMMUNITY-oriented functions, e.g., a community center or school, and is prepared to explore funding options for these uses.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Arthur Dawson,	Friday, September 23, 2022	C114-9	SITE GOVERNANCE / FINANCING: Many members of the public have requested consideration of establishing a trust or similar management entity to oversee redevelopment and implementation of the Specific Plan rather than a private developer. A trust mechanism would open opportunities for public financing and site management that would broaden the potential for successful redevelopment AND community compatibility. In fact, the Board's April 2019 resolution "Supporting a Land Use Planning process and considerations for disposition of the Sonoma Developmental Center Site," states: "Be it further resolved that the Board may also consider in the future a Joint Powers Authority, Trust or other mechanism to facilitate the disposition and transition of the site to meet the desired outcomes." Community members have clearly articulated the conflict inherent in creating a plan that is both appropriate for Sonoma Valley and financially feasible, with these economics driven in large part by the dilapidated infrastructure and environmental cleanup liabilities left by the State. The State must help defray the significant costs to clean up the site that it has left in poor condition to ensure that the plan is not merely driven by economic factors. 89% of community residents surveyed believe that the State should be responsible for clean-up and other remedial maintenance of the site.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Arthur Dawson,	Friday, September 23, 2022	C114-10	Conclusions The Sonoma Valley community's reasons for rejection of the proposed alternative plans are aligned and consistent. The alternatives do not reflect the themes heard over and over in multiple Valley-wide workshops regarding the appropriate size and scale of development, and adequate protection of the wildlife corridor and surrounding open space. None of the current alternatives reflect the many environmental constraints on the site, nor do any strike a balance between financial interests, affordable housing, and environmental and community well-being. The community has spoken clearly. On its behalf, the NSV MAC respectfully reiterates its request that the Sonoma County Board of Supervisors direct staff to work with the community to develop an alternative using the framework as outlined above and detailed in the accompanying Appendix.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Barbara Roy	Sunday, September 25, 2022	C115	it is disappointing that in spite of the grave issues for the Glen Ellen community, the DEIR essentially dismisses any creative way to achieve a reasonable balance of additional housing with the rural nature of the area. The majority of residents and Sonoma Valley groups favor a 450 housing unit plan and yet it is tied to the Historic Preservation Alternative which the DEIR rejects, however, no attempt is made to pattern that density with a modified preservation model which could be a reasonable plan. The document is clearly biased toward a plan that has been consistently rejected by the populace. A main tenet when this process began was for it to "complement" the surrounding community. In as much as, according to ABAG, the entire County is to supply 3881 housing units by 2031, it is not reasonable to put 1000 of them in tiny rural Glen Ellen. Under Aesthetics 3.1 LU3 is to locate future growth using infill parcels. Building a city in the middle of the Glen Ellen community is not infill. Table2.5-3 indicates a hotel which has also been soundly rejected by the residents of the Valley as inappropriate and growth inducing. Biological 3.4 OSRC-7.5 Maintain connectivity between natural habitats. Who bears responsibility in perpetuity for maintaining and enforcing the "mitigating policies" once the units are sold?	Your comment is noted. Please see MR-8 for an explanation of why the historic preservation alternative does not meet the project objectives.

Commenter	Date	Letter	Comment	Response
Barbara Roy	Sunday, September 25, 2022	C115	Hydrology 3.9 The Plan states it does not use groundwater. How is this possible in that Sonoma Creek does draw groundwater from the Shallow Aquifer and the Plan diverts water from Sonoma Creek? How is it determined that the water rights (to divert water from various creeks) which are sought to be safeguarded are not affecting groundwater gaining into the creeks? SDC has 4 groundwater wells which are not currently drawing. Where is the guarantee that they will never be reactivated? 3.9.3.3 item 6D and 6E seek to ensure water to the Plan residents and safeguard SDC water rights. What safeguards are in place for the existing residents whose water supply are also tied to creek and stream flow as affected by SDC diversions? 630 says the diversions cannot result in a net increase of withdrawals or diversions from various springs and streams including the four main sources used by SDC during low-flow periods including summer, fall, and drought conditions or as "annual averages". Please define "annual averages" as used here. Averages over drought years differs from non drought years and also years where climate change has caused a heavy but short-lived precipitation that drains away before being absorbed.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Barbara Roy	Sunday, September 25, 2022	C115	Land Use 3.10 The Plan conflicts with Land Use Policy, which calls for growth utilizing vacant parcels in urban areas. It is a manipulative definition of infill to describe building 100 housing units where few exist, as "infill". Physical Barrier: While it may not be what the DEIR calls a "typical reference", how is building a city in the middle of the Glen Ellen community in its entirety, not, in fact, a "physical barrier"?	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Barbara Roy	Sunday, September 25, 2022	C115	Housing 3.12 Again, it is not against reasonable County Housing Element policy which references "Fair Share" distribution to support 1000 units of the ABAG figure of 3881 units in rural Glen Ellen? The Plan claims it does not induce substantial population growth. Please explain and justfy how virtually doubling by adding 2400 people to a community of 2542 is not inducing substantial population growth.	The comment is noted. As described in pages 579-584 of the DEIR, the Proposed Plan is consistent with the overarching regional need for both market rate and affordable housing in the Sonoma Valley and throughout the Bay Area, as well as with historic residential and employment uses of the site: SDC has facilities that housed up to 3,700 clients, and SDC was one of the largest employers in the County and the largest in

Commenter	Date	Letter	Comment	Response
				Sonoma Valley. Further, the new development would be entirely concentrated within the existing urbanized footprint of thre historic campus, with all surrounding open space acreage preserved as open space.
Barbara Roy	Sunday, September 25, 2022	C115	Transportation 3.14 The Plan hopes that residents will not use their cars. The Plan hopes that residents will not work off site. How does the Plan justify figures based on hopes? How will no free parking on site impact existing neighborhood streets and the existing rural Glen Ellen community which the Plan hopes to entice with recreation etc? Emergency access only addresses emergencies within the site.	The comment is noted. Please see MR-4 for more detail about emergency evacuation analysis, and MR-3 for more detail about what is considered in the preparation of a Draft EIR. The presence of priced parking near an area with free parking can cause motorists to search for spaces on those free streets (commonly known as "spillover"). However, there is a limited distance motorists are willing to walk from their vehicles. In the case of SDC, on-street parking pricing would only be considered in non-residential areas, primarily in the "core campus". The core campus is located roughly one-third mile from the nearest residential uses in Eldridge and almost two-thirds mile to Glen Ellen, walking distances that would be too lengthy and inconvenient for most motorists. Thus, the potential for spillover parking is minimal. The presence of free parking often leads to many motorists seeking spaces in the same highly-desired locations, resulting in vehicles circling the area. This can have the unintended effect of marginally increasing VMT and creating potential safety issues as drivers spend a greater amount of time searching for parking spaces. Additionally, The VMT analysis was conducted using the Sonoma County Travel Model 2019 (SCTM19) operated and maintained by the Sonoma County

Commenter	Date	Letter	Comment	Response
				Transportation Authority (SCTA). The model includes extremely sophisticated algorithms to predict traveler behavior, and has been calibrated against real-world observations both through comparison of traffic volume projections versus observations, as well as aggregated "big data" obtained through mobile devices that provides real-world data on how residents, employees, and visitors travel within and beyond Sonoma County. As with all travel demand models, SCTM19 considers the proximity of housing, jobs, and services to one another, and accordingly does assume that some persons will both live and work within the proposed Specific Plan boundaries or adjacent areas. Such travel synergies are expected in areas with a mix of housing and employment, and attempting to override these assumptions in the VMT analysis would not only be speculative, but would substantially overstate potential impacts and mischaracterize the proposed Specific Plan's design, land use mix, and policies. The applied VMT analysis is a superior approach that reflects application of the best-available tools and information.
Barbara Roy	Sunday, September 25, 2022	C115	Wildfire 3.16 The DEIR continues to deal with this issue, as with others, as if the SDC core was somehow not in the middle of a rural community and that what happens on site does not impact the surrounding area. Evacuation Issues. Historical first-hand information from those who have evacuated from multiple wildfires in recent years does not support the time figures used in this report. Again, the planning treats the situation as if only SDC needs to evacuate. Experienced survivors know that 1.2 minutes of extra evacuation time is not realistic. Most evacuees have spent hours on clogged roads. A wildfire evacuation entails residents from all the areas possibly in the shifting track of fire. Furthermore, assumptions seem to be	The comment is noted. Please see MR-4 for more information about the wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			made that everyone in the path gets instant notification, which has not been the case as both land line and cell communications may easily be compromised. As the County knows, wildfire is swift and unpredictable. How are these time frames justified as they do not reflect real time experience?	
Betsy Donnelly	Thursday, September 22, 2022	C116-1	Thank you for taking the time to read and respond to my comments. I am confused and hope you can help clarify several statements in the EIR that seem contradictory. On the one hand it says there will be no significant impact on wildlife species yet on the other hand for each species and each special project a biologist will do an environmental assessment prior to the start of each special project. Also, no new field studies were done for the EIR because existing resources contained enough detail for a program level environmental assessment and yet the EIR states that operations could result in loss of habitat or harm species if they are present. Another thing I am unclear about, is that I was under the impression that environmental impact was not allowed to be deferred, but relying on the "future studies" seems to be doing just that. Here are just a handful of the statements in the EIR that seem to contradict each other.	Thank you for your letter. The comment is noted. Please see MR-3 for more information about how a programmatic Draft EIR addresses future studies.
Betsy Donnelly	Thursday, September 22, 2022	C116-2	From section 3.4.3.2: No new field studies were conducted for the preparation of this EIR, because existing resources contained information on pertinent aspects of biological resources in the Planning Area at level of detail appropriate for a program level environmental assessment. Future project specific detailed biological surveys will be necessary to confirm presence or absence of sensitive resources on future development sites. Cumulative impacts related to biological resources are discussed in Chapter 5: CEQA Required Conclusions. Page 241-242: In terms of potential operations and maintenance related impacts, some increased risk to special-status species may result from increased vehicular traffic, increased recreational use, and domestic pets. Direct impacts to streams and surrounding	Thank you for your letter. The comment is noted. Please see MR-3 for more information about how a programmatic Draft EIR addresses future studies, and MR-7 for more infomation about the biological resources analysis.

Commenter	Date	Letter	Comment	Response
			habitat could result in the loss of suitable habitat or harm of these species if they are present	
Betsy Donnelly	Thursday, September 22, 2022	C116-3	Page 221: Lack of information in the CNDDB and other reports about a species or an area does not imply that the species does not occur or that there is a lack of diversity in that area. This lack of information may reflect a lack of Project or reporting more than absence of special-status species. Thus, there may be additional occurrences of special-status species within this area that have not yet been surveyed and/or mapped. BIO-1 Prior to the commencement of the approval of any specific project in the Proposed Plan area, Project Sponsors shall contract a qualified biologist to conduct studies identifying the presence of special-status species and sensitive habitats at proposed development sites and ensure implementation of appropriate mitigation measures to reduce impacts to sensitive habitat or habitat function to a less than significant level. Thank you again for you time and attention and for working with the community to help reach a solution we can all agree on.	Thank you for your letter. The comment is noted. Please see MR-3 for more information about how a programmatic Draft EIR addresses future studies, and MR-7 for more infomation about the biological resources analysis.

Commenter	Date	Letter	Comment	Response
Bonnie Brown	Monday, September 26, 2022	C117-1	Comment: The statements underlined in the analysis below do not provide substantial evidence for these statements. Energy use can be initiated just as well as the Proposed Plan and biological resources preserved as well. No proof of the statements below are included in the analysis. Wildfires risks would be much less with the Historic Preservation Alternative since 1500 to 1700 less vehicles would be evacuating. The environmental features of wildlife protection would be enhanced with less housing, noise, lights, intrusion of their habitat. This analysis of the Historic Preservation Alternative is incomplete and makes unsubstantiated remarks. ES.4.2 Identification of Environmentally Superior Alternative "Overall, the Historic Preservation Alternative is the environmentally superior alternative, although significant impacts of the Proposed Plan and the two alternatives are largely comparable, and the Historic Preservation Alternative would be less superior in some environmental features such as energy use, biological resources, and wildfire risks."	The comment is noted. Please see MR-8 for explanation of why the historic preservation alternative does not meet the project objectives.
Bonnie Brown	Monday, September 26, 2022	C118-1	"This EIR conservatively assumes that VMT reduction due to implementation of these strategies would be inadequate to reduce residential VMT per capita and induced VMT to less-than significant levels, resulting in significant and unavoidable impacts, with no other feasible mitigation measures available. These impacts would also be cumulatively considerable." Comment: Because of these significant and unavoidable traffic impacts which are cumulatively considerable in the Proposed Plan, the Historic Preservation Alternative is the Environmentally Superior Alternative. Lower housing numbers and development will result in VMT reduction to a level safer and acceptable to the community and not destroy the safety or quality of life of current residents of Sonoma Valley. The density of housing in the Historic Preservation Alternative is the one requested by Supervisor Gorin, with support by other supervisors. The analysis of the Historic Preservation Alternative in the DEIR is insufficient and incomplete for these reasons. There is no analysis of financial feasibility in this alternative or benefit to the community and beyond.	The comment is noted. Please see MR-6 for an explanation of the VMT analysis, and MR-8 for more information on the analysis of the historic preservation alternative.

Commenter	Date	Letter	Comment	Response
Bonnie Brown	Monday, September 26, 2022	C119-1	Comment: There is no substantial evidence given in the below analysis in chapter 3.8 of the DEIR, page 268, that 1500 to 1700 more vehicles, as planned by the Proposed Plan in the SDC Specific Plan. evacuating from a wildfire will not impair, physically interfere, or endanger the lives of current residents attempting to evacuate during a wildfire emergency. My personal experience shows these to be false statements. I evacuated from the 2017 fires from my home at Verano Avenue and Arnold Drive. Vehicles were moving at a snail's pace. It took me an hour and one half to reach a location in south Sonoma Valley where I was meeting my daughter and could spend the night where evacuation was not required and I felt somewhat safe. If the fires had progressed farther south from Glen Ellen, the Springs and all of Sonoma would have been engulfed, which was a possibility and the reason for all of the valley to be ordered to evacuate. In the 2020 evacuation of just Oakmont, I witnessed traffic going south on both Highway 12 and Arnold Drive. Both evacuation routes were just as impacted as the 2017 fires, and that was just Oakmont residents. To claim that the additional vehicles of 1500 to 1700 in the Proposed Plan would only increase evacuation time by less than a minute is completely false and relies on an unsubstantiated opinion. It does not take into account actual experience. Clearly, from my actual experience during evacuations, it is evident that adding 1500 to 1700 vehicles to a wildfire evacuation in Sonoma Valley will cause extreme danger to current residents and significant risk of loss, injury or death involving wild land fires. When a wildfire is approaching, no County Emergency Operations Plan will help "to the extent feasible". People will evacuate when they feel in danger. This is NOT less than significant. For this reason, the Historic Preservation Alternative is the Environmentally Superior Alternative. It lessens housing numbers and traffic impacts to the extent that evacuations can be safer.	The comment is noted. Please see MR-4 for an explanation of wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Bonnie Brown	Monday, September 26, 2022	C119-2	Comment: The statements in red below do not give substantial evidence and bear no semblance to the actual conditions that local people have experienced during evacuations. "Compliance with existing State and local codes and regulations as well as proposed policies...and structures to the extent feasible" go out the window when people fear for their lives. Chapter 3.8: Hazards and Hazardous Materials. Impact 3.8-6 Implementation of the Proposed Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Less than Significant)" "In addition, see Impact 3.16-1 in Section 3.16: Wildfire for further analysis. The County's Emergency Operations Plan establishes the emergency management organization for emergency response, establishes operational concepts associated with emergency management, and provides a flexible platform for planning emergency response in the county. Development facilitated by the Proposed Plan would be constructed in accordance with federal, state, regional, and local requirements, which are intended to ensure the safety of county residents and structures to the extent feasible. Compliance with these standard regulations would be consistent with the County's Emergency Operations Plan. Thus, implementation of the Proposed Plan would not impair an emergency response or emergency evacuation plan and impacts would be less than significant. Mitigation Measures None required". "Impact 3.8-7 Implementation of the Proposed Plan would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. (Less than Significant) See Impacts 3.16-1 and 3.16-2 in Section 3.16: Wildfire for analysis on this impact. Compliance with existing State and local codes and regulations as well as proposed policies would reduce impacts to a less-than-significant level related to exacerbating wildfire risks during construction, operation, and implementation of the Proposed Plan.	The comment is noted. Please see MR-4 for an explanation of wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			Mitigation Measures None required".	

Commenter	Date	Letter	Comment	Response
Bonnie Brown	Monday, September 26, 2022	C120-1	Comment: The analysis of the Historic Preservation Alternative is inadequate and does not provide substantial evidence in its statements. In the statement below, ES.3.3, there are no facts to verify that development would be more constrained than with the Proposed Plan. If the assumption is that adaptive reuse would not be successful and used for future development, then that is in conflict with the statement in 4.3 Historic Resources. It also does not give substantial evidence that there would be fewer jobs. Adaptive reuse of existing buildings can provide space for jobs, with the possibility of that near the Proposed Plan. The number of jobs estimated in the analysis is speculative and no evidence is provided. ES.3.3 Historic Preservation Alternative "Further, because the historic character of the existing buildings within the Sonoma State Home Historic District would be retained as much as possible, intensity and density of future development would be more constrained than with the Proposed Plan. As a result, overall development would be less than that of the Proposed Plan…..roughly 340 fewer jobs than envisioned by the Proposed Plan." 4.3 Historic Resources "There are several compelling reasons for striving to reuse contributing buildings in the SSHHD (Sonoma State Home Historic District), to the greatest extent practical. Adaptive reuse is recognized as a highly sustainable approach to construction."	The comment is noted. Please see MR-8 for an explanation of why the historic preservation alternative does not meet the project objectives. While adaptive reuse was studied as part of the Specific Plan process (see in particular the Adaptive Reuse Potential Evaluation prepared by Hornberger + Worstell Architects in March 2021), adaptive reuse of many of the buildings at the SDC site would involve extensive renovations/seismic retrofitting/hazardous material remediation. Development would be more constrained because many existing historic buildings on site are single-story buildings; reuse would allow less flexibility in building footprints and development style than new buildings.

Commenter	Date	Letter	Comment	Response
Bonnie Brown	Monday, September 26, 2022	C120-2	"The Historic Preservation Alternative also does not include a new connection to Highway 12." Comment: This is a benefit of the Historic Preservation Alternative and its proposed elimination was not analyzed in this alternative, thus the analysis is inadequate This connector road would cause oil and gas run-off in the open space, cause wildlife road kill, especially at night, necessitate a stop light on Highway 12, and bisect the open space that was promised to be preserved. Any drivers who attempt to go from Arnold Drive to Highway 12 or vise versa during an evacuation will find the exact same vehicle back-up as on the other route. There is an existing wide EW connector road three block south of SDC: Madrone Road. To not add a new road through the open space would preserve the historic open space. This was not analyzed in this Alternative, making it inadequate.	The comment is noted. Please see MR-7 for an explanation of the adequacy of impacts on wildlife movement, including for the proposed Highway 12 connector road.

Commenter	Date	Letter	Comment	Response
Bonnie Brown	Monday, September 26, 2022	C121-1	"The Proposed Plan would result in significant and unavoidable impacts related to transportation (Impact 3.14-2), and historic resources (Impact 3.5-2)." 4.3 Historic Resources "There are several compelling reasons for striving to reuse contributing buildings in the SSHHD (Sonoma State Home Historic District), to the greatest extent practical. Adaptive reuse is recognized as a highly sustainable approach to construction. Additionally, SDC is a fixture in the Sonoma Valley, reinforced by strong collective community memory. The sense of place, complete with historic buildings and mature landscape, offers an established location for the campus's next life. The SDC site also offers an existing sense of community that is respected and can be reinforced through a mixture of adaptively reused historic buildings and contextually responsive new buildings. The level of detail and design present on the SDC site is not easily replicated with modern building practice and economics." Footnote page 533: "141 Rehabilitation and adaptive reuse at SDC is generally more expensive than new construction. See Alternatives Report, November 2021 (Updated), available at https://www.sdcspecificplan.com/documents" Comment: Regarding the footnote statement above and information in the Alternatives Report, November 2021, the conclusions are not based on substantial evidence. No proof of the statement is given. Adaptive reuse is being successfully done all over this country. Community Housing Sonoma County (Keith Christopherson) has adaptively reused buildings in Sonoma County for veterans housing, even an old firehouse. The reason it is not done is because of developers' lack of imagination and will to develop anything except with demolition and new construction. There is no evidence of proof that adaptive reuse is more expensive than new construction. To re-quote other statements is not proof. Substantial evidence is required.	The comment is noted. Please see MR-8 for an explanation of why the historic preservation alternative does not meet the project objectives. Estimates for costs associated with adaptive reuse of existing buildings at the SDC site, including those cited in the Alternatives Report and Adaptive Reuse Potential Evaluation, are estimates based on high-level surveys of the buildings, architectural expertise, and current industry trends, and are not intended to be definitive per-building detailed cost-estimates.

Commenter	Date	Letter	Comment	Response
Bonnie Brown	Monday, September 26, 2022	C121-2	Impact 3.5-2 - Implementation of the Proposed Plan would cause a substantial adverse change to the significance of a historic district, as defined as physical demolition, destruction, relocation, or alteration of the historic district or its immediate surroundings such that the significance of the historic district would be materially impaired pursuant to § 15064.5. Page 296 -" Implementation of future development and redevelopment permitted under the Proposed Plan would allow more dense new development adjacent to contributing resources, as well as alteration and reconstruction of contributing resources in the Core Campus area. New construction has the potential to disconnect the remaining contributing resources in the Core Campus from those in Community Separator and Regional Parks lands to the east and west, consequently disrupting the feeling and character within the historic district. This would affect the cohesiveness of SSHHD's overall integrity to the point that it would no longer be eligible for listing in the NRHP, CRHR, or as a California Historic Landmark. The impact of such activities is considered significant because they would cause a substantial adverse change to the historical district as defined by CEQA Guidelines Section 15064.5. While proposed policies noted above and the Standard Conditions of Approval (LU-1, LU-2, LU-3, LU-4, LU-5, and LU-6) would help reduce these impacts to the maximum extent practicable, there are no mitigation measures available to avoid impacts entirely. As such, this impact would remain significant and unavoidable. Mitigation Measures None required." Comment: Because of these significant and unavoidable impacts to the Historic District of SDC in the Specific Plan's Proposed Plan, it is clear that the Historic Preservation Alternative is the Environmentally Superior Alternative and should be adopted by the Board of Supervisors. Its density was requested by Supervisor	The comment is noted. Please see MR-8 for an explanation of why the historic preservation alternative does not meet the project objectives.

Commenter	Date	Letter	Comment	Response
			Gorin and other Board members agreed. This alternative was not studied in detail and does not include substantial evidence of its analysis.	

Commenter	Date	Letter	Comment	Response
Bonnie Brown	Monday, September 26, 2022	C122-1	Footnote page 533: "141 Rehabilitation and adaptive reuse at SDC is generally more expensive than new construction. See Alternatives Report, November 2021 (Updated), available at https://www.sdcspecificplan.com/documents" Comment: This statement provides no substantial evidence and conflicts with Hazardous Materials study documents by Van Brunt Associates in the WRT report and reiterated by consultants for the Specific Plan, as quoted below. The last paragraph is significant: All hazardous materials must be removed before demolition. Then the building is demolished and all of that is transported to landfills, some to hazardous landfills out of state since some hazardous materials may be left in the rubble. Then the costs of labor and new materials for new construction are added. No study of the total costs of all of the processes required for demolition and new construction have been substantially studied and compiled to make the statement that adaptive reuse is more expensive than demolition and new construction. And the GHG emitted by demolition and new construction were not studied or included, as requested in my original comments to the DEIR, and no substantial evidence was given. This is especially important since all of the buildings east of Arnold Drive, constructed of cement and tile roofs, are planned to be demolished in the Proposed Plan.	The comment is noted. Please see MR-8 for an explanation of why the historic preservation alternative does not meet the project objectives. Estimates for costs associated with adaptive reuse of existing buildings at the SDC site, including those cited in the Alternatives Report and Adaptive Reuse Potential Evaluation, are estimates based on high-level surveys of the buildings, architectural expertise, and current industry trends, and are not intended to be definitive per-building detailed cost-estimates. Plase also see MR-3 for more information on the level of detail and analysis appropriate for a programmatic EIR.
Bonnie Brown	Monday, September 26, 2022	C122-2	Van Brunt Associates/WRT Report: "Prior to any construction or demolition, all of these hazardous and potentially hazardous materials will be inspected, sampled, or inventoried. The ultimate goal for this work is to ensure workers and the environment is protected during building repairs, renovations, or demolition." "The presence of most hazardous materials in buildings is not necessarily illegal or dangerous. Most potentially hazardous building components in good condition may be left in place. Upgrades involving new finishes such as paint and floor coverings may not trigger expensive abatement and remediation actions. If a building is planned for renovation, the extent and scope of renovation determines which hazardous materials must be abated, removed, stabilized, or even left in place." "Building demolition would trigger the most costly hazardous	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			materials abatement program. Generally speaking, all hazardous materials must be removed in order to demolish a building."	
David Brigode	Monday, September 26, 2022	C123-1	I have done a preliminary examination of the draft Specific Plan prepared and just released by the County for the Sonoma Developmental Center SOME POINTS OF REVIEW –Of the approximately 1100 housing units proposed, only 283, at most, will be affordable to households at an AMI of 80% or less. • At the presumptive density of 20 units per acre, that means only 14 acres out of 180 acres in the core area are dedicated to affordable housing • The Plan falsely claims that housing for the "Missing Middle" is for households at 120-160% of AMI. Nobody uses that range – the Missing Middle is usually defined as 80-120% of AMI • 75% of the housing proposed is essentially market rate, with unrestricted sale and resale prices. No residency requirements. These units are designed for absentee investors and second homeowners. • The bulk of all housing is to be on the East side of Arnold – however, it is forbidden for that to start construction until the non-residential West side is well underway • There is no discussion of ADU's as an affordable housing resource. • Entire portions of buildable land within the core 180 acres are set aside for "Open Space", even though the SDC is surrounded by thousands of acres of open space. • The Specific Plan and EIR is vague on the "Arnold to Highway 12" connector, which is essential for a project of this scope.	The comment is noted. Please see MR-3 and MR-7 for more detail regarding the level of detail in the Highway 12 connection.

Commenter	Date	Letter	Comment	Response
David Brigode	Monday, September 26, 2022	C123-2	Continued reference is made to the need for "financial sustainability" as the reason for so much market rate housing. Yet we have seen no financial projections justifying that. NOTE: I continue to maintain that the denial of affordable housing, and the preponderance of market rate housing, is being driven by the need to pay for the infrastructure for the non-residential component of the SDC Specific Plan, including the 120 unit hotel (which nobody wants); and the proposed "conference center", which is completely undefined as to size and scope, and is the pet project of an environmentalist lobby which has been so influential over this process from behind the scenes going back a decade.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
David Brigode	Monday, September 26, 2022	C123-3	see violations of State and Federal Law in this proposed Specific Plan, leading to prolonged litigation to either modify the affordable housing componenet or deny the entire flawed Specific Plan: 1) Failure to comply with the State guidelines implementing the SDC conversion which mandate a meaningful emphasis on affordable housing; (SB 82 Government Code 14670.10.5/Governor's Executive Order N-06-19) 2) A clear failure to Affirmatively Advance Fair Housing (a HUD federal requirement) by targeting higher income, predominantly non-minority households leading to increased racial, ethnic and family status exclusion. 3) The obvious failure to implement Sonoma County RHNA allocations for affordable housing in a sincere and meaningful manner to address Sonoma County's worsening housing crisis. In my opinion, the plan is designed to create a "cash cow" for the yet unspecified private, for-profit developer. This is not the plan the public wants, yet it just keeps moving ahead in disregard of public opinion.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
David Eichar	Friday, September 23, 2022	C124-1	More comments on the Draft EIR and SDC Specific Plan. The DEIR overstates the GHG and VMT. This is partially due to the assumption at least 50%of the housing units will be for the "missing middle." As shown below, most teachers and firefighters will not be able to afford the "missing middle" housing units. As a result, these housing units will go to higher income families. Studies have shown that higher income families drive more and take public transportation less. From the SDC Specific Plan: "Missing Middle Income households make between 121 percent and 160 percent of Sonoma County AMI, - too much to qualify for Affordable Housing , but not enough to buy a median priced home. Missing middle housing will make up 50 percent of the total market rate housing at the site. These homes will be accessible for Sonoma County's middle income workforce, such as teachers and firefighters, to help keep these professionals from being priced out of Sonoma Valley"	It is assumed that the commenter intended to use the word "understates" instead of "overstates." The commenter is correct that the affordability level of residential units has an effect on VMT, with mid- to lower-income housing generating less VMT per capita than housing occpuied by those with higher income. It is important to distinguish, however, that such income-based adjustments are not performed by the SCTM19 travel demand model when producing VMT outputs. The SCMT19 VMT outputs were directly applied in the DEIR transportation analysis and do not include income adjustments. When assessing project-level VMT impacts for a proposed development, it is typically appropriate to post-process VMT outputs to account for affordability levels using published methodologies and research. Because the proposed Specific Plan is a programmatic document and project-level details are unknown at this time, these forms of affordability adjustments were conservatively not applied. Income is not a factor for GHG emissions for CEQA. It could be indirectly tied based on housing types, which are regulated under the SP. CalEEMod/CAPCOA has generation rates tied to the land uses, which each have a certain level of development that is used to calculate operational emissions. Therefore, income level does not have a bearing on the GHG emissions analysis.

Commenter	Date	Letter	Comment	Response
David Eichar	Friday, September 23, 2022	C124-2	salary would be $58,557 and the highest base pay would be $103,959." https://www.sonomanews.com/article/news/95-of-teachers-authorize-strike-due-to-budgetimpasse/ "The average Firefighter/EMT II salary in Sonoma, CA is $69,590 as of August 29, 2022, but the range typically falls between $64,560 and $87,550." https://www.salary.com/research/salary/alternate/firefighter-emt-ii-salary/sonoma-ca As you can see, only single teachers making the maximum salary, which very few do will be in the 121%-160% AMI. Teachers and firefighters salaries are below 120% AMI. Therefore, teachers and firefighters would not be able to afford the "missing middle" housing, thus needing deed restricted Affordable Housing; otherwise GHG and VMT will be greater. This means much more than the 25% of units need to be deed restricted Affordable Housing. This should be 100% Affordable Housing.	The comment is noted. The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Deb McElroy Pool	Sunday, September 18, 2022	C125-1	Instead, please direct Permit Sonoma to support the Historic Preservation Alternative as “it is the most environmentally sound” and reflects largely what the public, NVMAC, Springs MAC, and Sonoma Land Trust has repletely imputed as an alternative to Permit Sonoma. Specifically, please direct Permit Sonoma to take these steps: 1. Reduce the size of development to 450 or fewer homes and require that the majority of them be affordable for the people who already actually live and work in Sonoma Valley and for people with disabilities. Eliminate the hotel, and do not duplicate retail and commercial space that is already provided in Glen Ellen. Keep in mind, this is a rural community. 2. Riparian areas are crucial when it comes to Open Space. Increase setbacks along Sonoma Creek, Riparian areas and the Sonoma Wildlife Corridor to at least 100 feet, instead of inadequate 50 feet as proposed. 3. Protect Open Space by providing enforceable timeline,	The comment is noted. Please see MR-8 for an explanation of why the historic preservation alternative does not meet the project objectives.

Commenter	Date	Letter	Comment	Response
			boundaries and actions for permanently preserving open space and keeping it in public hands.	
Deb McElroy Pool	Sunday, September 18, 2022	C125-2	In the DEIR, analyze the impacts of and add enforceable measures to reduce impacts of proposed new uses in the open space including but not limited to agriculture, agricultural processing, tasting rooms, farm stands, recreation, parking lots, geothermal development and sports facilities. 4. Wildfire: Revise wildfire evacuation impacts to reflect actual experiences which occurred during recent wildfires using new county wildfire risk and hazard maps. Adding 11/2 minutes to the timeline of evacuation is meaningless! 5. Climate Crisis: Think 30X30 Initiative, which California embraces. Given the County's Climate Crisis Resolution and commitments to reduce climate changing emissions (GHGS) from driving and other sources, revise the Specific Plan and DEIR with legally enforceable measures to reduce climate emissions, such as building fewer homes, reusing and demolishing fewer buildings, providing transit and permanently securing the maximum amount of Open Space. 6. The DEIR falls short of CEQA requirements. The DEIR is	The comment is noted. Please see MR-4 for more explanation of wildfire evacuation, MR-8 on why fewer homes will not accomplish the project objectives, and MR-3 for an explanation of the legal requirements for a programmatic EIR, and how later phases of the project will be required to complete additional CEQA analysis.

Commenter	Date	Letter	Comment	Response
			inadequate and the so-called selfmitigated Specific Plan contains many weak general policies, goals and conditions of approval, to address the environmental impacts.	
Deb McElroy Pool	Sunday, September 18, 2022	C125-3	The DEIR does not adequately analyze and prevent or reduce environmental impacts in most if not all of the areas studied as evidenced by few actual requirements and many vague words such as “should” or “could occur” “may result” or “if feasible.” The DEIR needs to be revised and the Conditions of Approval strengthened and moved into a legally enforceable Mitigation and Monitoring Program. There is still so much work to do with the Specific Plan and the DEIR. I support Commissioner Carr’s request (Planning Commissioners Meeting 9/15/22) for additional time to get this right. He repeatedly stated that in order for the Planning Commission to do their job with integrity, they would need addition time to go page by page. This was even at the expense of more frequent meetings to accomplish the task, getting it to the Board of Supervisors as soon as is possible. There is a willingness to do the hard work, we	The comment is noted. Please see MR-2 for a response regarding the project timeline, and MR-3 for a response regarding the level of detail included in a programmatic Draft EIR.

Commenter	Date	Letter	Comment	Response
			just need the courage to take the bold steps, and do the right thing for the future.	
Deborah C. Nitasaka	9/26/22	C126-1	We have been asked to select from the three options laid out in the SDC Alternatives Report released just a few weeks ago (November 1, 2021). Each offering little realistically plausible beyond an audacious open door for upscale developers to bring in projects bound to fail if past is prologue (i.e., Rohnert Park's Sonoma Mountain Village]aka Hewlett-Packard] and Petaluma's telecom boom (and bust). Beyond some open space promises (with little detail), the rest in no way addresses the very real and urgent needs of Sonoma County residents. More tourist-serving accommodations? This valley has been decimated by the county's cash-cow (Transient Occupancy Tax), converting units built for, zoned for, subsidized for, intended for - residents to live in - now operating as disruptive commercial enterprises in residential neighborhoods. The costs to our communities are innumerable. It is clear we have been sold out by our civic leaders. Any further moves toward "tourist-trapping" our community will not go down well. Forget the hotel! Give us back our housing stock!	Thank you for the letter. The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	9/26/22	C126-2	Industrial parks? For which segment of our undereducated population? According to The Sonoma County Workforce Investment Board's draft Local Workforce Development Plan 2021 – 2024: Over the next five years, the following are the top five occupations that will be in-demand for Sonoma County: 1. Office and Administrative Support 2. Sales 3. Food Preparation and Serving 4. Transportations and Material Moving 5. Management Unless Sonoma County changes course, opting for a more enriching, visionary future, these will be the jobs of tomorrow. I see no reason to settle, to offer so little to our children, to our community. My vision is one calling for opportunity, advancement, growth, fulfillment in work and play.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Deborah C. Nitasaka	9/26/22	C126-3	The people of Sonoma County have been told there must be a plan covering how anything we ask for will be paid for. Curiously, I see no such level of detail in this consultant's report. Why the dichotomy? Maybe it's time to get real, to try a bit more transparency, to actually explore feasible options that will bring to the county what residents so urgently need, with top of the list being decent affordable housing for agricultural workers, students, developmentally disabled, the unhoused, and others most sorely in need. This housing might well be thought of as that needed to replace the hundreds of homes lost to the vacation rental industry as well as to the fires of 2017 - 2020. Sonoma County may not have fulfilled its promise of a community-driven process, but the people of Glen Ellen and beyond are stepping up on their own. For my part, I am pushing past what some say is the line of possible to envision the day students live, learn, and work on SDC's campus. Imagine SDC as a place flourishing with innovation, preserving history, expanding its role to enrich the surrounding community with lifelong learning opportunities, special needs housing and education, visiting professor lecture series, and all while graduating people prepared with the skills essential for fulfilling, well-paying careers, ably set to meet and exceed the demands of today and the future.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	9/26/22	C126-4	I am in full agreement with the thoughts and recommendations sent to you by the Sonoma Land Trust concerning the need to preserve the wildlife corridor. Therefore, the remainder of my comments will pertain to the built portion of the campus. To start, I have to say that the prospect of jamming together thousands of homes in the southern end of SDC is appalling. How does such a banal idea enrich the quality of life for Sonoma County residents? As a housing advocate clocking in more than 30 years, I endorse incorporating housing into SDC's future, especially special needs housing. To do so well will require far more thought than we see here. Questions remain as to how many homes can safely be added to the this part of the valley, how the units would be protected from further loss to Sonoma County's Vacation Rental Conversion Program or to any other misuse. As well, I need to see much more detail regarding the intended population. As others have said (and I concur), "The alternatives do not provide for adequate emergency egress in the event of wildfire, are not compatible with the rural character of the surrounding communities within the Sonoma Valley, and do not realistically address impacts on infrastructure, such as water recharge, inadequate roadways, sewage system capacity, etc."	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Deborah C. Nitasaka	9/26/22	C126-5	Too often Sonoma County officials have ignored what is needed for what is easiest, furthering the human toll. I've seen it all. The matter of public safety became alarmingly clear as a planning oversight when we learned, through the series of meetings held within a single week earlier this month (11/13/21, 11/16/21, 11/17/21), that the consultants did not meet with CalTrans when developing their traffic outline, yet calculated traffic flow by comparing apples and oranges. Able-bodied drivers (2,000-4,000 new local residents, those traveling into Glen Ellen for work, tourists, and others are likely not comparable to developmentally disabled people who have never driven. Their traffic pattern predictions would be laughable if they weren't also potentially deadly (as we have seen when residents attempting to escape the Paradise fire and who were incinerated while desperately fighting to escape the flames). A related shock, we also learned the consultants never met with local fire agencies. Simply appalling comes nowhere close to my outrage that Sonoma County is, once more, cashing in at the expense, at an ultimate cost of the very lives of the people who live and work here.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	9/26/22	C126-6	Yes, the pressures for change have arrived. Sonoma County's needs are: • Development (commercial: housing imbalance) - We need to plan for a rebalancing; • Poverty escalation due to promotion of industrial sectors paying less than living wages (hospitality, tourism, and agriculture) must be addressed by accepting nothing less than living wage jobs. We need to prepare our young people for a brighter future; • Economic collapse following the housing bust; • Brain drain: SDS closure, the relocation of well-paying industries (telecommunications, Hewlett-Packard, etc.; • An insatiable hunger for revenue derived from new sources such as recreational drug production and sales, vacation rental conversion of thousands of Sonoma County homes; • A growing homeless population; • Escalating real estate prices - pricing most local residents out of the market; • Housing codes prejudicing construction of large homes over more modest sized units; • The impact of a collapsing infrastructure (fires, contaminated drinking water, unkept electrical systems); • The decline of our professional and degreed populace; • Climate change; • Questionable practices at the county level (planning, code enforcement, zoning, emergency services); • Student housing shortage: Santa Rosa Junior College opted to use bond revenue for the construction of an elaborate parking structure instead of desperately needed student housing - resulting in thousands of students now sleeping in their cars (some in that very parking structure [PD article about JC students living in their cars]); • Low to middle income and special needs housing loss due to VACATION RENTAL industry & lack of building; • Shortage of skilled tradespersons: Sonoma County lacks cutting-edge jobs training for a sorely-needed workforce - one able to meet national trades workforce shortage.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	9/26/22	C126-7	What is the best possible use for SDC as one answer to the issues listed above? Let's start with the dilapidated SDC structures. Their condition is undoubtedly the result of the state's neglect. Therefore, it is incumbent upon Sonoma County to insist that the state acknowledge it is theirs to repair. Not only must the restoration be paid for by the state, we have recently learned that California has a revenue surplus to cover those costs. And those resources have attached to them some stringent guidelines as to how the reported surplus can be spent. Lucky for us infrastructure and colleges are among the options: "California is — once again — overflowing with money, and will likely have a $31 billion budget surplus next year, according to a Wednesday report from the independent Legislative Analyst's Office. And because the state is forbidden from spending more tax dollars per Californian than it did in 1978, once adjusted for inflation, it only has a few options for handling most of the cash windfall: slashing taxes; issuing tax rebates; funneling it to schools and community colleges; or earmarking it for certain purposes, such as infrastructure." (Hoeven, 11/18/21)	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	9/26/22	C126-8	As indicated above, Sonoma County's workforce predictions are not encouraging. They mirror a sad national trend wherein opting out of college are also coming up short on the skills needed to succeed in the workplace: Two-thirds of Americans over 25 don't have a bachelor's degree or higher. A Harvard study uncovers inconsistent efforts to give these workers skills for economic mobility and calls for improving the problem. Academic work on training programs has been somewhat static, says Rachel Lipson, director of the Harvard Project on Workforce. A paper from 30 years ago might not look much different from one published today. "There's been a lot of attention on K-12 quality and college access and completion, but a lot less on the types of educational and training pathways that sit in between high school and four-year college," she says. These pathways are critical to the future of economic mobility, and the Project on Workforce hopes to raise the research community's interest in them. "The plurality of the U.S. labor force does not have a four-year college degree," says Lipson. "We can't throw up our hands and say four-year colleges are the only answer." (Smith, 2021)	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	9/26/22	C126-9	Having outlined the need and some substantial financial avenues, I will now outline how to put SDC to work for the betterment of the people of Sonoma County. Instead of continuing to produce cooks and tourism graduates, we need to give our kids a better future, one promising living wage opportunities, not a serf's subsistence; one grounded in an understanding of California's history as essential to knowing how best to go forward! Some Educational & Housing Models As Best Fits For The SDC Campus: ▪ High Tech "Trade Tech College" - ▪ Satellite Junior College Campus: Vocational Tech! ▪ Berea College: I have learned that Berea is interested in expanding to develop this unique college model in every state: Every student attends tuition-free! Every student works on campus, putting to work the lessons learned in the classroom. Majors include education, agriculture, the trades, the arts, and much more. ▪ The University of Oregon, Phil and Penny Knight Campus for Accelerating Scientific Impact: a 160,000-square-foot campus built to accelerate groundbreaking scientific discovery and development in a collaborative multidisciplinary environment <https://inhabitat.com/leed-goldtargeted-knight-campus-advances-scientific-innovation/> ▪ Career Technical Education, (Sonoma County) also referred to as CTE, is a multi-year sequence of courses that integrates core academic knowledge with technical and occupational knowledge to provide students with a pathway to post-secondary education and careers. CTE programs deliver an enriched educational experience that promotes student interest and academic success while developing technical and career readiness skills necessary for the workplace of the future. Graduates of today's rigorous and relevant CTE programs are better prepared for high-wage, high-skill and high demand careers. ▪ "State-supported technical college" - Clark Howard 9/13/18 show ▪ "Upskilling For Today & Tomorrow" - The Hill Event: Streamed	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			Live 9/22/21 <https://youtu.be/ph9f1Z_P45c>	

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	9/26/22	C126-10	I would add that it is entirely feasible within these models to: ▪ Incorporate an affordable housing component, including special needs housing, into the campus plan; ▪ Offer on-site housing for students, staff, faculty which will reduce traffic impacts and provide additional incentives to prospective applicants; ▪ Training/Educational offerings might include an emphasis on high tech (environmental sciences, construction trades - including 3-D printing for housing production, modern firefighting and law enforcement courses, certificate programs in mental health, special education, & so much more); ▪ Traditional Trades (Carpenter, electrician, plumber, telecommunications engineer, auto mechanics, fire fighting, law enforcement - emphasizing community policing!, ecological land/resource management, nursery management [plant propagation, marketing, shipping], etc.), w/emphasis on high tech tools; ▪ LEED Certification program; ▪ Environmental Sciences: building in internships around campus grounds care (maintenance, repairs, upgrades, etc.) - Forestry, Firefighting technology, Alternative Energy Program; ▪ Sustainable Farming Program; ▪ Indigenous People's Program: History & Culture; ▪ Health/Medical: Psych techs, med techs; ▪ Arts & Crafts Program (including student work program, sale to the public of hand-made goods); ▪ Retail Management: (w/training to include time spent running on-campus market); ▪ Day school for students with developmental disabilities (plug in tech students for "on-the-job" psych tech training aspect); ▪ Carve-outs for Crisis Management Clinic for Developmentally Disabled in need of care beyond that available in their community settings; ▪ Permanent Supportive Housing: See as a model Sweetwater Spectrum, Fifth Street West, Sonoma - a "mini-community" for autistic adults (Kory Stradinger, Executive Director);	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			▪ Community Center & History Museum: Oversight of cemetery, Sports/Playing Fields, Historic Preservation (Cemetery, buildings, overall site); ▪ Emphasis on: Economic and Racial Diversity.	

Commenter	Date	Letter	Comment	Response
Dianne Brinson	Sunday, September 25, 2022	C127-1	AESTHETICS (Light and Glare) Development at the level provided for in the Specific Plan — up to 1000 residences, a hotel, a conference center, employment centers — will create an urban village in a semi-rural area (Glen Elle, Eldridge). The development would create a new source of substantial light which would adversely affect both nighttime views and wildlife movement. At night, a considerable amount of street lighting will be required for the safety of the residents, hotel guests, and employees leaving their workplaces after dark. Light will be spilling out of residence windows, hotel rooms, the conference center— and, in the winter, workplaces. The DEIR says that thick vegetation and compliance with dark-sky requirements will buffer wildlife from exposure to human activities. I don't think so. Are the building going to be single-story? No. How can thickly-planted trees and shrubs block light from second-story (or higher) windows? Newly-planted vegetation is unlikely to be tall enough to block even first-floor window light. Who will decide if the vegetation is sufficiently thick — the developer? Policies 5-32, 5-39, and 5-43 are vague, making meaningful enforcement— to protect views and wildlife — unlikely. I often walk in Oakmont as dawn is breaking. There is considerable light spillage from windows of early-rising residents. Take a walk through a developed neighborhood early some morning to see what light spillage from home windows looks like.	The comment is noted. As described under Impact 3.1-4 on page 106 of the DEIR, the DEIR analyzes impacts on light and glare and outlines policies that would mitigate these impacts. With adherence to existing and proposed policies and County Code and General Plan standards, development under the Proposed Plan would not substantially increase the amount of nighttime lighting or glare in the already previously developed Core Campus or surrounding open space areas. Development would be substantially similar to existing buildings and development on campus, but with the addition of new "dark sky" protections, not previously instituted at the SDC site, as required under Policy 2-11 of the Public Review Draft Specific Plan. Impacts associated with light and glare would be less than significant.
Dianne Brinson	Sunday, September 25, 2022	C127-2	BIOLOGICAL RESOURCES The DEIR states that the wildlife corridor is 3/4 of a mile wide. Where's the support for that statement? If the wildlife corridor is wider than that, then the statement that the "southern edge SLIGHLTLY (emphasis added) infringes into the northern portion of the Core Campus" is incorrect. All planned buildings and lighting could be closer to the wildlife corridor. The conclusion that no mitigation is required (Impact 3.4-4 on 254) needs another look, once the width of the wildlife corridor is established.	The comment is noted. Development must be located within the boundaries of the development footprint, as shown in Figure 4.1-2 of the Public Review Draft Specific Plan, ensuring the wildlife corridor is protected and expanded.

Commenter	Date	Letter	Comment	Response
Dianne Brinson	Sunday, September 25, 2022	C127-3	WILDFIRE EVACUATION The DEIR considers two potential fire scenarios — fire from the NE, fire from the SE. What if a fire comes from the north or northwest (Sugarloaf, Hood Mountain, Calistoga) — as the 2020 Glass Fire did? If the fire comes from the north or northwest, vehicles of 5000 Oakmonters will be added to the flow of vehicles fleeing the area. Evacuation times will be slower if Oakmonters are added. When I evacuated from Oakmont in September of 2020, I was only allowed to go toward Kenwood. It took me a while to get out of Oakmont, but once I reached 12, I made my way smoothly to Madrone Road to Arnold Drive and south to a San Francisco hotel. However, if the vehicles of 2400 residents and 120-plus hotel guests from the SDC area had needed to evacuate, they would have gotten there before me and choked the route.	The comment is noted. Please see MR-4 for more information about wildfire evacuation analysis.
Dianne Brinson	Sunday, September 25, 2022	C127-4	ALTERNATIVES (Choice of) All of the Alternatives that were considered provide for at least 750 housing units. The DEIR concludes that dropping the number of housing units from 1000 to 750 would mean a less economically viable project because of the high level of infrastructure and other costs involved. Those costs include cleaning up asbestos, lead, and pesticides left behind by the State of California. The assumption, I assume, is that the developer will have huge expenses to clean up the property and so must be allowed to build a huge number of housing units in order to recover those costs and make a profit. The State should be putting money in for clean-up. Otherwise, existing residents of this area (not just Glen Ellen and Eldridge, but Oakmont/Rincon Valley/Bennett Valley) are going to suffer from increased traffic, increased lighting, and slower fire evacuations so that the cleanup costs can be absorbed by the developer. Could we look at a combination of low density (400 units) plus a public/institutional use such as a climate research center?	The comment is noted. Per State CEQA Guidelines Section 15126.6(a), (c) & (f), the Lead Agency is not obligated to select the Environmentally Superior Alternative for implementation if it would not accomplish the basic project objectives and/or is infeasible. State law stipulates that the SDC Specific Plan prioritize financial feasibility at the site per Government Code Section 14670.10.5.

Commenter	Date	Letter	Comment	Response
Douglas A McKinley	Monday, September 26, 2022	C128-1	1) Traffic on Arnold Drive is already insufferable. The additional thousands and thousands of daily vehicles will increase traffic jams especially at known choke points getting in and out of Sonoma heading to the Bay Area or Petaluma. QUESTION: Will funding for this project include improvements to these locations that already back up and the additional traffic will warrant a stoplight. Arnold and Carneros Hwy (121). Stage Gulch Road (116) and Old Adobe Road - When returning for the Bay Area you often get routed this way. 2) Electricity -We are already told to conserve electricity and have impending rolling power outages. QUESTION: Where is the additional electricity coming from? 3) Water - We are already told to conserve water and droughts are getting worse. QUESTION: Where is the additional water coming from?	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
William Bucklin		C129-1	I am the owner of Old Hill Ranch. Our property shares approximately a half mile border with the Sonoma Developmental Center property from Butler Creek to Trestle Glen Drive. You have already received my comments dated 4/7/2022 regarding the "3 alternatives." In my comments I expressed my concern regarding the proposed road between the Proposed Development and Hwy 12. The Proposed Plan acknowledges that the connection to Highway 12 as a "known controversy." While it is true, as stated, that some community members felt that the proposed connection would improve traffic conditions and wildfire evacuations, my experience of the many meetings I attended was most community members stated that the road was not essential and that it would be detrimental to wildlife habitat and the wildlife corridor.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
William Bucklin		C129-2	Furthermore, the Draft EIR states no mitigation is required because "Implementation of the Proposed Plan would not have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service" And furthermore, the Draft EIR indicates that potential special	The comment is noted. Please see MR-7 for a discussion of further environmental review that would be required before construction of a Highway 12 connector road.

Commenter	Date	Letter	Comment	Response
			status wildlife are, among others, the Golden Eagle considered to be a state species of special concern and protected by the Bald and Golden Eagle Act.	
William Bucklin		C129-3	And Furthermore table 3.4-2 states that "The species has not been documented in or immediately near the Planning Area." I would like to draw attention to my letter sent to Brian.Oh@sonoma-county.org on 4/7/22 that stated I had recently seen a pair of Golden Eagles on the SDC property along the proposed road. Furthermore, I direct you to my Instagram account @willbuckzin to a post that is dated November 6th 2021 with 4 photos clearly identifying these majestic birds. Over the next two months I witnessed them on at least 6 different occasions, two of which they were situated in the trees along the proposed road. My question is, if the Eagles were hunting along the proposed access road, doesn't that suggest that the proposed road would have a potentially adverse effect on this special status species?	The comment is noted. Thank you for your comment. The list of documented special-status species and assessment of potential for special-status species to occur (Table 3.4-2 and Table 3.4-3) has been amended to include Sonoma Ecology Center provided observations for special status species. Some of the comment's designations of individual species do not meet the criteria to be considered "special status" under CEQA. However, these species will all benefit from the above-mentioned policies and would not be significantly adversely affected by future projects. The Specific Plan places a high priority on biodiversity preservation, preservation of wildlife corridors and protection of special-status species (Vision Statement; existing County, State and Federal policies; please refer to Specific Plan Goals 2-D, 2-E; Specific Plan Policies 2-6 through 2-30). Though the comment does identify some special-status species that were not identified as observed in the DEIR, all potential significant impacts to these species would be mitigated to a less than significant level with the implementation of existing Local, State and Federal policies and the specific and general policies in the DEIR. Please also see MR-7 for a discussion of further environmental review that would be

Commenter	Date	Letter	Comment	Response
				required before construction of a Highway 12 connector road.
William Bucklin		C129-4	Another area of concern regarding the proposed road as it relates to Biological Resources. 3.4-1 of the Draft EIR states no mitigation is required because "Implementation of the Proposed Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites." This statement is false and I would you to address my concerns. Can you please help me understand why no mitigation would be necessary in the event the proposed road was built across Butler Creek? For example, just last month on September 9th I was contacted by Jacob Harvey who works for the Audubon Canyon Ranch and "Living with Lions." P13, a collared lion that they monitor had been prowling our ranch. (See detailed map enclosed.) The lion had traversed through the SDC campus, across the proposed Hwy 12 access road onto our ranch to take a deer. The map of P13's movements are attached.	The comment is noted. Please see MR-7 for a discussion of further environmental review that would be required before construction of a Highway 12 connector road.
William Bucklin		C129-5	Furthermore, in 2019, for over a year, the Audubon Canyon Ranch hosted a wild life camera on Butler Creek, approximately 10 feet from the Developmental Center property. The quantity and scope of wildlife photographed was remarkable with Mt Lions, Bobcats, Racoons, skunks and squirrels being plentiful. I personally know of a Coyote who has raised her litter besides Butler Creek every year since I can remember. I have seen Western Pond Turtles on our access road traversing into SDC property. There are numerous Horned and Barn Owls. I have heard Spotted owls there too. A direct connection between the Proposed Development and Hwy	The comment is noted. Please see MR-7 for a discussion of further environmental review that would be required before construction of a Highway 12 connector road.

Commenter	Date	Letter	Comment	Response
			12 will scare, kill, and maim wildlife and would interfere substantially with the movement of native resident species.	
Elisa Stancil Levine	26-Sep-22	C130-1	Hello, my public comments in the past two rounds have not been addressed. I had high hopes the EIR would require direct samples and studies of the buildings on site, whether for adaptive re-use or demolition. Let me make this clear, I do not trust your analysis because you have done no studies on the actual buildings and report the condition of various buildings incorrectly. How can you say there will be LESS THAN SIGNIFICANT hazard when you do not know what the hazards are? See the copy below from text* following Figure 3.8-2, below. There is no mention of mercury, asbestos, cadmium, or other prevalent building materials used in construction prior to 1979. Remediation and encapsulation options for adaptive reuse are not reviewed herein at all. As a professional in historic restoration I find this report suspect and tailored to drive conclusions to a predetermined outcome, an outcome that is fraudulently substantiated. Here is my public comment: TEST THE BUILDINGS AND THE INFRASTRUCTURE throughout the footprint for building materials and conditions that affect the adaptive re-use and the demolition that would ultimately transform the site. Make the testing plan and the findings known to the public ASAP. Respond as promised. There are no actual studies done and all the conclusions about hazards on the site are unsubstantiated.	The comment is noted. As noted on page 261 of the DEIR, the Hazards and Hazardous Materials Impact Analysis considers the nature of foreseeable hazardous materials use, storage and disposal resulting from the redevelopment of the Sonoma Developmental Center. It also identifies ways that hazardous materials could be exposed to the environment or individuals. The analysis includes a qualitative evaluation of impacts associated with the presence or hazardous materials. The analysis is based on a review of materials ranging from online databases such as Envirostar and Geotracker, hazard maps, Phase I & II Site Assessments (see Appendix G), and relevant plans and regulations at the Federal, State, and local levels. Therefore, upon implementation of the Specific Plan and regular operations of the site, compliance with the regulations for hauling hazardous substances would continue to reduce the potential of an accidental release of hazardous materials (Impact 3.8-1) to a less than significant level. Further, Standard Condition of Approval HAZ-3 would require implementation of Best Management Practices to reduce exposure of workers to contaminated

Commenter	Date	Letter	Comment	Response
				materials during construction, icluding a soil management plan and a health and safety plan. Compliance with the Standard Conditions of Approval Measure HAZ-3 and existing regulations would reduce impacts related to the release of hazardous materials due to foreseeable upset or accident conditions to less than significant. Therea are no schools located or are proposed to be located within one-quarter mile of the Planning Area. Thus, implementation of the Proposed Plan would have no impact regarding hazard emissions or materials in within one-quarter mile of an existing or proposed school. Regarding Impact 3.8-4, implementation of HAZ-3 prior to construction would reduce the potential risks associated with releases of contaminated media as a result of Proposed Plan to a less-than-significant level.
Elizabeth Crabtree	Sept. 22, 2022	C131-1	My husband and I live about two miles south of the SDC site, on a lane off Arnold Drive. As survivors of the Oakland Hills fire in 1991 and the Nuns fire in 2017, we have intimate knowledge of how unpredictable and destructive fast-moving wildfires can be. Thus, we are deeply concerned about the proposal of the SDC Specific Plan that will put 2,500+ new vehicles on a two-lane country road that is already inadequate for traffic at peak hours, and the DEIR's conclusion that this will have no significant impact on fire evacuation plans. When trying to determine accurate traffic data, it is common practice to commission a comprehensive study of traffic patterns. DEIR Appendix F, Traffic Model Data, raises far more questions than it answers. How was that information gathered? Was a study conducted that counted vehicles on multiple days at peak hours to establish an accurate baseline upon which to build projections for evacuation time in the event of a fast-moving wildfire? When was this study done? The data included in Appendix F as presented is virtually meaningless.	Thank you for the letter. Your comment is noted. Please see MR-4 for an explanation of the methodology in developing the wildfire evacuation scenarios and analysis.

Commenter	Date	Letter	Comment	Response
Elizabeth Crabtree	Sept. 22, 2022	C131-2	Between Madrone and Petaluma streets, Arnold Drive is lined with over 20 non-through roads, many of which connect to other non-through roads, whose only access out is Arnold Drive. This includes the relatively densely populated Grove, Sobre Vista, Carriger and Morningside Mountain/Vigilante roads, along with multiple smaller roads and lanes. How was the existing population accounted for when the DEIR assessed the proposed time it would take to evacuate in a wildfire emergency? When determining proposed evacuation times (DEIR, Table 3.16-1, p. 517), were people fleeing wildfire in the Mayacamas on the east side of Sonoma, for whom Arnold Drive would likely be the only escape route, considered? Answering each of these questions with the best information possible is essential to determining accurate evacuation data.	Your comment is noted. Please see MR-4 for an explanation of the methodology in developing the wildfire evacuation scenarios and analysis.
Elizabeth Crabtree	Sept. 22, 2022	C131-3	Further, the SDC DEIR envisions a plan that, in the event of approaching wildfire, encourages residents "to shelter in place." (DEIR, p. 511). I urge you to view the 2019 documentary film "Fire in Paradise" (Netflix) that clearly shows the human cost of minimizing wildfire danger in favor of development. During the 2018 catastrophic Camp Fire in Paradise, CA dozens of residents were forced to shelter in place as a last resort or risk dying in their cars trying to flee on a two-lane road engulfed in fire. They huddled for hours on a concrete pad as propane tanks exploded around them. They survived, but the trauma they experienced will likely stay with them forever. To propose "sheltering in place" as a reasonable option, rather than a last-chance way to survive catastrophic wildfire, is highly irresponsible.	Your comment is noted. Please see MR-4 for an explanation of the methodology in developing the wildfire evacuation scenarios and analysis.
Elizabeth Crabtree	Sept. 22, 2022	C131-4	Regarding the day-to-day impact of adding 2500+ cars to traffic on Arnold Drive, the Specific Plan notes a goal to "Ensure that new development takes into consideration resultant traffic and levels of transportation activity from when SDC was operational." The SDC was operational throughout the 20th and into the 21st century. Which period when the SDC was operational does the Specific Plan refer to? And where will that data come from? As SDC residents didn't use Arnold Drive, it can be assumed it means the employees of the SDC. It was a 24-hour facility; any data used should reflect that, as well as take into consideration that Arnold Drive—especially south of the SDC—is far busier now than it was when the SDC was at peak operation. I drive Arnold Drive every day, and at peak hours, traffic between the rotary and Petaluma Street is sometimes bumper-to-bumper.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Elizabeth Crabtree	Sept. 22, 2022	C131-5	In the Aug.24 meeting, Mr. Oh noted that he envisioned the SDC proposed development as a vibrant activity hub for locals and visitors alike, akin to, in his words, "Sonoma Square." There is a key difference: the town of Sonoma, with its approximately 12,000 residents, is a community spread across thousands of acres with a complex grid of roads and streets. There are seven through streets that intersect Sonoma Square, including four-lane Broadway. The SDC Specific Plan proposes to build a community with a population far larger than neighboring Glen Ellen, including a hotel and a significant amount of commercial space, on a single two-lane country road with a possible connector to another two-lane road. Arnold Drive cannot reasonably support traffic for the kind of community hub that the Specific Plan proposes. I understand that the proposed SDC Specific Plan will bring significant financial benefits to the County of Sonoma. However, to disregard the solicited input of the majority of local residents and community organizations about its visions and hopes for the site, when we will have to live with its day-to-day consequences, is extremely poor governance. Thank you, and I look forward to receiving your answers to the questions above.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Elizabeth Pastore	Sunday, September 25, 2022	C132-1	Hello, I have both attached my letter as a pdf and copied it into the body of the email. Attached images are the trackings of a mountain lion P-13 seen to have been all over the SDC as well as on our property, right where the proposed HWY 12 connector road would be. Also included is a photo taken by a wildlife camera on our property at Butler Creek.	Thank you for the letter. The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Elizabeth Pastore	Sunday, September 25, 2022	C132-2	Thank you for reading my comments. My husband and I live on the land adjacent to the John Mesa soccer fields/Regional Park off of Trestle Glen. We are the 40-acre parcel (vineyard) between BR Cohn and the Regional Park. In other words, we are SDC's next-door neighbors, literally. While we are pro-housing, we have MANY concerns about this development's scope and size. While I have numerous concerns about water, fire, night sky pollution…I will focus primarily on the connector road between the SDC and Hwy 12, which as proposed in the figures in your plans, basically parallels our dirt driveway, appearing to be mere feet away from our property line and would forever disrupt a critical part of the wildlife corridor that folks don't seem to know about.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Elizabeth Pastore	Sunday, September 25, 2022	C132-3	I will begin with a positive comment. Point 1. Re: Page 11—"ES.3.2 Reduced Development Alternative" I am a big fan of the Reduced Development Alternative. I am pro-housing, but am more pro-wildlife, safety, and common sense. A population increase of 3000 individuals, a road bisecting an important wild-lands corridor, and many thousands of cars and visitors to this precious area is frightening and would alter not only the beauty of the land, but endanger the entire wildlife population. Nature must be part of our community, not separate from it. Both my husband and I had given input for the Hwy 12 connector road to be for emergency use only, and we continue to think this would be an excellent compromise given the importance of this land to the local wildlife, who would be displaced with cars. Even with bikes and pedestrians, they will still suffer. I support reduced development because it is more respectful of the wild-lands and wildlife.	The comment is noted. Please see MR-8 for an explanation of why the historic preservation alternative does not meet the project objectives.
Elizabeth Pastore	Sunday, September 25, 2022	C132-4	Point 2. The DEIC has no mitigation measures. Rather, you have "Goals" and "Policies." Please explain in detail, why and how this plan is "self-mitigating" and how the community can trust that SP (Specific Plan) will meet requirements for mitigation? Who is overseeing the process of your policies being met? What assurance is there that your "goals and policies" will be honored and met? My understanding is that CEQA requires specific mitigation measures for environmental impacts. You offer none.	The comment is noted. Please see MR-1 for an explanation of a self-mitigating plan.
Elizabeth Pastore	Sunday, September 25, 2022	C132-5	Point 3. On page 417 of the EIC, "Arnold Drive–South of Proposed Plan Area To the south of the Proposed Plan area between Harney Street and Madrone Road, daily volumes in 2021 were approximately 6,200 vehicles, as compared to approximately 7,100" …?? This section appears incomplete and I'd like to know what the rest of the paragraph says. It is incomplete. "7,100…??"	This comment is noted. The following edit has been made: DEIR p. 417: "To the south of the Proposed Plan area between Harney Street and Madrone Road, daily volumes in 2021 were approximately 6,200 vehicles, as compared to approximately 7,100 vehicles in 2019. Historical daily traffic volumes on this segment Arnold Drive reflect a peak of approximately 8,000 vehicles in 2014." This is a minor correction made to clarify and does not affect the findings of the DEIR.

Commenter	Date	Letter	Comment	Response
Elizabeth Pastore	Sunday, September 25, 2022	C132-6	Point 4. Re: Section "3.14.4.2 Methodology and Assumptions" "Land Use and Transportation Network Assumptions Consistent with Chapter 2: Project Description, the analysis presented in this section is based on an assumption that implementation of the Proposed Plan would result in 1,000 residential units with State and County density bonuses, including 435 single family units, 345 multifamily units, and 220 senior housing units. The Proposed Plan also includes 40,000 square feet of commercial/retail space, 190,000 square feet of office uses (likely including a mix of office, research and development, and other employment-based functions), 70,000 square feet of institutional uses (including work and meeting spaces including a conference center), a 120-room hotel, and 12.1 acres of recreational uses. In total, build out of the Proposed Plan is estimated to result in an added population of 2,400 persons and 940 jobs at buildout.ad" How many cars are you estimating will be on the roads? My estimate, conservatively, is 1 to 2 cars per household, 1 car for each job held, 1 car for each hotel guest room, plus at least 500-1000 more cars for guests, tourists, shoppers. Are you calculating traffic estimates and driving times for just the population or the workers too? Are we looking at over 4,000 more cars in this tiny area per day?	The comment is noted. Please see MR-6 for an explanation of methodology used in calculating traffic and VMT.
Elizabeth Pastore	Sunday, September 25, 2022	C132-7	Point 5. Please elaborate on the "Goals and Policies" section 3.14.4.3. Some of them seem overly optimistic: "no gaps in the sidewalk networks," "limit vehicle speeds," "work with Sonoma County Transit," "Fare-free bus rides," "Require development to reduce vehicle trips by 15%," but you have not included mitigation plans and have NO assurances that your "Goals" and "Policies" will succeed, let alone even be enacted. What if your "Goals" and "Policies" fail? Who is responsible?Why should we take your word that your "Goals" and "Policies" will even be considered and enacted by the developers? How does this suffice in an EIR? My understanding is that there must be stated mitigation measures to satisfy CEQA. Please explain and ensure to me that "goals and policies" are sufficient and mitigation is waived.	The comment is noted. Please see MR-9 for an explanation of how goals, policies, and the SDC Specific Plan Standard Conditions of Approval will be used and enforced by Sonoma County.

Commenter	Date	Letter	Comment	Response
Elizabeth Pastore	Sunday, September 25, 2022	C132-8	Point 6. "Proposed Hwy 12 Connection" Figures 3.14-3 and 3.14.4 And Policy 3.5 (page 437) "Reuse existing street network to the greatest extent feasible. Improve multi-modal access from the SDC to SR 12 by exploring the feasibility of providing an additional east-west emergency access connection from the site that includes high quality pedestrian and bicycle facilities" As diagramed in figures 3.14-3 and 4, the "proposed Hwy 12 connection" is situated within feet of our existing driveway as we live on the land immediately adjacent to the soccer fields of John Mesa Dr. We live on Trestle Glen. It appears that no one has actually walked this land (have you?) and observed the beautiful and important wildlife lands that exist there along with hilly terrain, a creek that the road would have to cross midway, and where our wildlife camera has just this past year snapped shots of mountain lions, bobcats, deer, fox, turkeys, really, every animal you could imagine being here. My husband photographed a pair of Golden Eagles this year on the SDC. This little corner of the property is an important and overlooked part of the wildlife corridor. A road here would utterly upend this precious corridor and change the land forever. My question to you is this, where will the animals go? How do you account for more pavement, cars, noise, pollution, speeding, and danger? There are already paved roads in this section, and the above "Policy 3.5" suggests "using existing street network to the greatest extent possible," yet you have a road going in a straight line parallel to our property line, ignoring the existing roads already present. If someone had actually walked this area, they would see it as an illogical place to construct a road, it's hilly and there is a creek it would have to cross. Has someone actually walked this site? I am formally inviting you to come. I'll state our suggestion again, if you must construct another road, use the existing roads already present, and please keep it a bike/pedestrian roadway only and only open it to cars for emergency usage..	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Elizabeth Pastore	Sunday, September 25, 2022	C132-9	Point 7: RE: page 580 “While the Planning Area currently has no residents, historically SDC was home to over 3,500 patients. With the Proposed Plan, the Planning Area would accommodate a total population of approximately 2,400 people.” I question the continued comparison of the population of patients at the SDC vs the expected population of the SP’s project, and I’d like you to explain to me why you think comparing the population of a group of patients who lived full-time in an institution with no interaction with the local community is equivalent to a population of people living in individual housing who all drive cars and will directly interact with our community at all times of the day and night. The SDC’s clients were stationary patients, not one of them owned or drove a car! They didn’t drive to the market, receive countless items from Amazon delivery trucks every day, take extra-long showers, buy plastic water bottles and litter them, or waste water washing their hair every day. The SDC was a fairly self-contained organization. Furthermore, most of the workers at the SDC worked in shifts that did not interfere with commute traffic/rush hours. I know this, because I have lived next door to the SDC since 2002! I also see discrepancies in the SP’s projection of the total population of residents, in some parts of the SP you say 3000 people and in others, such as above, you say 2400. Please explain that disparity. I could question 100 more items in the EIC but I’ll leave it there. Please listen to the community, and remember that our wildlife neighbors do not have a voice. They were here long before we were and it’s up to us to do right by them. I know we need more housing, but we must do everything possible to care for this sacred land and honor the foxes, big cats, and even the lowly skunks and lizards’ right to exist here.	The comment is noted. As described in pages 579-584 of the DEIR, the Proposed Plan is consistent with the overarching regional need for both market rate and affordable housing in the Sonoma Valley and throughout the Bay Area, as well as with historic residential and employment uses of the site: SDC has facilities that housed up to 3,700 clients, and SDC was one of the largest employers in the County and the largest in Sonoma Valley. While there is no direct perfect comparison for new residents at the SDC site, the numbers are provided to give contextual reference to the fact that the site has been previously developed and has served as a home to a substantial population of residents and employees previously. Ultimately, the DEIR's environmental impact analysis considers the existing conditions of the site.

Commenter	Date	Letter	Comment	Response
Greg Carr	Aug-22	C133-1	1. Please revise all determinations of "less than significant" to "significant and unavoidable" for impacts where the effectiveness of mitigation measures is uncertain. The following impact analyses include mitigation measures that either postpone analysis to future studies or contain "feasibility" qualifiers in their application. Since these measures cannot be relied upon to fully reduce these impacts, it is misleading to suggest that they do so. Aesthetics: 3.1-1, 3.1-2 Air Quality: 3.3-1, 3.3-2, 3.3-3 Biological Resources: 3.4-1, 3.4-2, 3.4-3 Cultural, Historic, and Tribal Cultural Resources: 3.5-1, 3.5-3 Energy and Greenhouse Gas Emissions: 3.6-1, 3.6-2, 3.6-3, 3.6-4 Geology, Soils, and Mineral Resources: 3.7-1 Hazards and Hazardous Materials: 3.8-2, 3.8-4 Hydrology an Water Quality: 3.9-1, 3.9-4 Noise: 3.11-1 Public Services and Recreation: 3.13-1, 3.13-3 Utilities and Service Systems: 3.15-1, 3.15-3 Wildfire: 3.16-1, 3.16-2	Thank you for the letter. The comment is noted. Please see MR-3 for an explantation of the level of analysis and programmatic nature of this Draft EIR.
Greg Carr	Aug-22	C133-2	2. In addition to the above changes, the EIR should identify changes in the Proposed Plan that would further mitigate the significance of impacts, including a lesser level of development, a fully fleshed out financial plan, and more firm and effective policies.	Thank you for the letter. The comment is noted. Please see MR-3 for an explantation of the level of analysis and programmatic nature of this Draft EIR.
Greg Carr	Aug-22	C133-3	A major omission in the Draft EIR is the lack of analysis of potential impacts of future uses of the Preserved Open Space Area. Since the project description includes agricultural and recreational uses, the impact analysis should identify the likely impacts, at least at a programmatic level of specificity. While the DEIR is correct in suggesting that these uses would be speculative in nature, the likely impacts are easily predictable and, like the analyses of development in the Core Campus, can be described with some accuracy. Please include these analyses, particularly in the discussions of Agriculture and Forestry Resources; Biological Resources; Cultural, Historical, and Tribal Cultural Resources; Energy and Greenhouse Gas Emissions; Geologic, Soil, and Mineral Resources; Hydrology and Water Quality; Noise; Public Services and Recreation; and Transportation. In addition, under Impact 3.4-1, the DEIR identifies Measure 2-12 limiting development in the wildlife corridor to limited trails/paths. Does this limitation apply to future agriculture use?...to future park use? Also, the Impact 3.13-2 analysis states that park and	The comment is noted. Please see revised policy 2-1: Ensure that land shown In Figure 2.2-1 as Preserved Open Space is dedicated or maintained as permanent public open space, and the Managed Landscape/Fire Buffer is designed and maintained for that purpose. The eventual owner/operator of the Preserved Open pace should prepare an open space plan in collaboration with the community, agencies, and organization to manage the rich diversity of resources on site, including habitat, vegetation, wetlands, native species, and other critical resources, balanced with recreation and wildfire protection needs. As part of the open space plan development, consider demarcating or delineating wetlands if

Commenter	Date	Letter	Comment	Response
			recreation uses would be limited to urban and built-up lands. Please clarify the above and make corrections as needed.	helpful for habitat protection, and delineating a cohesive system of trails and pathways that balances recreation and wildlife conservation. Please also see new Policy 2-58: Ensure that any agricultural use in the open space is limited to the historic agricultural area on the east side of the preserved open space area, and is focused on community gardening, education, or integrated with farm-to-table needs of SDC residents and businesses. Do not permit large-scale commercial agricultural uses. As the commenter notes, per policy 2-12, development within the wildlife corridor and along creeks would be limited to trails; no agriculture or active recreation uses would be allowed in these areas.
Greg Carr	Aug-22	C133-4	The DEIR lacks a complete analysis of the consistency of the Proposed Plan with the County General Plan. First, the project description does not identify the proposed General Plan land use and zoning designations necessary to achieve consistency. Second, the DEIR lacks the analysis of General Plan objectives and policies that are applicable to the proposed plan, including the Circulation and Transit Element (Objectives CT-4.1, 4.2, and 4.3 and related policies), the Open Space and Resource Conservation Element (Objectives OSRC-7.1 and OSRC-8.1 and 8.2 and related policies), and the Land Use Element (Objective LU-3.1 and related policies as well as Policy LU-20ff). Third, the DEIR statement under Impact 3.10-2 that the Specific Plan is generally consistent with the General Plan is incorrect in as much as "some updates" are necessary. Finally, Impact 3.12-1 fails to analyze population and housing growth enabled by the proposed plan in relation to the County General Plan, incorrectly asserting consistency in light of Bay Area growth rather than planned growth in the local area, the Sonoma Valley, and the County. Please include the appropriate analyses and corrections in the EIR.	The comment is noted. Please see page 7-2 of the Specific Plan for an explanation of how the General Plan and Zoning Code will be updated for consistency with the Specific Plan. Additionally, impact 3.10-2 is less than significant because, as described on page 321 of the DEIR, the Proposed Plan is consistent with the General Plan's goals for the Planning Area and includes provisions to update the General Plan and Zoning Ordinance consistent with State law in order to ensure consistency.
Greg Carr	Aug-22	C133-5	5. In general, the analysis of alternatives lacks objective comparisons of the relative impacts and instead arbitrarily defends the proposed plan as superior. Please provide objective substantiated comparisons.	The comment is noted. Please see MR-8 for a further explanation of the analysis of the historic preservation alternative and why it does not meet project objectives.

Commenter	Date	Letter	Comment	Response
Greg Carr	Aug-22	C133-6	Section 2.5 of the Project Description (Project Buildout) provides for flexibility in the level and profile of development allowed in each of the proposed subareas/districts. This flexibility leads to greater uncertainty in the significance of the Plan's impacts. More certainty and more effective mitigation would result from capping future development (#units, square footage, etc) in each subarea/district in phases. These caps could be accompanied by a provision in the monitoring program requiring periodic reports at the predetermined phases. These reports would include important parameters such as traffic and service capacities prior to the next phase of development.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Greg Carr	Aug-22	C133-7	7. Please clarify the applicability of Public Resources Code 21080.7 and Govt Code 65457 with respect to processing of future housing and non-residential project applications. This discussion should distinguish between environmental review and review for policy compliance for different types of projects.	The comment is noted. Please see MR-9 for a discussion of how the County will administer and process project applications.
Greg Carr	Aug-22	C133-8	8. Several sections are unclear with respect to the Hwy 12 connector. Goal 3-B suggests that the proposed connector to Hwy 12 would reduce air quality impacts. If the collector is not included in the plan, would air quality impacts be significant and unavoidable…or is there substitute mitigation available to minimize these impacts? Similarly, would GHG emissions be more or less significant without the connector? Third, the focused traffic analysis states that traffic levels of service in Glen Ellen would be improved with the connector, but did not analyze the levels without the connector.	The comment is noted. Given the programmatic nature of this Draft EIR, not every combination of Plan components could be analyzed. Please see MR-3 for more information on the level of analysis included in a programmatic EIR, and MR-6 for more information about VMT analysis undertaken.
Greg Carr	Aug-22	C133-9	9. Table 3.6-2 estimates existing mobile energy consumption at 176,922 million BTUs per year. What is the source of this figure? Please provide the calculations.	The comment is noted. Energy consumption estimates were derived using CalEEMod, a statewide land use emissions model designed to provide a uniform platform to quantify potential air emissions. For further information, please see Appendix B: Air Quality and GHG Data of the Draft EIR.
Greg Carr	Aug-22	C133-10	10. As mentioned above, the DEIR does not address the Plan's consistency with level of service objectives in the General Plan Circulation and Transit Element. Nonetheless, the County commissioned a focused traffic study in order to establish future levels of service for area roadways and intersections. Notwithstanding the fact that LOS is not a CEQA impact, these results should be presented and discussed in the EIR and the	The comment is noted. Please see MR-6 for more detail regarding traffic and LOS analysis. Please also see Figure 3.2-1: Bicycle/Pedestrian System, which shows the proposed signalized interection at Arnold Drive and Harney.

Commenter	Date	Letter	Comment	Response
			recommended mitigation measures, such as a signal at Arnold and Harney, should be included.	
Greg Carr	Aug-22	C133-11	11. In the discussion of the impacts of the Reduced Development Alternative, the statement is made that State Law stipulates that the plan must ensure financial feasibility. This is not true. Please include the exact language from the legislation enabling the County to develop a specific plan for SDC.	The comment is noted. Per Government Code Section 14670.10.5, "The planning process shall facilitate the disposition of the property by amending the general plan of the county and any appropriate zoning ordinances, completing any environmental review, and ***addressing the economic feasibility of future development***. [Emphasis added.] (2) In carrying out the land use planning and disposition process pursuant to the agreement, the director and county shall provide for the expeditious planning of future land uses for the site and an opportunity for community input, with the intent to reduce uncertainty, increase land values, expedite marketing, and maximize interested third-party potential purchasers."
Greg Carr	Aug-22	C133-12	12. In spite of the fact that CEQA allows the option of addressing cumulative impacts based upon future development under the County General Plan, the fact that there are two major land use initiatives underway involving amendments to the General Plan suggest that this is not the best approach. The Draft Springs Specific Plan calls for significant additional growth in the SDC vicinity and the Draft Housing Sites Rezoning calls for establishing additional affordable housing sites in the valley. The Public Review Drafts and DEIRs for these two plans have been released and should be included in this analysis.	The comment is noted. Please see MR-3 for more information on the level of detail and analysis included in a programmatic DEIR.
Greg Carr	Aug-22	C133-13	In general, it appears that the preparers of the DEIR have used the comparison of the alternatives to rationalize approval of the proposed plan rather than to describe the differences among them, particularly in the discussion of the cumulative impacts of growth enabled by the plan.	The comment is noted. Please see MR-8 for more detail about the comparison of alternatives in the Draft EIR.

Commenter	Date	Letter	Comment	Response
Greg Guerrazzi	Friday, September 23, 202	C134-1	Sonoma County Planning Commission and Board of Supervisors and State Senators: I am a 28 year resident of Glen Ellen and lifelong resident of Sonoma County. My family has been in the County for over 100 years. Please do not support the SDC Specific Plan or Draft EIR, which are woefully inadequate and inaccurate. The County is legally required to respond to the below Draft EIR comments.	Thank you for the letter. The comment is noted. Please see MR-3 for an explanation of the level of detail appropriate for a programmatic EIR.
Greg Guerrazzi	Friday, September 23, 202	C134-2	Specifically, the traffic analysis lacks basis and is unrealistic. The size of the re-development must be scaled back to a realistic number of housing and commercial units to allow for an orderly and safe evacuation, such as proposed in the Historic Preservation Alternative. 1. On the night of October 8 & 9 it took us over an hour to evacuate Glen Ellen due to the Nuns Fire. Arnold Drive was gridlocked with cars, trucks and trailers shrouded in smoke. Hwy 12 was closed as the fire jumped the Hwy into Glen Ellen. 2. It is completely irresponsible to consider an emergency exit route from Arnold Drive to Hwy 12, as historically every wildfire has come from the east which where this “escape route” would lead residents to a wall of flames and gridlock due to the likely evacuation of Oakmont. 3. Proposing to shelter in place at the SDC campus is ridiculous as the wildfire will consume the new development as was the case in Glen Ellen and many Santa Rosa neighborhoods. 4. The Draft EIR does not adequately address the Vehicle Miles Travelled for the people and support required for 1,000 homes and 940 jobs, as this amount of traffic will overwhelm the two lane roads of Arnold Drive, Hwy 12, Bennett Valley and Warm Springs Roads. 5. How will evacuation and safety measure put in place since the 2017 and 2020 fires even begin to protect the lives of 5,000 additional people? 6. The Draft EIR does not adequately address the above items.	The comment is noted. Please see MR-4 for an explanation of the wildfire evacuation analysis, and MR-6 for more detail about methodology used to anaylze VMT.
Greg Guerrazzi	Friday, September 23, 202	C134-3	1. Environmental & Climate Impacts: The Draft EIR does not meet CEQA requirements. 2. The Draft EIR does not have conditions that will be legally enforceable such as a Mitigation and Monitoring Program. 3. The Draft EIR must be revised to align with the County’s own Climate Crisis Resolution. 4. The Draft EIR lacks realistic mitigation measures and conditions	The comment is noted. Please see MR-1 for an explanation of a "self-mitigating plan," and MR-9 for an explanation of how the County will enforce Specific Plan policies and Standard Conditions of Approval (as delineated in Appendix A of the Specific Plan).

Commenter	Date	Letter	Comment	Response
			to address the environmental and climate impacts of 1,000 homes and 940 jobs in a rural, wildlife corridor, setting.	
Greg Guerrazzi	Friday, September 23, 202	C134-4	1Historic Preservation Alternative ("Historic Alt"). The Draft EIR must be revised to adequately address the Historic Alt, as it is identified as "the environmentally superior alternative". 2. The Historic Alt meet the state's statutory objectives. The Draft EIR must be revised to include a detailed analysis of this alternative. 3. The Historic Alt is the plan the community supports and the County has been specifically directed by the State to follow community input and secure community support.	The comment is noted. Please see MR-8 for an explanation of why the historic preservation alternative does not meet the project objectives.
Greg Guerrazzi	Friday, September 23, 202	C134-5	Cumulative Impacts 1. The Draft EIR does not adequately assess the future impact of the Elnoka Development. 2. The Draft EIR does not adequately assess the Sonoma Valley infill housing. 3. The Draft EIR does not adequately assess the future development in Rincon Valley, such as the new development at Hwy 12 and Calistoga Road. 4. All of these above projects and more will increase traffic in the Hwy 12 Glen Ellen corridor especially during an emergency evacuation.	The comment is noted. Please see MR-3 for an explanation of the level of analysis appropriate to a programmatic Draft EIR. Further, the potential impacts to vehicular travel that may occur with the proposed Specific Plan are assessed using a VMT performance metric, which considers the amount of vehicular travel (measured in miles) that would be generated on a per-person basis, rather than a LOS metric which measures the amount of traffic congestion and delays occurring on a given roadway or intersection. VMT is assessed using the Sonoma County Transportation Authority's SCTM19 travel demand model. While regional travel and land use characteristics play a key role in how the model estimates VMT, the influences of individual development projects such as those listed by the commenter would not measurably influence the number of miles that future residents and employees within the proposed Specific Plan area drive on an average day. Stated another way, while

Commenter	Date	Letter	Comment	Response
				the projects would be expected to increase traffic volumes, they would not individually or collectively result in substantial changes to existing or cumulative travel patterns with respect to the number of daily miles that residents or employees typically drive. The DEIR transportation analysis is consistent with guidance provided by OPR on how to assess potential VMT impacts, and examines the per-person VMT levels that the proposed Specific Plan would result in as compared to existing levels as well as levels forecast to be present under cumulative conditions. In summary, while the approved and proposed development identified by the commenter would be expected to increase traffic volumes in the Sonoma Valley area (and potentially have an effect on congestion levels), they would have no discernible effect on the proposed Specific Plan's VMT analysis as presented in the DEIR.
Greg Guerrazzi	Friday, September 23, 202	C134-6	Water & Power 1. The Valley of the Moon Water District has contacted me to advise we must reduce or water consumption by 20%. The Draft EIR must be revised to address how the water demand of 1,000 homes and 940 jobs will impact the current users. 2. The Draft EIR must be revised to specifically analyze the water sources to be utilized to support 1,000 homes and 940 jobs/commercial activities during a wild fire event. 3. The Draft EIR must be revised to fully evaluate the assumptions made to assert that the water resources are available for this size of development. If they are why and I being asked to reduce my use by 20%? 4. During the recent heat wave, we were instructed to not use electrical power between 3 PM and 10 PM and this situation will recur. The Draft EIR does not adequately address how the power grid can accommodate 1,000 homes and 940 jobs/commercial activities without impacting the existing residents and commercial uses.	The comment is noted. Please see MR-5 for an explanation of the water supply analysis performed for this Proposed Plan, and MR-3 for an explanation of the level of detail appropriate for inclusion in a programmatic EIR. Electrical power demand during extreme heat waves is a statewide strain on the electric grid; thus, analysis of these effects is not included in this Draft EIR. As per analysis of electrical capacity in Impact 3.15-1 on page 479 of the Draft EIR, "'service to this facility will be made in accordance with PG&E's Electric Rules and Tariffs on file with the State of California Public Utilities Commission at the time the Applicant applies for service and in

Commenter	Date	Letter	Comment	Response
				accordance with any required Land and Environmental reviews.'"
Greg Guerrazzi	Friday, September 23, 202	C134-7	Wildlife Corridor & Sonoma Creek 1. The Draft EIR does not adequately address, and it must be revised as to how 1,000 homes and extensive commercial activity will impact a crucial wildlife corridor. 2. The Draft EIR does not adequately address, and it must be revised as to how 1,000 homes and extensive commercial activity will impact the crucial water source of Sonoma Creek for wildlife and salmon restoration. Ultimately the Draft EIR will need to be revised to address the project selected by the State for redevelopment of SDC. The Historic Alt must be analyzed as the most likely scenario.	This comment is noted. Please see MR-8 in regards to the historic preservation alternative and MR-7 in regards to the adequacy of impacts on wildlife movement or disagreement with analysis/findings.
Greg Kamman	26-Sep-22	C135-1	I am a hydrologist with over thirty years of technical and consulting experience in the fields of hydrology, geology, and hydrogeology. I have been providing professional hydrology and geomorphology services in California since 1989 and routinely manage projects in the areas of surface- and groundwater hydrology, water supply, water quality assessments, water resources management, and geomorphology. Most of my work has been in the Coast Range watersheds of California. My areas of expertise include: characterizing and modeling watershed-scale hydrologic and geomorphic processes; evaluating surface- and ground-water resources/quality and their interaction; assessing hydrologic, geomorphic, and water quality responses to land-use changes in watersheds and causes of stream channel instability; assisting and leading in the development of CEQA environmental compliance documents and project environmental permits; and designing and implementing field investigations characterizing surface and subsurface hydrologic and water quality conditions. I earned a Master of Science degree in Geology, specializing in	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			sedimentology and hydrogeology as well as an A.B. in Geology from Miami University, Oxford, Ohio. I am a Certified Hydrogeologist (CHG #360) and a registered Professional Geologist (PG #5737) in the state of California. A copy of my resume is attached.	
Greg Kamman	26-Sep-22	C135-2	I have reviewed the Draft Environmental Impact Report (DEIR) for the Sonoma Developmental Center Specific Plan in Sonoma County, California, and evaluated if the project may impact surrounding properties and the environment. Specifically, I have reviewed the DEIR and technical appendices. Based on my review of these materials, it is my professional opinion that the DEIR is inadequate in evaluating the potential significant impacts of project actions on hydrology, water quality and biological resources. The rationale for this opinion is based on multiple findings presented below.	This comment is noted. There is no specific assertion of howthe DEIR is inadequate, therefore no futher response is required.

Commenter	Date	Letter	Comment	Response
Greg Kamman	26-Sep-22	C135-3	1. There are several local and state regulations applicable to the SDC Specific Plan that are not included in the Hydrology/Water Quality Regulatory Setting section (3.9.1 on pg. 270) of the DEIR. These include the following. a. Sonoma County General Plan 2020 Policy C-WR-2f, which states, “Discretionary projects in Urban Service Areas, where the density of development thus extent of impervious surface area is greater than in Rural Communities, shall be required to maintain the site’s pre-development recharge of groundwater to the maximum extent practicable/feasible. Develop voluntary guidelines for development in Rural Communities that would accomplish the same purpose. (GP2020 Revised)”. b. Sonoma County General Plan 2020 Policy C-WR-4b, which states, “Use water effectively and reduce water demand by developing programs to: (1) Increase water conserving design and equipment in new construction, including the use of design and technologies based on green building principles; (2) Educate water users on water conserving landscaping and other conservation measures; (3) Encourage retrofitting with water conserving devices; (4) Design wastewater collection systems to minimize inflow and infiltration; and (5) Reduce impervious surfaces to minimize runoff and increase groundwater recharge. (GP2020)”. c. Sonoma County General Plan 2020 Policy C-WR-4f, which states, “To minimize generation of wastewater and encourage conservation of Coastal water resources, require use of water saving devices as prescribed by the local water provider in all new developments. (New)”. d. California statutes and regulations (e.g., California Code, Division 3. Dams and Reservoirs) related to dam safety.	This comment is noted. The Proposed Plan is compliant with all relevant regulations and plans including the County Municipal Code and the General Plan.

Commenter	Date	Letter	Comment	Response
Greg Kamman	26-Sep-22	C135-4	As elaborated below, the missing County policies and state regulations are directly relevant to the water supply and flood hazard assessments for the project as elaborated below. The DEIR Project Description is not detailed enough to evaluate potential impacts on hydrology and the environment. The DEIR does not contain a project plan with sufficient detail about land use change to complete the necessary hydrologic and water quality assessments to determine impacts from the project. Due to the lack of an adequate Project Description, I don't agree with the DEIR determinations that potential hydrologic and water quality impacts are less than significant and that no mitigation measures will be required for the following reasons. a. Impact 3.9-1 - The DEIR states that potential impacts to federal, state, and local water quality standards are less than significant. However, the DEIR has not analyzed how changes in site runoff and associated erosion potential will change. Based on my experience, this analysis would require detailed hydrologic and hydraulic modeling that incorporates all changes in land use (esp. impervious surfaces) and runoff estimates to determine where and by how much flow rates (and erosion potential) may impact receiving waterways both on- and off-site. BMPs and other measures would then be designed correctly to mitigate these impacts. This is the primary way the DEIR can address the significance of the impact before and after mitigation.	This comment is noted. The Proposed Plan is compliant with all relevant regulations and plans including the County Municipal Code and the General Plan. Please see Section 3.9 on the hydrology impacts of the Proposed Plan.
Greg Kamman	26-Sep-22	C135-5	b. Impact 3.9-2 - The DEIR states that the project will not interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin and associated potential impacts are less than significant. However, the DEIR does not contain any detailed technical analysis of how the project development will alter groundwater recharge. The DEIR has an obligation to describe any potential changes in recharge. Simply stating that BMPs that support groundwater recharge will be integrated into the Project does not demonstrate that they will be sufficient to mitigate potential impacts.	This comment is noted. Please see Section 3.9 on the hydrology impacts of the Proposed Plan.

Commenter	Date	Letter	Comment	Response
Greg Kamman	26-Sep-22	C135-6	c. Impact 3.9-3 - The DEIR states that Project development would not substantially alter the existing drainage patterns or result in substantial erosion and flooding on- or off-site or contribute runoff that would exceed the capacity of existing or planned storm drain systems. Thus, the DEIR concludes that associated impacts are less than significant. These conclusions are not substantiated as the DEIR does not present results from any hydrologic on hydraulic analyses to demonstrate to what degree the project may increase runoff rates and erosion potential from new or improved development. The assumption that adhering to County mandated BMPs will reduce flooding and erosion impact to below significant has not been demonstrated. Instead, the DEIR defers analysis and mitigations for hydrologic and water quality impacts.	This comment is noted. Please see Section 3.9 on the hydrology impacts of the Proposed Plan.
Greg Kamman	26-Sep-22	C135-7	Impact 3.9-4 – The DEIR states that the potential to expose people and structures to significant risk or loss, injury or death involving flooding from dam failure is less than significant. However, this is completely contrary to the California Division of Safety of Dams (DSOD) conclusions about Project dam safety presented in Section 3.9.2.5 (Flooding – Flooding from Dam Failure, pg. 286-287) of the DEIR. Page 286 of the DEIR states, "The DSOD has classified the downstream hazard of a failure at Fern Lake as high". On page 287, the DEIR states, "The DSOD has classified the downstream hazard of a failure at Suttonfield Lake as extremely high." These statements alone suggest this potential impact is not "less than significant". The DEIR does present inundation maps associated with these failures but provides no further analysis on how these potential impacts will be mitigated apart from the statement (pg. 287) "Specific geotechnical investigations of the dams at Fern and Suttonfield Lakes would need to be conducted to determine their potential for failure." However, this is a deferred analysis, which does not support the findings of "less than significant" impacts and "not applicable" mitigations. Impact 3.9-5 - The DEIR states that implementation of the Project would not conflict or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Thus, the DEIR concludes that associated impacts are less than significant. However, for the same reasons presented above (items 2a. – 2c.), the DEIR does not present any technical justification for this determination and should be considered inadequate and incomplete.	This comment is noted. Please see response to comment B11-271.

Commenter	Date	Letter	Comment	Response
Greg Kamman	26-Sep-22	C135-8	An important analysis of the SDC project is the determination if there are sufficient water supplies to meet proposed project water demands. Appendix D of the DEIR presents the results of this analysis. Based on my review of Appendix D, I've identified several mistakes and other issues that suggest the DEIR does not demonstrate there is sufficient water supply to meet future (2045 full buildout) demands. Table 2 (pg. 14) of Appendix D indicates that estimated Project annual water demands by the year 2045 will be 342 acre-feet per year (AFY). Table 9 (pg. 31) of Appendix D indicates that available annual supply that will be 100% reliable for the period 2030-2045 is 356 AFY. Comparison of available and reliable water supply (356 AFY) to full buildout demands (342 AFY) suggest there is very little margin for error in terms of future water supply management. The DEIR supply estimate is also concerning to me in that the historic (1969-2007) water use (demands) for the SDC averaged 622 AFY and peaked at 1,143 AFY in 1986 (pg. 12, Appendix D). I'm suspect that the historic SDC water use is nearly twice the volume of estimated future full buildout (2045) Project water demands, especially when the Project proposes to build an additional 1000 residential units and hotel and reoccupy and/or expand the commercial and industrial uses (see Table 1, pg. 13 of Appendix D). Even with conservation measures, I would expect that Project water demands would be similar to if not larger than historic use. The next paragraphs elucidate this opinion.	This comment is noted. Please see MR-5 on the adequacy of the Water Suppy Assessment.
Greg Kamman	26-Sep-22	C135-9	In reviewing and cross-checking the data and information presented in Tables 1 and 2 of Appendix D, I identified several questionable results that suggest the DEIR water demands are significantly underestimated. These findings are as follows. a. Table 2 (pg. 16 of Appendix D) only provides employee water use estimates for the proposed hotel. Water use by guests staying in the 100,000 square foot hotel is not accounted for in the annual water demand estimate. Incorporating guest water use into the demand estimate could easily result in total annual project demands greater than reliable supply. b. To better evaluate the DEIR demand estimates, I created Table A (below), which merges data from Tables 1 and 2 in DEIR Appendix D. In doing this exercise, I identified a significant math error in the DEIR demand estimates for General Commercial, Office, Public/Industrial, and Research & Development land uses presented	This comment is noted. Please see MR-5 on the adequacy of the Water Suppy Assessment.

Commenter	Date	Letter	Comment	Response
			in Table 2 of Appendix D. When independently calculating water demands using the 2045 land use areas and Water Use Factors provided in Appendix D, the respective 2045 water demands for the General Commercial, Office, Public/Industrial, and Research & Development land uses result in values that are two orders of magnitude higher than those reported, which results in an increased annual Project water demand of 9846 AFY (see Table A).	
Greg Kamman	26-Sep-22	C135-10	The Permit Sonoma website1 provides guidelines (8-2-1 Water Supply, Use and Conservation Assessment Guidelines) for the preparation of Water Supply Assessments. The purpose of this policy is to provide guidance to applicants and their representatives on how to prepare a Water Supply, Use, and Conservation Assessment (henceforth, the "Assessment"). The Assessment may be a standalone document, or supplemental to a hydrogeologic study, Zero Net Use report, or other water supply related report. These guidelines are intended for discretionary and ministerial projects. Discretionary projects that are dependent on groundwater or surface water will typically require an Assessment with the use permit application. The Assessment will inform the environmental review process and conditions of approval. The authority of the Assessment falls under Sonoma County General Plan, Water Resource Element Goals WR-2 and WR-4, Objective WR-4.1, WR-4.2, and WR-4.3, and Policies2 WR-2c, WR-2d, WR-2e, WR-4b, and WR-4f. Therefore, the DEIR Water Supply Assessment (Appendix D) should adhere to County Guidelines. Appendix A to the County's Guidelines has water use estimates for residential, landscape, agricultural, and Commercial and Industrial uses that are greater than those factors presented in Table 2 of Appendix D (see Table B). Applying the Sonoma County water use estimates to Project water demand estimates results in higher residential and irrigated area water demands than presented in the DEIR (see Table B below). In summary, correcting math errors and applying the Sonoma County guidelines water use estimates to the DEIR demand estimate tables results in a total annual Project water	This comment is noted. Please see MR-5 on the adequacy of the Water Suppy Assessment.

Commenter	Date	Letter	Comment	Response
			demand of 10,231 AFY, a values three times higher than reported reliable supply (356 AFY). This annual total demand will be even higher when hotel guest water use is considered.	
Hugo Dwyer	25-Sep-22	C136-1	By way of introduction, VOR – A Voice Of Reason - is a national non-profit founded in 1983. For nearly forty years, we have been advocating for high quality care and human rights for all individuals with intellectual and developmental disabilities (I/DD). I write you today on behalf of those individuals with the most severe and profound I/DD and autism in California, in regard to the county's plans for the property that was once home and community for many of our loved ones with I/DD at the Sonoma Development Center. It is my understanding that the property is being divided and parceled out to property developers and investors. We would like to ask that you please keep a substantial portion of the property available to providers of services for those individuals most deeply impacted by I/DD and autism, in keeping with the original intent of those who first developed this property. Sonoma County is known around the world for its beauty, its amazing vineyards, and for its people. Forest fires may change the landscape. Drought may ruin a season of grapes. But the people of Sonoma County have a chance to retain their heart, their soul, and their dignity, by determining to continue to provide for California's most vulnerable citizens. Business schools used to teach about the value of "Goodwill". You cannot set a price on it, but it is an asset that can bring greater value to all of the other assets a business, or a county, holds. We urge the	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			Sonoma County commissioners to bring that unique and rare value to their community, and to maintain the goodwill that they have considered one of the many blessings that have long graced Sonoma County and its families.	
J.E. Airey	Monday, September 26, 2022	C137-1	Questions About the Draft EIR Demolition Impact: Assessment needed of the considerable cost and environmental impact of turning all the buildings on the east side of Arnold Drive into rubble and hauling it away. Where will the tile roofs and fire resistant plaster walls garbage go ? What is the impact of hundreds of tons of this material in the land fill? Reuse , renovation and repurpose are the future on planet earth which is being covered with discarded garbage!! Water: Water availability concerns are at a crisis level. What exactly is the the water source for 1000 new homes or even for 450 new homes in the draft EIR? Housing versus Houses: Why is building new houses proposed when the SDC housed 3000 in existing structures? Why not renovate, restore and repurpose the historic, beautiful buildings on the SDC campus before any new construction? The EIR must be modified to insure the first use of existing buildings. Fire Prevention: New home construction is a magnet for wild fires. What special fire resistant construction will be used if these homes are built? Will his include fire resistant tile roofs and heavy plaster walls like those found on most of the historic buildings which were built to last and have lasted? Wildlife: The SDC campus is an extension of an important wildlife	This comment is noted. Please see MR-5 in regards to the lack of, or inadequacy of, or disagreement with water supply analysis and MR-7 in regards to the adequacy of impacts on wildlife movement or disagreement with analysis/findings. Please see MR-3 in regards to the level of detail of analysis and programmatic nature of the DEIR and MR-8 in regards to the historic preservation alternative.

Commenter	Date	Letter	Comment	Response
			corridor and passage between Sonoma Mountain and the Mayacamas Range. The area must remain open to wildlife coming through Jack London Park and traveling to the Audubon and Oak Hill preserves.	
Jack Allan	Friday, September 23, 2022	C138-1	I have a comment on the accessibility of the open space during construction. How will this work and will there be access throughout the building process from Arnold drive to the open spaces on the west side of the campus? For example the parking spaces on Wilson which many cyclists use as their starting point. This is a crucial entry point for plenty of folks who do not wish to park at Jack London and enter from the other side, as well as the current residents of the Glen Ellen/Eldridge neighbourhood.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
jason enzenzensperger	Monday, September 26, 2022	C139-1	The land was deeded in perpetuity to the feeble minded. Please don't sell it to the greedy.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Jerry Bernhaut		C140-1	Thank you for the opportunity to submit further comments on the recently issued Sonoma Developmental Center (SDC) Specific Plan and Program Environmental Impact Report (PEIR). The following comments are submitted on behalf of the SDC Campus Project 1. Permitted Uses in Preserved Open Space It has come to our attention that in the Draft Specific Plan, Table 4-3, Permitted Uses, under Preserved Open Space, the following uses are included as P, permitted: Agricultural Crop Production and Cultivation Agricultural Processing Animal Keeping: Confined Farm Animals Animal Keeping: Farm Animals Farm Retail Sales Farm Stands Indoor Crop Cultivation Mushroom Farming Nursery, Wholesale Timberland Conversions, Minor Tasting Rooms In the Draft EIR, Section 3.4.3.4 Impacts: "Summary of Proposed Plan The Proposed Plan would include residential development in the following districts: Marker Place, Core North Residential, Historic Core, Fire House Commons, Core South Residential, Creek West Residential, Agrihood, and Eldridge North. Approximately 1,000 housing units are planned to be developed throughout these districts as well as commercial, institutional, and public land uses and an Highway 12 connector road. The existing undeveloped portions of the Planning Area would be designated as Preserved Open Space land use. Development is not proposed to occur within Preserved Open Space, where current daytime recreational uses would continue." (emphasis added)	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Jerry Bernhaut		C140-2	The DEIR concludes as follows: "3.4-1 Impact. Implementation of the Proposed Plan would not have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. (Less than Significant)" (DEIR p.241) While residential development is not proposed within Preserved Open Space, the permitted uses identified in Table 4-3, including Agricultural Crop Production and Cultivation and Timberland Conversions, clearly contemplate vineyard development. Vineyard development involves deep soil disturbance, vegetation and tree removal, with likely significant habitat impacts for Special Status Species Yellow Legged Frog and California Giant Salamander, listed as present on SDC land in DEIR Table 3.4-1. The deep ripping of the soil to plant grape vines will be especially harmful to salamanders, who live part of their lives in underground tunnels.	This comment is noted. Please see MR-3 in regards to the level of detail of analysis and programmatic nature of the Draft EIR.
Jerry Bernhaut		C140-3	"Agricultural Processing" likely is meant to permit wineries. This reading is supported by permitting tasting rooms. These uses, in addition to habitat destruction, will also involve construction activities, vehicular traffic. Farm retail sales will generate vehicular traffic. Keeping farm animals raises concerns about impacts on wildlife. The Relevant Policies and Implementing Actions listed in Section 3.3.3.3 of the DEIR, do not adequately address the reasonably foreseeable significant impacts on wildlife likely to result from these permitted uses. Allowing these permitted uses is not consistent with the reasonable understanding by the public of what is meant by protecting the preserved open space. While the SDC Campus Project supports organic food crop agriculture in a specifically designated approximately five -acre area in the southern end of the east open space, we do not support the permitted activities in the Preserved Open Space listed in Draft Specific Plan Table 4-3. Food agriculture in this limited area will provide a public benefit without significant impacts on biological resources.	This comment is noted. Please see MR-3 in regards to the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Jim Price,	Saturday, September 24, 2022	C141-1	I have lived in the Springs of Sonoma Valley since 2008 when my late wife Pamela and I moved to the Sonoma Valley. I am a homeowner, a Viet Nam era Army veteran and a graduate of UC Santa Cruz with degrees in Economics and Planning and Public Policy in Environmental Studies. I'm also a member the Sonoma Land Trust and and avid hiker of the Sonoma Valley Parks and Jack London State Park as well as the lands of the SDC currently owned by the State. I have a love of this land and place as well as the people of this community that I call home. The SDC is a public treasure that demands our best efforts at preservation and protection. That said, I support the North Valley Municipal Advisory Council's vision for future development at the SDC. I do not support the Sonoma Developmental Center (SDC) Specific Plan as proposed by Permit Sonoma and find that the DEIR is inadequate to meet the requirements of the California Environmental Quality Act. While I'm not a resident of Glen Ellen, I nonetheless have been actively following the advocacy the North Valley Municipal Advisory Council have performed on behalf of the citizens of Glen Ellen and all of Sonoma Valley and I strongly urge you to follow their recommendations. I will confine my comment to one important issue that I have not seen addressed in the DEIR: The conflicts created by domestic animals that a population of ~ 2,400 people and their pets will have on the wildlife corridor and other native species.	This comment is noted. Please see MR-7 in regards to the adequacy of impacts on wildlife movement or disagreement with analysis/findings.
Jim Price,	Saturday, September 24, 2022	C141-2	1) What specific empirical studies has Permit Sonoma and/or their consultants conducted to determine the probable effects of domestic animals (specifically cats, dogs, reptiles, amphibians) on the wildlife known to use the corridor and other native wildlife know to inhabit the SDC and environs? 2) If such studies have been conducted where are they available for review? 3) If such studies have been conducted what mitigating measures have been identified for each species of domestic animal studies?	This comment is noted. Please see the Open Space Management Framework, Policy 2-14 of the Specifci plan which prohibits all unleashed outdoor cats, and restrict off-leash dogs and other domestic animals to private fenced yards and designated areas.

Commenter	Date	Letter	Comment	Response
Jim Price,	Saturday, September 24, 2022	C141-3	In the Specific Plan, it has been suggested that cat owners will be required to keep their cats on leashes as a mitigating measure. At what specific locations in California has this strategy been implemented? What studies have been done to suggest that such a stratagem works? How would this be enforced and by whom? What penalties will the cat owner face for not following the mitigation measure? Can these measures be overturned by subsequent Homeowners Associations that might be expected to be constituted at a later date? How do you ensure these measures in perpetuity? 5) Cats are know to carry disease that may have ill effects on our native mountain lions and bobcats that are known to frequent the corridor and the environment in and around the SDC. What specific diseases has the DEIR considered? What specific mitigating measures are recommended to keep our wild cats safe from these diseases? 6) In my own experience, dogs have a keen sense of hearing a smell and it is not unusual for them to bark at wildlife that strays onto their owner's property. What studies has the DEIR relied upon to inform them of the probable effects that domestic dogs will have on the wildlife corridor? What mitigating measures have proven effective at preventing domestic dogs from barking at wildlife expected to use the wildlife corridor? How and who will be responsible for enforcing your recommended mitigating measures? 7) What diseases do domestic dogs carry that may be threat to native animals that are know to use the wildlife corridor? What mitigating measures have proven effective are preventing the spread of these diseases to the wildlife know to use the corridor?	This comment is noted. The Open Space Management policies of the Specific plan are meant to promote a balanced approach to the open space in the Planning Area, with an emphasis on conservation, biological resources and recreational access, and to provide guidance and requirements that prepare the Planning Area for the natural and man-made hazards that future development may face.
Jim Price,	Saturday, September 24, 2022	C141-4	8) Domestic reptiles and amphibians are known to carry diseases that may have deleterious effects on native species. What studies have been done to identify these diseases? What mitigating measures are recommended to prevent the transfer of these diseases to native species? What enforcement measures are contemplated? How and who will be responsible for endorsement? 9) Light pollution may have a negative impact on the wildlife corridor. What light mitigation measures are contemplated at the core campus to limit these effects? What science is/or will Permit Sonoma and/or their consultant use to identify and mitigate these effects? 10) Lions and Bears are native to the SDC. There is a strong probability that domestic animals may be considered food by these apex predators. What protocols will be put into place to ensure	This comment is noted. The Open Space Management policies of the Specific plan are meant to promote a balanced approach to the open space in the Planning Area, with an emphasis on conservation, biological resources and recreational access, and to provide guidance and requirements that prepare the Planning Area for the natural and man-made hazards that future development may face.

Commenter	Date	Letter	Comment	Response
			native apex predators are not euthanized because they kill domestic animals? What measure will human pet owners be required to follow to mitigate domestic animals from falling pray to apex predators? How and who will be responsible for enforcement of these protocols/laws?	
Johanna M. Patri	22-Sep-22	C142-1	Please address the following questions and issues regarding the analyses contained in the Sonoma Developmental Center Specific Plan Draft Environmental Impact Report (DEIR) and its compliance with the California Environmental Quality Act (CEQA). Project Description While the DEIR may satisfy Section 15124 of the CEQA Guidelines under Section 2 Project Description, the project description is the foundation upon which environmental analysis is constructed and the DEIR project description is inadequate. The DEIR project description does not contain enough detailed information or all of the components of the project as identified in the Specific Plan as required by CEQA provisions and case law to allow the public, reader, or decision makers to understand thoroughly the components of the project and the types and intensities of the project's environmental effects and impacts. How does the DEIR adequately address all the components and potential environmental impacts of the project as the DEIR project description contains only conceptual and board-stroked project concepts? Explain why most of the DEIR project description refers to historical facilities, data, infrastructure, conditions and assumptions, including, but not limited to: e.g.	This comment is noted. Please see MR-3 in regards to the level of detail of analysis and programmatic nature of the Draft EIR

Commenter	Date	Letter	Comment	Response
Johanna M. Patri	22-Sep-22	C142-2	2.1.2.2 Transportation: Does not include any project description for proposed or additional local or regional public transportation to serve the proposed total buildout of approximately 2,400 residents and 940 jobs – approximately twice the population of current Glen Ellen, CA. 2.1.2.4 Utility Infrastructure: Wastewater: ends with "assuming that additional connections can be made to the main sewer line at the south side of the site" with no verifiable conclusions; Stormwater: refers to "additional measures will ensure" is speculative without describing what those measures are or would be; Natural Gas and Electricity: refers to a system of distributed energy resourced (DERS) that could include solar, wind, geothermal, and methane gas co-generation is speculative without specifics; such facilities as wind machines, solar arrays, and geothermal systems cannot be evaluated, quantified, or analyzed. 2.1.3.1 SDC Core Campus: If all new development is proposed to be located in the already previously developed Core Campus, where in the project description are activities associated with demolition including a demolition plan, travel routes for off-haul, disposable sites, recycling, etc.?	This comment is noted. Please see MR-3 in regards to the level of detail of analysis and programmatic nature of the Draft EIR
Johanna M. Patri	22-Sep-22	C142-3	The DEIR does not have sufficient information in the project description about the actions and activities that would occur under the proposed project and is misleading and incomplete to enable the public and decision makers to understand the logic and facts that link the proposed project to the intensity of the project and the environmental impact conclusions contained in the DEIR. When is construction of the proposed project expected to be initiated; how long will it take to complete construction; when would project operations, occupancy, use begin? What is the quantitative measure of the intensity of each component? e.g. • square footage of commercial space; • width and linear feet of new roadways; • number and size of windmills or solar arrays; • limits and quantities of grading, including material imported or exported What is the expected schedule and details for the phases of build-out?	This comment is noted. Please see MR-3 in regards to the level of detail of analysis and programmatic nature of the Draft EIR

Commenter	Date	Letter	Comment	Response
Johanna M. Patri	22-Sep-22	C142-4	Hotel Overly Zone Allowing for a 120-room Hotel Where in the DEIR is the project description and analysis of the proposed 120-room hotel, including, but not necessarily limited to: VMT Analysis: The DEIR states: "Given the programmatic nature of the Proposed Plan, all potential future development within the Proposed Plan boundaries is included in the VMT analysis." Where is the analysis and data for tourist traffic?	This comment is noted. Please see MR-3 in regards to the level of detail of analysis and programmatic nature of the Draft EIR
Johanna M. Patri	22-Sep-22	C142-5	Housing Allocations and Build-out Population The DEIR states: "According to the Final 2023-2031 RHNA, ABAG has determined that unincorporated Sonoma County's fair share of regional housing needs for the 2023 to 2331 period would be 3,881 units. Approximately 1,632 of these units would be allocated as housing affordable to very low- and low-income households." This is a ratio of approximately 42% of housing needs allocated to very low- and low-income households as determined by ABAG. The Specific Plan proposes a total buildout of 1,000 housing units, but it appears that only 283 units are designated as low-income housing units or a ratio of approximately 28% units are low-income housing units. How does the DEIR justify this allocation given the counties need for housing very low- and low-income households? How does the DEIR justify a build-out population of 2,400, twice the size of the current population of Glen Ellen?	This comment is noted. Please see page 376 of the DEIR for a discussion on the Proposed plan's role in meeting the very low and low income household portion of the RHNA.
Johanna M. Patri	22-Sep-22	C142-6	Future and Additional Environmental Review Analysis Under CEQA Provisions with Mitigation Measures and a Verifiable Mitigation Monitoring Plan The proposed Sonoma Developmental Center Specific Plan provides a vision for the future possibilities of development in the defined planning area and utilizes a Programmatic EIR. While Government Code section 65457 may exempt from further CEQA requirements, subject to certain exceptions, residential development projects if they are consistent with a specific plan for which an EIR has been certified, it does not exempt other types of development such as commercial and recreational development. What additional environmental review will be required for all the commercial, retail, educational, medical, office, administration, tourist-serving, and recreational development components as proposed in the Sonoma Developmental Center Specific Plan?	This comment is noted. Please see MR-3 in regards to the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Johanna M. Patri	22-Sep-22	C142-7	Provisions and Analyses of Adequate Alternatives to the Project, While CEQA establishes no categorical legal imperative as to the scope of alternatives to be analyzed, an EIR must describe a reasonable range of alternatives to the project that could feasibly attain most of the basic objectives of the project while avoiding or substantially lessening any of the significant effects of the project. The DEIR fails to provide and evaluate a reasonable range of alternatives with meaningful detail analysis. Why is an alternative project that best fits the Glen Ellen and Sonoma Valley communities not evaluated? This would consist of a smaller project with a more robust equation of affordable housing units over market-rate housing, elimination of any hotel project and reducing commercial development as these types of development exist in nearby communities. While tourism may seem to have a positive impact on employment opportunities and revenue to governmental jurisdiction coffers, the effects of the tourist industry as it regards the distribution of revenue among the different social groups must be analyzed. The DEIR fails to analyze the impacts of tourism on the environment, the wildlife resources and income inequality. An Alternative Project must be presented and analyzed with more educational and community facilities and benefits resulting in higher-paying job opportunities with the goal of effective economic distribution policies designed to improve the living standards of the work force.	This comment is noted. Please see a discussion of the rationale for determining the alternatives on page 524 of the DEIR. Case law suggests that the discussion of alternatives need not be exhaustive. CEQA Section 1 5126.6(f) states that the alternatives in an EIR should be governed by a "rule of reason." The alternatives addressed the two impacts the DEIR identified: transportation (Impact 3.14-2), and historic resources (Impact 3.5-2).
Johanna M. Patri	22-Sep-22	C142-8	How does the DEIR justify a development model, which consists primarily of lower-income paying jobs with no provisions that ensure employee housing on the Sonoma Development Center campus and would require those workers to live outside of the community and commute long distances, as a worthy or sustainable model. Why are not: • a reduced Development Alternative project with a minimum of 50% affordable housing; and • an Historic Preservation Alternative Project prepared with a sufficient degree of analyses to provide decision makers with information that enables them to evaluate and review environmental, aesthetic and community-oriented superior projects thoroughly? Where is the substantiated, quantifiable, and verifiable evidence, data, and analyses in the DEIR that the project objectives cannot be met with reduced development and robust historic	This comment is noted. Please see a discussion of the rationale for determining the alternatives on page 524 of the DEIR. Case law suggests that the discussion of alternatives need not be exhaustive. CEQA Section 1 5126.6(f) states that the alternatives in an EIR should be governed by a "rule of reason." The alternatives addressed the two impacts the DEIR identified: transportation (Impact 3.14-2), and historic resources (Impact 3.5-2).

Commenter	Date	Letter	Comment	Response
			preservation of the existing campus? Are not the outlined objectives broad enough that a reasonable, less impacting range of alternative projects can be analyzed?	
Johanna M. Patri	22-Sep-22	C142-9	Travel Demand Management Plan (TDMP) Transportation Mobility and Access Goal 3-1 and Policy 3-4.2 are totally inadequate to address the provisions for an effective TDMP. The DEIR does not provide an adequate and verifiable Travel Demand Management Plan (TDMP) with Best Employer-Based Practices and Implementations as encouraged by Caltrans to significantly reduce Vehicle Miles Traveled (VMT) and reduce green-house gases and improve air quality by providing employees with: • Financial incentives such as transit passes for using Sonoma County Transit routes; • Transportation information; • Employer-provided shuttle buses and vanpools; • Ride-sharing opportunities; • Transportation options; • Dedicated employee on-site parking spaces for carpoolers; • Staggered work hours and flexible scheduling; • Compressed workweek; • Commute during off-peak times of day; • Affordable employee on-site housing; • Secure workplace parking for bikes, as well as shower and locker facilities for those who bike and walk to work; and • Guaranteed-ride-home for unplanned trips home.	This comment is noted. Please see MR-6 in regards to the traffic analysis.

Commenter	Date	Letter	Comment	Response
Johanna M. Patri	22-Sep-22	C142-10	Evaluation of Vehicle Miles Traveled (VMT) for Hotel Visitors The Technical Advisory on Evaluating Transportation Impacts in CEQA (April 2018) makes a clear distinction between "Trip-based" and "Tour-based" assessments of Vehicle Miles Traveled (VMT). The DEIR fails to assess VMT of Hotel Visitors. "A tour-based assessment counts the entire home-back-to-home tour that includes the project… a tour-based assessment of VMT is a more complete characterization of a project's effect on VMT. The DEIR fails to make any attempt to use such "tour-based" methods for hotel visitors. Because the proposed Specific Plan would enable a new hotel project, the DEIR must include and analyze all visitor trips from their beginning, ending at the hotel, and back home, as these trips are 100% "project induced". The DEIR fails to address the job-housing-vehicle miles traveled crises of Sonoma Valley, which is an example of why the State passed in 2013, SB743. It reflects a State Legislative mandate to more appropriately address the regional picture of traffic congestion management related to development and reduction of GHG emissions because of Vehicle Miles Traveled. The DEIR fails to analyze Vehicle Miles Traveled (VMT) and promote the State's smart mobility goals, thereby aligning with the County's long-range transportation plans and reduction of greenhouse gases. The DEIR fails to analyze traffic and the increase in VMT in sync with Caltrans' mission, vision, and goals to reduce statewide vehicle miles traveled (VMT) and to promote the State's smart mobility goals with only the availability of Arnold Drive, which bisects the Town of Glen Ellen.	This comment is noted. Please see MR-6 in regards to the traffic analysis.
Johanna M. Patri	22-Sep-22	C142-11	Conclusion The DEIR does not adhere to the basic principal of CEQA, which is simple: design, shape, and analyze the total project and sufficient alternatives to avoid significant impacts before deciding to certify an EIR and subsequently approve a project. The DEIR fails CEQA provisions which require the analysis and shaping of a project in quantifiable terms, not assumptions. Figuring it out later after certification of an EIR is neither a sound approach for the decision makers, the Lead Agency, the State, nor likely a defensible approach under CEQA. Thank you for your consideration and responses.	This comment is noted. Please see MR-3 in regards to the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Julie Cade	Monday, September 26, 2022	C143-1	Although the State mandates changes to the SDC, the recommended changes in this Specific Plan and the DEIR go far beyond what is desirable or wise. The increased groundwater usage due to additional population in an increasingly dry and hot climate; the increased traffic as new residents travel to Santa Rosa or Sonoma for goods and services, which will necessitate more roads, infrastructure, and vehicle miles traveled and will add to the difficulty and danger of driving on narrow, curvy, two-lane roads such as Bennett Valley and Warm Springs Roads and Arnold Drive (especially during evacuations); the addition of people and structures placed at risk due to more and larger wildfires; and the impacts on the rural nature of the area, will negatively affect everyone in the Sonoma Valley. The Proposed Plan is not the environmentally superior alternative. In 3.8-7, the DEIR specifically states that "the Proposed Plan would not expose people or structures to significant risk of loss, injury, or death involving wildland fires." This is patently not possible with the addition of thousands of new residents and buildings to the area! In 3.14-4, "Implementation of the Proposed Plan would not result in inadequate emergency access". This defies the experience of many in the Tubbs and Glass fires. In 3.16-1 and 3.16-2, the comments here are entirely understating the current and future wildfire risks and challenges of emergency response or evacuation plans.	This comment is noted. Please see MR-4 in regards to Ithe inadequacy or disagreement with wildfire evacuation analysis, MR-5 in regards to the lack of, or inadequacy of, or disagreement with water supply analysis, and MR-6 in regards to the traffic analysis.
Julie Cade	Monday, September 26, 2022	C143-2	Having evacuated in 2017 and 2020 from Oakmont in the Tubbs and Glass Fires and in each case, virtually being parked on the two-lane Highway 12 for hours in traffic while flames wrapped around us, we know beyond any doubt that more people feeding out to Highway 12 in an emergency will be a massive problem. There are already insufficient ways to leave the area, whether going towards Sonoma or Santa Rosa. Building more roads and emergency egress/access will take years and add to the fossil fuel usage/emissions, if these roads can ever be built (note that nothing has changed around Oakmont since the Tubbs fire to fix the egress concerns). Adding cars will only make things worse, risking more lives and increasing liability for the governmental parties involved in this decision. It seems this EIR was written without regard to how challenging and dangerous it is to live here. In 3.9-2 "Implementation...would not substantially deplete groundwater supplies…" Wells in the area are already going dry	This comment is noted. Please see MR-4 in regards to Ithe inadequacy or disagreement with wildfire evacuation analysis, MR-5 in regards to the lack of, or inadequacy of, or disagreement with water supply analysis, and MR-6 in regards to the traffic analysis.

Commenter	Date	Letter	Comment	Response
			and as yet, there is no monitoring of them by the County or water agencies. Adding 1000 + residents, new businesses, possibly including wineries (already heavy water users), hotels, and restaurants, will increase the draw on groundwater. The Specific Plan will deplete existing local residents' water availability at what is already a critical time of shortage.	
Julie Cade	Monday, September 26, 2022	C143-3	Why we are qualified to make these statements: We are ten-year residents of Oakmont. We lived in a house adjacent to the SDC property for a year while our Oakmont home was being remodeled. We walked daily on the grounds of the SDC and beyond and became acquainted with the natural beauty, charm and character of this rural area. Julie worked at the former Valley of the Moon Winery (now Abbot's Passage) and was a volunteer and then an employee of the former Quarryhill Botanical Garden (now Sonoma Botanical Garden). All of these experiences deepened our knowledge, understanding, and appreciation of the natural treasures of the area. Having lived in 17 towns and traveled to many parts of the world, we say with enthusiasm that the Sonoma Valley is unique for its history, scenery, and rural nature and must be preserved to the greatest extent possible. Accepting this Specific Plan at the Proposed Plan level would be disastrous for Sonoma Valley. The EIR needs to be updated based on climate change, wildfires, and water scarcity that have gotten worse since this one was written. Putting 1000-2400 additional residents in the area, no matter whether the homes are affordable or not, will create environmental damage and risk of the lives of the entire population of existing and new residents. If this Plan is in any way accepted, it should be at the lowest population increase level, "Historic Preservation Alternative", which will still create the significant issues highlighted above.	This comment is noted. Please see MR-4 in regards to the inadequacy or disagreement with wildfire evacuation analysis, MR-5 in regards to the lack of, or inadequacy of, or disagreement with water supply analysis, and MR-6 in regards to the traffic analysis.

Commenter	Date	Letter	Comment	Response
Kaitlyn Garfield	23-Sep-22	C144-1	Dear Sonoma County Board of Supervisors, Planning Commission, Permit Sonoma, Advisory Team and Consultant Team, My name is Kaitlyn Garfield, I am Housing Administrator at Housing Land Trust of Sonoma County (HLT). This letter represents HLT's public comments on the SDC Specific Plan draft. Thank you for all your time and hard work on creating this plan and we look forward to seeing the final result. HLT supports the plan's 25% inclusionary requirement for ownership units. We ask that ownership units at a variety of income levels are created, at values based on the economic framework and affordable housing needs at the time of project construction. HLT also supports the opportunity for developers to use density bonuses to increase the overall housing stock created.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Kaitlyn Garfield	23-Sep-22	C144-2	HLT strongly supports the requirement that all inclusionary units must be built onsite of the SDC campus and must be fully integrated into the community. Inclusionary units should be scattered not clustered together, and co-located with the market rate units. Inclusionary units should also be built concurrently with market rate units and be comparable in size, basic finish options, construction quality, and exterior design to adjacent market rate units. Onsite and integrated inclusionary housing has been shown to produce a host of individual and social benefits, including equality of access to resources, a more cohesive community of diverse citizens, less stigma and pushback, and greater upward mobility and wealth building for residents. HLT also strongly supports the requirement that all affordable units must be affordable in perpetuity. There is no benefit to short term affordability covenants on affordable homeownership units: the developer has the same cost, the city will either eventually lose or must fight to keep an affordable unit, and the community will inevitably end up with a smaller housing stock than they would with permanent affordability. A model that creates affordability in perpetuity by design without any future re-upping should be used.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
KATHLEEN FERRIS	26-Sep-22	C145-1	I write as a Glen Ellen homeowner and a water policy expert. I served as Executive Director of the Arizona Groundwater Management Study Commission, Director and Chief Counsel of the Arizona Department of Water Resources, and Executive Director of the Arizona Municipal Water Users Association. I am currently a Senior Research Fellow at the Kyl Center for Water Policy at Arizona State University. As explained below, the Draft Environmental Impact Report (EIR) for the Sonoma Development Center Specific Plan (Project) inadequately evaluates the potential hydrologic and water supply impacts of the Project.	Thank you for your comment letter. This comment is noted. Please see MR-5 regarding the Water Supply Assessment.
KATHLEEN FERRIS	26-Sep-22	C145-2	The Project and Valley of the Moon Water District (VOMWD) are located within the Sonoma Valley Subbasin that is designated under the California Sustainable Groundwater Management Act as a high priority basin because of the density of wells, groundwater reliance and documented impacts of declining groundwater levels.1 Water users in the Subbasin have already reported wells going dry and many residents are concerned about the long-term sustainability of the Subbasin's groundwater.2 As water levels drop and wells dry up, some Sonoma County officials have suggested a moratorium of new well drilling may be needed.3 Following a ruling by the California Court of Appeals, Sonoma County must now adopt standards for new well permits to ensure that new wells "do not harm resources that belong to everyone, including future generations."4 The Draft EIR acknowledges at page 296 that "there could be a significant impact on groundwater if it were drawn to serve the needs of new residents, visitors, and businesses in a way that would substantially impede with groundwater recharge." But the potential impacts are dismissed because "future development at SDC would use surface water . . . and not be reliant on groundwater." Yet the Draft EIR fails to analyze what might happen to those surface water supplies as drought and climate change continue. Additionally, because the Project is not well-defined, it is impossible to know if its development will impede groundwater recharge. Impacts on	The comment is noted. Please see MR-5 for imformation regarding the Water Supply Assessment and coordination with Valley of the Mood Water District.

Commenter	Date	Letter	Comment	Response
			the fragile Sonoma Creek seem all but ignored.	
KATHLEEN FERRIS	26-Sep-22	C145-3	The Planning Area is insufficient to consider the impacts of the Project. The Draft EIR limits its evaluation to the 945-acre SDC Specific Plan Planning Area. But water supplies for the Sonoma Valley are inter-related. As the Sonoma County Civil Grand Jury advised in 2020: "Today there are more water users in the Valley than ever. Valley residents still depend on surface and groundwater resources throughout the Valley. These resources are not sufficient to sustain current population without importing additional water from the Russian River. Water resource planning, development, regulation and use take place primarily in four local organizations: the City of Sonoma, the Valley of the Moon Water District, the Sonoma Developmental Center, and Sonoma Water. These are separate entities, but they all depend on the same limited resources. The actions of each affect all the others."5 (Emphasis added)	Thank you for your comment letter. This comment is noted. Please see MR-5 regarding the Water Supply Assessment.

Commenter	Date	Letter	Comment	Response
KATHLEEN FERRIS	26-Sep-22	C145-4	Estimated water use and impacts on VOMWD are not fully considered. The projected water use of the Project, 342 acre-feet per year at build-out, seems significantly underestimated for 1,000 dwelling units, 940 employees and 390,000 square feet of commercial, hotel, office, public and institutional space. For example, the Proposed Plan contemplates a population of 2,400 at build-out, with an estimated residential water use of 172 acre-feet per year, which amounts to about 64 gallons per capita per day (GPCD). However, VOMWD had a potable water use of 102 GPCD in 20206 and there is no explanation why the estimated residential per capita water use for the Project would be 38 gallons per capita less than VOMWD's 2020 GPCD. Of concern is that the Draft EIR admits that VOMWD will see "shortfalls" in being able to meet future demands within its service area during "single dry years," which VOMWD will address through its Water Shortage contingency Plan—meaning existing customers will bear the brunt of these shortages. Even under current conditions, VOMWD has already declared a Phase 2 shortage seeking a 20 percent cut in water usage. Further, the Draft EIR Water Supply Assessment looks at projected water demand only from 2025 through 2045, a mere 20 years. That might be all that the law requires, but it is not an acceptable standard for sustainable large-scale planning in a time of increasing water scarcity. What's more, the Water Supply Assessment conclusion—that sufficient water is estimated to be available to the VOMWD to meet future demands within its service area and the Project—is based on past water supplies available to VOMWD and several assumptions, including future supply augmentation and increasing state-mandated efficiency and drought requirements. This is not a confidence-building conclusion given the questionable nature of these assumptions and the likelihood that water supplies will be reduced going forward.	Thank you for your comment letter. This comment is noted. Please see MR-5 regarding the Water Supply Assessment.

Commenter	Date	Letter	Comment	Response
KATHLEEN FERRIS	26-Sep-22	C145-5	The recent drying of the Colorado River has painfully illustrated that it is unwise to base our projections of future water supplies on the past. Climate change, mega-droughts, aridification, and overuse have radically altered the Colorado River, which now is freefalling towards “dead pool” when no water can be released from Lakes Powell and Mead. In the space of less than a year, Colorado River water managers have crossed the divide from “we have this handled” to “our Colorado River water may be cut off completely.” This and other stark realities must alter how we look at managing our finite and threatened water supplies moving forward. I urge Sonoma County to take the time necessary to conduct an in-depth assessment of how development of the SDC will affect the entire Sonoma Valley’s water resources in the long-term (100 years), considering the impacts of climate change, population increases, groundwater overdraft, and other stresses on our finite and inter-related water supplies. This is a time to be cautious and conservative about the level of development our threatened water supplies can support, as the crisis of the Colorado River has proved to us all.	Thank you for your comment letter. This comment is noted. Please see MR-4 regarding wildfire risk and evacuation times and MR-5 regarding the lack of, or inadequacy of, or disagreement with water supply analysis.
Ladd J. Miyasaki		C146-1	3.9-2 Implementation of the Proposed Plan would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Provided that the entire project be under management of the Sonoma Valley Groundwater Management Plan	This comment is noted. Please see MR-5 regarding the lack of, or inadequacy of, or disagreement with water supply analysis.
Ladd J. Miyasaki		C146-2	3.9-3 Implementation of the Proposed Plan would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would result in substantial erosion, siltation, or flooding on- or offsite; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. Increased runoff from	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			impervious surfaces of the project will increase downstream flow to areas at approximatley18 feet above sea level of Sonoma Creek Schell Creek Arroyo Seco	
Ladd J. Miyasaki		C146-3	3.9-5 Implementation of the Proposed Plan would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Provided that the entire project be under management of the Sonoma Valley Groundwater Management Plan	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Ladd J. Miyasaki		C146-4	3.13-3 Development under the Proposed Plan would not require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. The proposed project would decrease recreational activity due to the loss of the existing softball diamond on the project site	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Ladd J. Miyasaki		C146-5	3.15-2 Development under the Proposed Plan would have sufficient water supplies available to serve the Planning Area and reasonably foreseeable future development during normal, dry and multiple dry years. Provided that the entire project be under management of the Sonoma Valley Groundwater Management Plan	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Marina Abbott	Monday, September 26, 2022	C147-1	> 1. What happened to the green belts we have consistently voted for? > 2. What about our abysmal public transit? In CA, statistics show that 1 home means 3 cars, adding pollution and traffic in a rural area. > 3. Evacuation in emergency? Already a problem in our valley. Add 3,000 cars? Death trap. > 4. While additional housing is needed, adding single family dwellings is foolhardy. If housing must be placed here, make it a reduced number of multi family units, clustered only along the road and have funding and plans in place to offer robust, frequent, affordable public transportation. > 5. Reject any plans for a resort hotel. This unavoidably degrades the environment, doesn't benefit valley residents and further complicates evacuation in emergencies. Currently it's rare for valley hotels and vacation rentals to be fully booked. If more hotel rooms are needed, let current properties add rooms by building upward. > 5. This land is a rare and precious wildlife corridor. The tiny sliver allocated in the plan is woefully inadequate. Putting housing there will inevitably put more animals into contact with residents or their cars resulting in injuries and/or death to threatened species. > 6. The suggestion that new residents will find employment onsite in new retail shops or restaurants is ludicrous on its face. Glen Ellen has numerous commercial spaces that sit empty or turn over frequently because the community can't support the current businesses. Adding more just adds to the problem. > Wrong plan, wrong place.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Mary Martinez	21-Sep-22	C148-1	The DEIR is inadequate and does not define a specific project, nor does it adequately analyze, prevent or reduce the environmental impacts – specifically wildfire, evacuation and the existing wildlife corridor. 1) There is no analysis of the impacts on the wildlife corridor through the campus and acknowledgement of the fact that animals currently use the campus and will be severely impacted by any development. The property and the campus itself are part of the WILDLIFE CORRIDOR and must be acknowledged as such. (Page 8 DEIR) • What mitigation measures will be required and enforced to protect and preserve this critical WILDLIFE CORRIDOR that	This comment is noted. Please see MR-2 in regards to the level of detail of analysis and programmatic nature of the Draft EIR, MR-7 in regards to the adequacy of impacts on wildlife movement or disagreement with analysis or findings, and MR-4 in regards to the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			was established by the late, prominent environmentalists and Sonoma Valley residents, Otto & Ann Teller prior to the closing of the Sonoma Developmental Center? Will performance standards be put into place to consider the impacts of traffic on wildlife function, resources, light and noise if, or when, an intermediary road cuts through the heart of the corridor to mitigate wildfire evacuation? • Will the wildlife corridor be considered essential or will the development of the "open space" have priority? What comes first? The cart or the horse?	
Mary Martinez	21-Sep-22	C148-2	2) The DEIR needs to be revised with conditions of approval strengthened and moved into a legally enforceable mitigation and monitoring program. It fails to disclose the full extent of impacts that will result throughout Sonoma Valley from this large-scale development in an area currently zoned AG and Rural Residential and outside of the urban growth area. Employment and resident numbers at SDC reached a peak over 50 years ago when both primary traffic arteries in the Valley were still well-functioning roads. Vehicle trips were limited to employees with the VMT were spread out over the period of the work day. • Why is a large-scale hotel being proposed when it's not a defined project objective, and when VMT is listed as a significant challenge?	This comment is noted. Please see MR-9 in regards to the mitigation monitoring and performance standards. Please see MR-6 in regard to the traffic analysis.
Mary Martinez	21-Sep-22	C148-3	3) The current plan will destroy the very qualities that make the historic SDC site unique and the environmental impacts of the Specific Plan – what is the intended scale of the project? • Why has the Historic Alternative been dismissed even though it is identified as the "superior alternative"? (DEIR page 14). • What mitigation measures will be required and included? • What are the other options were considered and why was this option dismissed?	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Mary Martinez	21-Sep-22	C148-4	4) The DEIR has failed to describe existing fire hazards and risks nor does it properly address the increased frequency, severity, intensity and spreading speed of wildfires due to climate change. Fire evacuation is a current and future concern for ALL residents of Sonoma Valley. • What mitigation measures will be required to ensure the safety of the residents of Sonoma Valley during future wildfires	The comment is noted. See response to comment B3-27.

Commenter	Date	Letter	Comment	Response
			should this AG-Rural Residential property be fully developed as proposed? • How will any mitigation measures be enforced?	
Mary Martinez	21-Sep-22	C148-5	5) The DEIR (pg. 515) dismissed "a fire approaching from the west (Sonoma Mountain) may be less likely, and did not warrant further specific analysis". The residents of Sonoma Valley lived through several major fires within the last 60 years and know that possibility must be considered in the DEIR. The DEIR states that "the additional SR12 connector will provide additional fire access and evacuation routes." (pg. 520) • Has the DEIR considered that previous fires have approached Sonoma Valley from the SR12 direction to the EAST? During recent wildfires the primary road arteries were clogged with traffic for 24 - 48 hours in the valley, thus creating dangerous conditions.The DEIR has presented no project alternative reflecting the community values of the residents of Sonoma Valley neither as an educational, cultural or recreational campus for the residents of Sonoma Valley. The current DEIR does not meet these objectives and the concerns that have been voiced by the residents of the of Sonoma Valley throughout the process. The DEIR has failed to acknowledge and address these and other primary issues that must be included in any future development at the Sonoma Developmental Center property in Sonoma Valley, California. Please answer all questions and concerns before the final DEIR is adopted.	The comment is noted. See response to comment B3-27 and MR-4 in regards to wildfire evacuation.

Commenter	Date	Letter	Comment	Response
Mary Poppic-Reeves	14-Sep-22	C149-1	We have lived within a mile of the Sonoma Developmental Center for over 20 years. We have raised our two children here, walking its streets and trails while appreciating the truly special place it is, from its diverse community of residents, to its rich wildlife population, and its verdant landscape. It is a unique resource for our community--- for the entire North Bay, that requires a well-considered, thoughtful approach to its transition. While the process may have started out this way, this push to approve an inadequate, nonspecific and unenforceable Draft EIR and Specific Plan is a dangerous and unconscionable rush to judgement. Undertaking this process simultaneous to the State's Request for Proposal is a waste of precious resources; these tools should react to a specifc development proposal that has yet to be produced. The Draft EIR and Specific Plan before you makes it clear the process is out of order. Simply, the cart has been placed before the horse. Your overarching question has to be: What happens if the RFP generates a proposal that this Draft EIR and Specific Plan doesn't specifically address, or worse, is so broad that the room for interpretation allows a full range of unintended and unacceptable consequences? The requisite comprehensive detail of this proposal mandates an EIR and Specific Plan that analyzes point by point all the merits and drawbacks of this enormously complicated project.	This comment is noted. Please see MR-2 in regards to allowing more time before finalizing the Specific plan.
Mary Poppic-Reeves	14-Sep-22	C149-2	3.4 Biological Resources To bring development to the SDC necessitates adding additional roadways to handle the traffic associated with such an overload of residential and commercial units. A new Arnold Drive to Highway 12 connector is proposed—one that would cut a path right though the critical Valley of the Moon Wildlife Corridor. How can this have a "less than significant impact" on the black bears, mountain lions, bobcats, and dozens of other species that have all been documented in the area? If left undisturbed, studies have shown the Wildlife Corridor through the SDC can continue to provide critical connectivity. If development is more important to our environment, what is the plan to mitigate this unrecoverable loss?	This comment is noted. Please see MR-7 in regards to the DEIR's findings on wildlife impacts.

Commenter	Date	Letter	Comment	Response
Mary Poppic-Reeves	14-Sep-22	C149-3	3.9 Hydrology and Water Quality Where is the water coming from to support 2,400 new residents? The Draft EIR suggests there will be no impact on groundwater. For those who have been asked to conserve water because of a local dwindling supply, development on this scale makes no sense. How will this undeniable impact during a drought emergency be mitigated?	This comment is noted. Please see MR-5 in regards to the DEIR's water supply analysis.
Mary Poppic-Reeves	14-Sep-22	C149-4	3.10 Land Use and Planning How can we know that "development under the Proposed Plan would not physically divide an established community" if the Draft EIR isn't even reacting to a specific development proposal? Those of us on the southside of Glen Ellen would argue any type of major development in the SDC corridor could sever our connection to the village on the north side of Glen Ellen. The project should work to unify, not divide, our historic community, but without specifics, we cannot know what impacts might occur and how they might be mitigated.	This comment is noted. Please see MR-8 in regards to the DEIR's historic preservation analysis.
Mary Poppic-Reeves	14-Sep-22	C149-5	3.12 Population and Housing While we are aware how much Sonoma County needs affordable housing (with two sons who've regretfully had to settle elsewhere to afford their homes), using the SDC to resolve this issue is unrealistic. From a practical standpoint, this project's horizon is not even within ABAG's Regional Housing Needs Allocation time frame (2040 vs. 2023-2030). As broadly conceived as it is now, the Draft EIR and Specific Plan can't even ensure development that complies with the requirements that new housing be firesafe, reduce environmental impacts and traffic, and mitigates the drought emergency. Right now, there are about 700 dwelling units in the Village and 350 in the concentrated southside. You don't need an expert to see that doubling—not to mention potentially tripling, the housing units in Glen Ellen by building them all in the acres between the two will have an impact. Even the lowest increase of 450 units in the Historic Preservation Plan would represent a 45% increase and have an impact of at least equal measure. Trying to solve Sonoma County's housing crisis all in one project located in a narrow Valley with one road in and out is poor planning pure and simple; nothing in this Draft EIR suggests how the attendant problems of this scale of development might be resolved.	This comment is noted. Please see MR-4 in regards to the DEIR's fire evacuation analysis and MR-6 in regards to the DEIR's analysis of housing and traffic.

Commenter	Date	Letter	Comment	Response
Mary Poppic-Reeves	14-Sep-22	C149-6	3.14 Transportation Again: one road in, one road out. Then layer in at least one car in every new garage. Even in its heyday in the 1950's the SDC didn't have as much traffic as this scale of development will generate, and the Valley of the Moon, had a much lower surrounding population back then. Adding 1,000 homes could easily add as many cars, particularly given the limited public transportation and limited services in the area. These new residents will need cars and they will need a great deal more time for commuting when they are stuck on that one road in, one road out. Adding another crossing between Arnold Drive and Highway 12 will still place all these cars, a substantial increase, on two two-lane roads that are already heavily travelled—and have a devastating record for traffic fatalities in this very area. There will be a transportation impact regardless of the scope of the project—it must be comprehensively and specifically analyzed and the impacts duly mitigated.	This comment is noted. Please see MR-6 in regards to the DEIR's analysis of housings and traffic.
Mary Poppic-Reeves	14-Sep-22	C149-7	3.16 Wildfire In 2017, we packed up our family and pets as we were ordered to evacuate our home due to the Nuns Fire and were stuck in gridlock on Arnold Drive for hours as we joined our neighbors attempting to flee the flames. The suggestion that adding 2,400 residents would not "not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan," would be laughable, if the consequences were not so frightening. The location proposed for an additional crossing between Arnold Drive and Highway 12? In 2017, it was in flames. We urge you to set this process aside and wait the short time until a development proposal has been chosen by the State. Then a Draft EIR and Specific Plan can be prepared to react to specific issues, impacts can be better analyzed and reasonable mitigation measures proposed. Please do not make a rush to judgement; this resource is too valuable to put at risk.	This comment is noted. Please see MR-2 in regards to allowing more time before finalizing the Specific plan and MR-4 in regards to the fire evacuation analysis.
Mary Poppic-Reeves	Thursday, September 15, 2022	C150-1	Please accept our correspondence into the record for the Sonoma County Planning Commission's consideration of the Sonoma Developmental Center Draft EIR and Specific Plan. Feel free to reach out if you have questions.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Maud Hallin	Thursday, September 22, 2022	C151-1	Chapter 3.3 "Air Quality and Environmental Impact " manages to defer any decision about autos to PG&E and Sonoma Electrical. This is not acceptable. As early as 2025, we are required to operate a large number of electrical vehicles. In other words, property owners will need access to charging stations. It would be ecologically correct to encourage auto owners to have charging stations connected to their home el system. Whether they decide to install el panels or not! In addition the shopping center should have a number of charging stations. Eager to make money, I presume, that you would exempt the hotel complex from parking fees on campus.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Maud Hallin	Thursday, September 22, 2022	C151-2	The authors of the Environmental impact study do not live in this area. They appear to have no knowledge of the fact that workers in the construction or remodeling, or repair industry very often commute over an 1 hour away from SDC. Just as in the wine industry, staff are expected to arrive on the job, wherever, by their own auto. Housing is outside their budget. This is one reason, why we have asked for more low income housing. The first people to be allowed to get temporary or purchase housing should be in the construction business. Then you could limit some of the trucks on Arnold Drive. We currently have 1 bus line between Sonoma and Sta Rosa every 45 minutes. It looks as if you have preferred to defer this problem to others!	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Maud Hallin	Thursday, September 22, 2022	C151-3	In most households in the age bracket of 23-65 you will find that 2 grown up persons are working outside the home. Calculating that retired people have no need for vehicle transportation(???) nor would people in the housing for mentally disturbed. You still only calculate that there will be rather low income jobs on the campus for 700+ people. As the construction costs are around $725/sq/ft in this area, one person in each family would have to work outside the Campus. With the jobs that you outline, people can't afford those single family homes. Dreams are wonderful! It is easy in a large city to limit auto transportation as buses, etc. are available. Around Glen Ellen, that is not possible. I would like to see the people over 70 who would volunteer to hop on a scooter to go shopping. As to construction a new connection between Arnold Drive and Highway 12 - this makes no sense, as Highway 12 is more	The comment is noted. Please see MR-6 for more information on VMT and traffic analysis of the Proposed Plan.

Commenter	Date	Letter	Comment	Response
			blocked on a regular basis than Arnold Drive. Plus that road would have got run right through the current wild life corridor.	
Maud Hallin	Thursday, September 22, 2022	C152-1	Chapter 3.3 "Air Quality and Environmental Impact " manages to defer any decision about autos to PG&E and Sonoma Clean Power. This is not acceptable. As early as 2025, we are required to operate a large number of electrical vehicles. In other words, property owners will need access to charging stations. It would be ecologically correct to encourage auto owners to have charging stations connected to their home el system. Whether they decide to install solar panels or not! In addition the shopping center should have a number of charging stations. Any "public" parking area for residents, etc. should be covered by solar panels, and parking stations. Eager to make money, I presume, that the hotel complex would receive an exemption from parking fees on campus. Neither the grocery store on Madrone nor in the center of Glen Ellen use parking meters. In other words, it would make it more difficult for the local grocery store to make money, as people may shop elsewhere.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Maud Hallin	Thursday, September 22, 2022	C152-2	The authors of the Environmental impact study do not live in this area. They appear to have no knowledge of the fact that workers in the construction or remodeling, or repair industry very often commute over an 1 hour away from SDC. Just as in the wine industry, staff are expected to arrive on the job, wherever, by their own auto. Local housing is above their budget. This is one reason, why we have asked for more low income housing. The first people to be allowed to get temporary or purchase housing should be in the construction business. Then you could limit some of the trucks on Arnold Drive. Since the 2017 Fires, homeowners have often housed contractor and staff in trailers on their land. Contractors have arrived from Nevada, etc.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			We currently have 1 bus line between Sonoma and Sta Rosa every 45 minutes. It looks as if you have preferred to defer this problem to others!	
Maud Hallin	Thursday, September 22, 2022	C152-3	In most households in the age bracket of 23-65 you will find that 2 grown up persons are working outside the home. Calculating that retired people have no need for vehicle transportation(???) nor would people in the housing for mentally disturbed. You still only calculate that there will be rather low income jobs on the campus for 700+ people. As the construction costs are around $725/sq/ft in this area, one person in each family would have to work outside the Campus. With the jobs on campus that you outline, people can't afford those single family homes. Dreams are wonderful! It is easy in a large city to limit auto transportation as buses, etc. are available. Around Glen Ellen, that is not possible. I would like to see the people over 70 who would volunteer to hop on a scooter to go shopping.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Maud Hallin	Thursday, September 22, 2022	C152-4	The word Microgrid is dropped as a Goal. Chapter 3.6-19 This concept should be developed, and not just listed as a 20-year Goal. It is clear that the authors are clueless about solar/wind etc. energy usage. If you try to reduce pollution, how can you then ignore looking deeper into the needs for solar panels? They obviously know more about composting. Ah - I may be able to sell worms!	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Maud Hallin	Thursday, September 22, 2022	C152-5	As to construction of a new connection between Arnold Drive and Highway 12 - this makes no sense, as Highway 12 is more blocked on a regular basis, and ha higher average traffic than Arnold Drive. Plus that road would have to run right through the current wild life corridor. Besides Madrone has bicycle lanes, and is very nearby! What is needed is widening of Arnold Drive so that people may walk, or bicycle along that road.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Maud Hallin	Thursday, September 22, 2022	C152-6	Construction crews will all arrive in gas or diesel operated autos. I wonder how many people will want to buy a home at the SDC campus, if they are told they cannot operate an auto, nor connect an electrical auto to their own garage/parking space attached to their million dollar home? At what prices is the developer going to be able to sell? The Air Quality Station in Sebastopol clearly has difficulty in measuring from the SDC campus!	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Maud Hallin	Thursday, September 22, 2022	C152-7	You are trying to please some people by setting a 30' height limit for new construction. You state that existing construction is often above this height. Setting the limit to 35' would make more sense from an architectural point of view. That slight flexibility would allow for more interesting design of 3-story buildings for low income housing. Yes, you do want to make that housing attractive and pleasant for the $1 million plus owners to look at. While you tear down and/or remodel housing you could be intelligent and get some prefab housing. There are now some great companies that could ship in 20'x20' units for $50,000 with kitchen and bath all ready to connect. Later on, you could move them, stack them, etc. and create some great low income housing. Sorry for that idea, cuts into the profit of the developer!	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Maud Hallin	Thursday, September 22, 2022	C152-8	The present design has a road and lights too close to the creek. Wild life is not considered in the Report, only humans. I object! It is obvious, that the single family homes and the hotel are just there, to attract a developer. None of those are what is needed. All the housing should be low income housing, at different levels. I object to the intention to make 1 person rich at the benefit of so many hardworking people, who have to live over an hour away from their jobs, because of the cost of construction.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Meg Beeler	Wednesday, September 21, 2022	C153-1	Like many in the community, I believe the County has a once in a lifetime opportunity to stand out and lead at SDC in these times of climate crisis. Yet the DEIR fails in significant ways to offer clear goals and standards (policies) for protecting the riparian corridors, the rights of nature, and our precious natural resources. In fact, there are no stated goals for the creeks, wetlands, or beautiful lakes on the property, and minimal policies are included. The DEIR needs significant modifications to be used as a tool for systematic implementation, as required by the State. I'd like your help with this. I am commenting as a neighbor (living five minutes south of campus), a long-time hiker and passionate defender of the property, and a participant in the planning process for nearly 10 years in my role as Chair of Sonoma Mountain Preservation. Thank you for the opportunity.	The comment is noted. Please see MR-3 for an explanation of the level of detail of analysis and programmatic nature of the Draft EIR.
Meg Beeler	Wednesday, September 21, 2022	C153-2	Water is life, and by setting goals and policies to protect wetlands and riparian zones as a resource and respite for the community, and to protect migrating Coho and Steelhead, both the DEIR and Specific Plan can be enhanced, set precedent, and lead the State. Two specific goal-setting areas are central: Elevate creek protection and wildlife corridor flexibility by expanding buffers significantly; and enhance and protect rare, vulnerable wetlands and species there through setting them aside and abandoning the road through them. Just because buildings and asphalt were placed too close to the creeks in the past, there is no justifiable reason to continue outmoded practices. We know better, and the lack of studies done during this process is no excuse either. If there were goals and policies that supported wetlands, there would be no proposed new road from Arnold Drive to Highway 12. A road will create substantive, adverse effects: on the protected wetlands that support documented endangered species, the wildlife corridor, and fire egress in the face of Diablo winds coming from the East (the road will be in the direct path of 2017 fires.)[1] These impacts are not mentioned or addressed in the DEIR; goals do not support the wetlands, and "best practices" do not address the cumulative effects of such a road; or the fact that roads and wildlife corridors do not mix well. The approach of "We'll do needed studies later"	The comment is noted. Please see MR-7 for more detail on the proposed Highway 12 connector road's potential impact on wildlife. Please see also MR-4 for more detail regarding wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			gives developers no clear direction up front, and does not guarantee wetland and species protection or mitigation policy.	
Meg Beeler	Wednesday, September 21, 2022	C153-3	Riparian zone protection also lacks goals and policies to prioritize riparian protection. The DEIR ignores current studies that say creek setbacks should be up to 325 feet.[2] In addition, the DEIR and Specific Plan are in conflict. Sometimes they propose a 50-foot setback next to Sonoma Creek; sometimes they refer to existing County standards of 30-foot setbacks; sometimes they ignore Mill Creek setbacks entirely (P 41 people/wildlife interface policies). In fact, some of the proposed "Institutional development" (map 2.4-1) is right on top of Mill Creek.	Thank you for your comment. This comment is noted. As noted on page 252 of the DEIR, Policy 2-25 requires inclusion of protective buffers of at least 50 feet along Sonoma and Mill creeks, as measured from the top-of-bank, to protect the sensitive communities. Section 7-14.5 of the Sonoma County Code establishes stream setbacks for structures requiring a building permit, with minimum setbacks equal to the greatest of 1) two and one-half times the height of the stream bank plus 30 feet, 2) 30 feet outward from the top of the stream bank, or 3) any distance established in the general plan and/or zoning code. Future development would be subject to these setbacks' requirements. If riparian habitat and other sensitive natural communities are present and disturbance is required, federal and State regulations would require measures to reduce, avoid, or compensate for impacts to these resources. The requirements of these regulations are implemented through the permit process as indicated in Conditions of Approval Measure BIO-14. In addition, Conditions of Approval Measure BIO-1 requires conducting specific project biological resource assessments prior to commencement of any project. With implementation of Measure BIO-1 and Conditions

Commenter	Date	Letter	Comment	Response
				of Approval Measure BIO-14, impact of future development under the Proposed Plan on riparian habitat or sensitive natural communities would be less than significant. See also response to comment B8-5 and B8-9 regarding riparian area policy amendments. Please see MR-6 on the impact of the Highway 12 connector.
Meg Beeler	Wednesday, September 21, 2022	C153-4	I request that you please: 1) Analyze current studies relating to riparian protection, wetlands protection, and related groundwater sustainability to conform to State and County climate goals and best environmental practices. 2) Set goals and policies for protection. 3) Cite studies used to support your decisions on creek buffers, wetlands incursions, wildlife travel, and lake protection. 4) Analyze the cumulative impacts and potential degradation of floral and faunal habitats, groundwater supply, and riparian zones caused by the increased housing density, noise, construction, traffic, and demolition proposed under the Preferred Plan. Provide analysis of the impacts of redevelopment on migratory fish species, such as coho and steelhead salmon. Also analyze whether these impacts would be mitigated by a smaller redevelopment such as the HPA. 5) In the DEIR, add creeks/riparian zones and wetlands to goals, significance criteria, and section 3.1.3.3 relevant policies, implementing actions, and policies. Note that in section 3.4.1.3, local land use regulations, Sonoma County General Plan 2020, the DEIR mentions policy LU10-a for establishing maximum densities and siting standards for wetlands, sensitive natural communities, and areas of essential habitat connectivity, yet the same DEIR offers none of these. 6) Adhering to the above studies, delineate—in both the Preferred Plan and the DEIR—clear boundaries for riparian setbacks, identify the entities that a developer must work with to facilitate creek and wetland protection, or explicitly require a	Thank you for your comment. This comment is noted. As noted on page 252 of the DEIR, Policy 2-25 requires inclusion of protective buffers of at least 50 feet along Sonoma and Mill creeks, as measured from the top-of-bank, to protect the sensitive communities. Section 7-14.5 of the Sonoma County Code establishes stream setbacks for structures requiring a building permit, with minimum setbacks equal to the greatest of 1) two and one-half times the height of the stream bank plus 30 feet, 2) 30 feet outward from the top of the stream bank, or 3) any distance established in the general plan and/or zoning code. Future development would be subject to these setbacks' requirements. If riparian habitat and other sensitive natural communities are present and disturbance is required, federal and State regulations would require measures to reduce, avoid, or compensate for impacts to these resources. The requirements of these regulations are implemented through the permit process as indicated in Conditions of Approval Measure BIO-14. In addition, Conditions of Approval Measure BIO-1 requires conducting specific project biological resource assessments prior to commencement of any project. With implementation of Measure BIO-1 and Conditions of Approval Measure BIO-14, impact of future

Commenter	Date	Letter	Comment	Response
			developer to ensure that redevelopment of the core campus be done in such a way, and with sufficient buffers, as to protect the natural values of the open space. 7) Add specific, enforceable guidelines for riparian and wetland protections, specifying acreages and minimum boundaries on both the east and west sides of Arnold Drive, and limit allowed uses on these acreages to passive recreational uses such as hiking, mountain biking, horseback riding, photography, etc. If agricultural or commercial uses are permitted, ensure mitigations are identified and enforceable. 8) Please make sure that policies in the Specific Plan are consistent in Wildlife Corridor Policies (p40), People/Wildlife Interface (p 41), and policy 2-25 (p 42). 9) Please ensure that policies in the DEIR, notably policies 2-21, 2-23, 2-25, 2-27, and 2-30 are consistent.	development under the Proposed Plan on riparian habitat or sensitive natural communities would be less than significant. See also response to comment B8-5 and B8-9 regarding riparian area policy amendments. Please see MR-6 on the impact of the Highway 12 connector.
Meg Beeler	Wednesday, September 21, 2022	C153-5	I appreciate the work done to date. As a private citizen reading the documents and preparing this letter, I have recently spent over ten hours, so I fully support Commissioner Carr's imperative that more time is needed for the Planning Commission to do its job. I know that with the political will to make this project right, in line with community values, we can succeed together.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Meg Beeler	21-Sep-22	C154-1	Like many in the community, I believe the County has a once in a lifetime opportunity to stand out and lead at SDC in these times of climate crisis. Yet the DEIR fails in significant ways to offer clear goals and standards (policies) for protecting the riparian corridors, the rights of nature, and our precious natural resources. In fact, there are no stated goals for the creeks, wetlands, or beautiful lakes on the property, and minimal policies are included. The DEIR needs significant modifications to be used as a tool for systematic implementation, as required by the State. I'd like your help with this. I am commenting as a neighbor (living five minutes south of campus), a long-time hiker and passionate defender of the property, and a participant in the planning process for nearly 10 years in my role as Chair of Sonoma Mountain Preservation. Thank you for the opportunity.	The comment is noted. Please see MR-7 for more detail on the Proposed Plan's potential impact on wildlife. Please also see pages 2-9 through 2-13 of the Public Review Draft Specific Plan for goals and policies related to protection of natural resources, a significant focus of this Proposed Plan.
Meg Beeler	21-Sep-22	C154-2	Water is life, and by setting goals and policies to protect wetlands and riparian zones as a resource and respite for the community, and to protect migrating Coho and Steelhead, both the DEIR and Specific Plan can be enhanced, set precedent, and lead the State. Two specific goal-setting areas are central: Elevate creek protection and wildlife corridor flexibility by expanding buffers significantly; and enhance and protect rare, vulnerable wetlands and species there through setting them aside and abandoning the road through them. Just because buildings and asphalt were placed too close to the creeks in the past, there is no justifiable reason to continue outmoded practices. We know better, and the lack of studies done during this process is no excuse either.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Meg Beeler	21-Sep-22	C154-3	If there were goals and policies that supported wetlands, there would be no proposed new road from Arnold Drive to Highway 12. A road will create substantive, adverse effects: on the protected wetlands that support documented endangered species, the wildlife corridor, and fire egress in the face of Diablo winds coming from the East (the road will be in the direct path of 2017 fires.)1 These impacts are not mentioned or addressed in the DEIR; goals do not support the wetlands, and "best practices" do not address the cumulative effects of such a road; or the fact that roads and wildlife corridors do not mix well. The approach of "We'll do needed studies later" gives	The comment is noted. Please see MR-7 for more detail on the proposed Highway 12 connector road's potential impact on wildlife. Please see also MR-4 for more detail regarding wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			developers no clear direction up front, and does not guarantee wetland and species protection or mitigation policy.	
Meg Beeler	21-Sep-22	C154-4	Riparian zone protection also lacks goals and policies to prioritize riparian protection. The DEIR ignores current studies that say creek setbacks should be up to 325 feet.2 In addition, the DEIR and Specific Plan are in conflict. Sometimes they propose a 50-foot setback next to Sonoma Creek; sometimes they refer to existing County standards of 30-foot setbacks; sometimes they ignore Mill Creek setbacks entirely (P 41 people/wildlife interface policies). In fact, some of the proposed "Institutional development" (map 2.4-1) is right on top of Mill Creek.	As noted on page 252 of the DEIR, Policy 2-25 requires inclusion of protective buffers of at least 50 feet along Sonoma and Mill creeks, as measured from the top-of-bank, to protect the sensitive communities. Section 7-14.5 of the Sonoma County Code establishes stream setbacks for structures requiring a building permit, with minimum setbacks equal to the greatest of 1) two and one-half times the height of the stream bank plus 30 feet, 2) 30 feet outward from the top of the stream bank, or 3) any distance established in the general plan and/or zoning code. Future development would be subject to these setbacks' requirements. If riparian habitat and other sensitive natural communities are present and disturbance is required, federal and State regulations would require measures to reduce, avoid, or compensate for impacts to these resources. The requirements of these regulations are implemented through the permit process as indicated in Conditions of Approval Measure BIO-14. In addition, Conditions of Approval Measure BIO-1 requires conducting specific project biological resource assessments prior to commencement of any project. With implementation of Measure BIO-1 and Conditions of Approval Measure BIO-14, impact of future development under the Proposed Plan on riparian habitat or sensitive natural communities would be less than significant. See also response to comment B8-5 and B8-9 regarding riparian area policy amendments.

Commenter	Date	Letter	Comment	Response
Meg Beeler	21-Sep-22	C154-5	I request that you please: 1) Analyze current studies relating to riparian protection, wetlands protection, and related groundwater sustainability to conform to State and County climate goals and best environmental practices. 2) Set goals and policies for protection. 3) Cite studies used to support your decisions on creek buffers, wetlands incursions, wildlife travel, and lake protection.	Thank you for your comment. This comment is noted. As noted on page 252 of the DEIR, Policy 2-25 requires inclusion of protective buffers of at least 50 feet along Sonoma and Mill creeks, as measured from the top-of-bank, to protect the sensitive communities. Section 7-14.5 of the Sonoma County Code establishes stream setbacks for structures requiring a building permit, with minimum setbacks equal to the greatest of 1) two and one-half times the height of the stream bank plus 30 feet, 2) 30 feet outward from the top of the stream bank, or 3) any distance established in the general plan and/or zoning code. Future development would be subject to these setbacks' requirements. If riparian habitat and other sensitive natural communities are present and disturbance is required, federal and State regulations would require measures to reduce, avoid, or compensate for impacts to these resources. The requirements of these regulations are implemented through the permit process as indicated in Conditions of Approval Measure BIO-14. In addition, Conditions of Approval Measure BIO-1 requires conducting specific project biological resource assessments prior to commencement of any project. With implementation of Measure BIO-1 and Conditions of Approval Measure BIO-14, impact of future development under the Proposed Plan on riparian habitat or sensitive natural communities would be less than significant. See also response to comment B8-5 and B8-9 regarding riparian area policy amendments. Please see MR-6 on the impact of the Highway 12 connector.
Meg Beeler	21-Sep-22	C154-6	4) Analyze the cumulative impacts and potential degradation of floral and faunal habitats, groundwater supply, and riparian zones caused by the increased housing density, noise, construction, traffic, and demolition proposed under the Preferred Plan. Provide analysis of the impacts of redevelopment on migratory fish species, such as coho and steelhead salmon. Also analyze whether these impacts would be mitigated by a smaller redevelopment such as the HPA.	The comment is noted. Please see MR-3 for an explanation of the level of detail of analysis and programmatic nature of this Draft EIR.

Commenter	Date	Letter	Comment	Response
Meg Beeler	21-Sep-22	C154-7	5) In the DEIR, add creeks/riparian zones and wetlands to goals, significance criteria, and section 3.1.3.3 relevant policies, implementing actions, and policies. Note that in section 3.4.1.3, local land use regulations, Sonoma County General Plan 2020, the DEIR mentions policy LU10-a for establishing maximum densities and siting standards for wetlands, sensitive natural communities, and areas of essential habitat connectivity, yet the same DEIR offers none of these.	This comment is noted. As noted on page 94 of the DEIR, "Appreciation of aesthetics and visual resources is generally subjective by nature, and therefore the extent of visual impact associated with adoption and implementation of the Proposed Plan can be difficult to quantify." Therefore, the impacts to creeks, riparian zones and wetlands were addressed in Section 3.4 on Biological Resources. Please see page 236 of the DEIR for specific criterions used to assess impacts on creeks, riparian zones and wetlands. Policy LU-10a: The proposed plan is compliant with all applicable regulations and plans including the county code and General Plan.
Meg Beeler	21-Sep-22	C154-8	6) Adhering to the above studies, delineate—in both the Preferred Plan and the DEIR—clear boundaries for riparian setbacks, identify the entities that a developer must work with to facilitate creek and wetland protection, or explicitly require a developer to ensure that redevelopment of the core campus be done in such a way, and with sufficient buffers, as to protect the natural values of the open space.	This comment is noted. Please see Section 3.4.3.3 on page 237 of the DEIR for relevant policies and implementing actions on riparian corridors, including 2-18, 2-27, and 2-30.
Meg Beeler	21-Sep-22	C154-9	7) Add specific, enforceable guidelines for riparian and wetland protections, specifying acreages and minimum boundaries on both the east and west sides of Arnold Drive, and limit allowed uses on these acreages to passive recreational uses such as hiking, mountain biking, horseback riding, photography, etc. If agricultural or commercial uses are permitted, ensure mitigations are identified and enforceable.	This comment is noted. Please see updated Table 4-3 in the Specific Plan.
Meg Beeler	21-Sep-22	C154-10	8) Please make sure that policies in the Specific Plan are consistent in Wildlife Corridor Policies (p40), People/Wildlife Interface (p 41), and policy 2-25 (p 42). 9) Please ensure that policies in the DEIR, notably policies 2-21, 2-23, 2-25, 2-27, and 2-30 are consistent.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Meg Beeler	21-Sep-22	C154-11	I appreciate the work done to date. As a private citizen reading the documents and preparing this letter, I have recently spent over ten hours, so I fully support Commissioner Carr’s imperative that more time is needed for the Planning Commission to do its job. I know that with the political will to make this project right, in line with community values, we can succeed together.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Michael Gill		C155-1	From: Michael Gill, Glen Ellen resident Thank you for the preparation of the DEIR and Specific Plan and earlier documents and for the opportunity to review and comment on them. I certainly am aware that outlining a future path for this valuable property is not easy, but we all need to get it right before redevelopment starts. My comments result from my experiences of working with environmental cleanup and land reuse issues at closed military bases around the Bay Area, as well as living part time in Glen Ellen. I look forward to receiving Permit Sonoma's responses to my comments and hope the final documents presented to the County are modified to reflect what I see is a very consistent call for a reduction in scope of the project. These changes will ensure that the open space is protected and the nearby small communities retain their charm and value, while meeting the goals of adding some needed housing.	Thank you for the letter. The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Michael Gill		C155-2	Specific Plan General Comments. SP-1. Reduce the Scale. I understand the State of California drivers for the turnover and redevelopment of this property (housing and financial stability). It is a valuable piece of land, which makes sense to reuse to help alleviate the shortage of housing stock for our residents. The question is how to most appropriately mesh it with the existing neighborhoods of Glen Ellen. According to wikipedia, the population of Glen Ellen is less than 1000 people (2010 census showed 784, in 2000 it was 992 people). If the proposal to build 1000 new residences happens, the estimate in the Specific Plan is that the town will grow by 2400 people. Or even more for the "High Development" alternative (1250 residences and 3000 people). This does not even include the 900+ workers. Given the current population and semi-rural makeup of the area, that growth will totally change Glen Ellen. Growth is predictably inevitable in most of California, but this kind of growth would strain existing services and from what I've read, isn't palatable for the existing residents. Given the need for housing, perhaps a more acceptable number of residences would be 300 units here, while other parts of the Sonoma County can share the load to provide additional housing. This would still amount to about 720 new residents, which almost doubles the current population. That alone is a challenge for all of the resource needs covered in the	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			Specific Plan and EIR (water supply, schools, utilities and services, roads, fire access/egress, etc.), but much less so than 1000 new units.	
Michael Gill		C155-3	A visual tool that Permit Sonoma could use to better illustrate what "x" residences looks like would be to provide a map overlay example of an existing neighborhood where 300 or 1000 or whatever housing units already exists. This is something people can envision and get a better idea of what the proposed numbers really mean. One example is University Village in Albany, CA, which is a residential neighborhood of dense homes. This is the development where many UC Berkeley married grad students reside. It has 974 units (multi-family attached townhouse style) on 77 acres (per wikipedia). I'm uncertain of the population. Locally, an example might highlight the Madrone or Grove Apartments in Eldridge or the "Springs" area along Hwy 12. How many people reside in those homes over how many acres? Those comparisons could offer readers something tangible to envision what this proposal means for SDC.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Michael Gill		C155-4	SP-2. Adjust the Mix. Understandably, there is a need to provide housing and that the plan be financially sustainable. To achieve that, I would propose that the SDC management more closely mimic the Presidio model in San Francisco. That is, a "Trust" would be created to oversee the mix of non-profits and some businesses that would co-exist with housing on the 200 acres. I would also propose that all housing be "affordable" housing, as that would provide a bigger dent than the current proposal. Three hundred affordable homes meet more need than 250 affordable homes (25% of 1000). They could be of medium/flex density as outlined in the Plan. Those people with the financial ability can still buy property in the Valley of the Moon. But they don't need the SDC. SDC housing should fill a bigger need and provide affordable housing. Part of the guiding principles in the Plan call for a mixed use scenario. I'd propose putting more weight on non-profits and small businesses than housing to utilize the existing 200 acres and keep the population lower. With today's world tending towards more work-at-home than in-office work for white collar jobs, less space per non-profit would be needed, therefore offering a quieter campus feel than what would have been possible pre-pandemic to support the venture. Non-profits should be encouraged to put forth plans, not just a housing developer.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Michael Gill		C155-5	SP-3. Power. I'm glad to see that renewable energy is to be used on site, as mentioned in Section 6.2. Perhaps implicit in the text, it should be noted more clearly that current California construction rules require new homes in California to install solar as part of the project. The text should state that requirement for the SDC residential development. This "California Solar Mandate" took effect January 1, 2020.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Michael Gill		C155-6	SP-4. Water. Water supplies are noted in Section 6.3, but it appears that the issue is not really settled. The text states: "Determining the ownership and use of these water rights will be another critical decision for SDC's water supply going forward." This is a huge challenge and needs early resolution. This could be a deal breaker and needs to be settled before approval of any plans. Has anyone from Permit Sonoma asked the VOMWD for data about water use and/or availability? VOMWD allows local residents to track our water use by the hour and this helps detect leaks. We are also asked to be diligent with our irrigation uses. It's clear they are concerned about limited supply due to the drought. Even with grey water and recycled water as part of the mix (Policy 6-10), can VOMWD actually supply enough water for the proposed development?? SP-5. Open Space. I totally agree with the plan's protection of the 700+ open space acres. It is a valuable space that I have enjoyed many times and hope to in the future.	The comment is noted. Please see MR-5 for imformation regarding the Water Supply Assessment and coordination with Valley of the Mood Water District.
Michael Gill		C155-7	Draft Environmental Impact Report Comments DEIR-1. Safe Cycling. In both the Specific Plan and DEIR, multi-modal transportation alternatives are discussed often, including high quality bicycle facilities. This is a good thing, given the increased population and little new road infrastructure. The current roads are small and sometimes already busy. It is an important part of the transportation equation and very welcome. But any details and "regulatory teeth" to actually make this happen seem missing. Many of the improvement plans have been around for 10 years or more (e.g., 2010 Sonoma County Bicycle and Pedestrian Master Plan). They are outlined in Section 3-14.3 and include the Sonoma Valley Trail, Class II bike lanes along the entirety of Arnold Drive between Glen Ellen and Highway 116, and more. While implementing these plans would go a long way to making cycling safer in the SDC area, how will the SDC project actually make these proposals a reality? It's not difficult to envision waiting more years for the County and State to take action, which will result in longer term unsafe cycling from new traffic growth around SDC. The real safety improvements necessary are beyond the north/south borders of SDC. If the developer is serious about making SDC multi-modal, then bike routes north and south of	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			SDC must be safe. It's not just about riding on the 200 acres. It needs to go beyond the borders. People will rides their bikes to and from SDC if it's safe. Maybe the SDC redevelopment can be the catalyst to get these projects rolling!	
Michael Gill		C155-8	DEIR-2. Existing Bike Trails. These two policies are from the DEIR (page 438) and they appear elsewhere as well: 3-15 Establish a new community bikeway connecting Railroad in Eldridge to Carmel Avenue in Glen Ellen by removing barriers and installing appropriate signage and crossings. 3-16 Create a multi- use creek trail running parallel to Arnold Drive that connects to a greater Glen Ellen-Eldridge community bikeway. I would note that this bikeway already exists. While a little work still needs to be done (open a gate and add signs), the Specific Plan isn't really presenting anything new here. Please recognize what's already there and don't take credit for something that is already done.	The comment is noted. These policies are intended to reinforce and formalize the existing bicycle network, and make connections where necessary.
Michael Gill		C155-9	DEIR-3. Support for Additional Comments. In addition to my cycling related comments above, I agree with the DEIR analysis provided by the following entities, who are much more articulate than me on many topics. I would defer to them for additional comments on the DEIR. We are consistent in concluding that no one wants the kind of proposed large-scale growth from the redevelopment of SDC. Some housing and other uses are needed and inevitable, but not the proposed amount. What they say makes total sense and I wish to add my voice to the comments from the following groups, which appear on the Save Our Space website. http://www.eldridgeforall.org/	The comment is noted. Please see MR-8 for more detail on why a lower number of housing units does not accomplish the project objectives.

Commenter	Date	Letter	Comment	Response
Meg Beeler	21-Sep-22	C156-1	We appreciate this opportunity to comment on the draft environmental impact report (DEIR) and preferred Specific Plan for redevelopment of the Sonoma Developmental Center (SDC). While we acknowledge the conflicting directives laid out in the legislation authorizing the specific planning process for the property and recognize the difficulty of making meaningful connections with stakeholders in pandemic times, we must express our overall disappointment with the DEIR and Preferred Plan, which do not reflect community input as we've witnessed in public meetings and in letters over the years-long planning process. The scale of proposed redevelopment of the 180-acre core campus is fundamentally incompatible with the rural character of the surrounding community and the north Sonoma Valley, presents a clear danger to the safety of current and future residents of the Valley in the inevitable event of wildfire, and threatens the integrity of Sonoma Mountain's irreplaceable natural resources — habitats for keystone flora and fauna, the health of the Sonoma Valley Wildlife Corridor, water quality, air quality, recreational opportunities, and historic, tribal, and modern cultural values.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Meg Beeler	21-Sep-22	C156-2	The DEIR fails to adequately or clearly describe meaningful, enforceable mitigations for the environmental impacts of redevelopment at the scale proposed, as required by the California Environmental Quality Act (CEQA). It fails to clearly delineate cumulative impacts. It does not provide sufficient analysis to give decision-makers all the information they need to satisfactorily draw conclusions about the environmental consequences of the Preferred Plan. It is our hope that by addressing the questions that follow, applicable, effective, enforceable mitigations will be identified and instituted that materially decrease or eliminate those impacts.	The comment is noted. Please see MR-3 for more information on the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Meg Beeler	21-Sep-22	C156-3	General concerns/questions The DEIR indicates that, across the board, the environmental impacts of the Preferred Plan and the Historic Preservation Alternative (HPA), which is acknowledged as environmentally superior per CEQA, are "largely comparable." The DEIR also states that the HPA is less superior in terms of energy use, biological resources, and wildfire risk (ES.4.2). Given the significant differences in scale of the two alternatives — the HPA is half the size of the Preferred Plan — these conclusions defy logic. 1) Please explain how construction of 1,000 homes occupied by 2,500 people has the same environmental impact across virtually every category studied in the DEIR as does providing 450 homes occupied by 1,125 people (a 55% reduction)? Which studies support this finding? 2) Please explain how providing workspace for 900 people has the same environmental impact across virtually every category studied in the DEIR as does providing workspace for 600 people (a 33.3% reduction). Which studies support this finding? 3) Please explain how the HPA—which translates to less demolition through adaptive reuse of historic structures, less construction, fewer vehicle miles traveled, and fewer people on the property—uses more energy, has a greater impact on biological resources, and increases wildfire risk than the Preferred Plan, as stated in the DEIR (ES 4.2). Which studies support this finding?	This comment is noted. Please see MR-8 on the impacts of the Historic Preservation Alternative. Due to the programmatic nature of the DEIR, analysis of Project Alternatives is only required to qualitatively assess the relative impacts. The DEIR does not attempt to quantify the impacts of the Project Alterantives to the same degree as the Proposed Plan. Instead, analysis is done to assess the significance level of the impacts and compare those with those of the Proposed Plan. Case law suggests that the discussion of alternatives need not be exhaustive. CEQA Section 15126.6(f) states that the alternatives in an EIR should be governed by a "rule of reason."
Meg Beeler	21-Sep-22	C156-4	Impacts specific to Sonoma Mountain The entire 945-acre SDC property, including the developed core campus, is located within one of the last rural regions on the Sonoma Valley floor, with the mostly undeveloped slopes of Sonoma Mountain forming the entire western boundary and serving as a viewshed/mountain backdrop; as an informal natural reserve/safe haven for native flora and fauna; and as an informal recreational resource for hikers, cyclists, and equestrians from throughout Sonoma County and beyond. Further, historic residential use of the SDC by individuals with developmental disabilities and their caregivers had minimal human-caused environmental impacts on the property's open spaces. Redevelopment at the scale in the Preferred Plan creates an urban footprint within this historically rural zone, significantly increasing human-caused environmental impacts	This comment is noted. No specifics on the adequacy of the DEIR are presented therefore no further response is required.

Commenter	Date	Letter	Comment	Response
			on a number of areas identified under CEQA (i.e., Aesthetics [3.1]; Biological Resources [3.4], and Public Services and Recreation [3.13], to name a few). To mitigate impacts of any redevelopment on the historic, minimal-impact, rural quality of the property, and to ensure the viewscape is preserved, we request that:	
Meg Beeler	21-Sep-22	C156-5	1) The DEIR include mitigation measures to compensate for the loss of the rural attributes of the property at its current baseline, or a baseline that dates back no further than 10 years. Please specify which measures in the current DEIR address these impacts, and which studies support them. 2) Please study, provide mitigation measures, and document how incorporating adaptive reuse of buildings into the HPA proposal, with its smaller human footprint, would impact environmental goals.	This comment is noted. Please see Section 3.1 of the DEIR regarding impacts from the Proposed Plan on aesthetic resources at the site. Please see Section 3.4 of the DEIR on impacts from the Proposed Plan on cultural, historic and tribal cultural resources at the site. Please see MR-8 on the impacts of the Historic Preservation Alternative.
Meg Beeler	21-Sep-22	C156-6	3) The SDC's open space currently sees frequent use by recreationalists from all over Sonoma County and beyond. That use increased markedly during the pandemic, despite restrictions on travel. The level of use has remained high as the pandemic has waned. The addition of 2,500 residents, 900 workers, visitors to the proposed hotel and conference center, and their friends and family, as outlined in the Preferred Plan, will add an exponential burden on the property's open space, much of which is on the skirts of Sonoma Mountain. Please analyze what that increase in recreational use means for aesthetics, biological resources, cultural, tribal, and historic resources, and water and air quality, and identify mitigations for those impacts.	This comment is noted. Please see Section 3.1 of the DEIR regarding impacts from the Proposed Plan on aesthetic resources at the site. Pleas see Section 3.4 on impacts to Biological Resources. Please see Section 3.5 of the DEIR on impacts from the Proposed Plan on cultural, historic and tribal cultural resources at the site. Please see Sections 3.3 and 3.9 for air quality impacts and hydrology and water quality impacts. As noted on page 404 of the DEIR, "construction of new parks would be subject to separate project-level CEQA review at the time the design and exact location is proposed in order to identify and mitigate any project-specific impacts as appropriate. As such, compliance with existing regulations would reduce impacts to a less-than-significant level related to the provisions of park facilities."

Commenter	Date	Letter	Comment	Response
Meg Beeler	21-Sep-22	C156-7	4) Please analyze the cumulative impacts and potential degradation of floral and faunal habitats, groundwater supply, and riparian zones across the site, including the 750+ acres identified as open space, caused by the increased housing density, noise, construction, traffic, and demolition proposed under the Preferred Plan. Please provide analysis of the impacts of redevelopment on migratory fish species, such as coho salmon. Please also analyze whether these impacts would be mitigated by a smaller redevelopment such as the HPA.	The comment is noted. Please see MR-3 for an explanation of the level of detail of analysis and programmatic nature of this Draft EIR, and MR-7 for an explanation of the analysis of biological resources. Please also see analysis provided in Impact 3.4-1 of the Proposed Plan's potential impact on special status species on page 241 of the Draft EIR. Additionally, please see MR-8 for an explanation of why the historic preservation alternative does not meet project objectives.
Meg Beeler	21-Sep-22	C156-8	The intent to preserve and protect the 750+ acres of open space surrounding the 180-acre core campus has been codified by the state in its enabling legislation and has been promised by the county in the Preferred Plan. However, neither the Preferred Plan and nor the DEIR delineate clear boundaries for the open space to be transferred, identify a mechanism of transfer, clearly identify the entities that a developer must work with to facilitate transfer, or explicitly require a developer to ensure that redevelopment of the core campus be done in such a way, and with sufficient buffers, as to protect the natural values of the open space. Please add specific, enforceable guidelines for the open space transfers, specifying acreages and minimum boundaries on both the east and west sides of Arnold Drive, and limiting allowed uses on these acreages to passive recreational uses such as hiking, mountain biking, horseback riding, photography, etc.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Meg Beeler	21-Sep-22	C156-9	) Agricultural and commercial uses should not be permitted in open space intended to be parkland. Please clarify that uses such as those identified in Table 4.3 will not be permitted in open space identified for transfer to park agencies, and that mitigations for such uses on other open space parcels are identified and enforceable. Thank you for the time and effort you have put into developing the DEIR and preferred Specific Plan for the property. We look forward to receiving Permit Sonoma’s responses to our concerns, and hope the final plan and EIR presented to the Planning Commission for comment and to the Board of Supervisors for approval reflect substantive changes that ensure the integrity of the natural values of Sonoma Mountain, and the communities that surround it, remain intact.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required. Please also see amended Policy 2-1 of the Specific Plan, which requires that the eventual owner/operator of the open space prepare an open space plan in collaboration with the community, agencies, and organization to manage the rich diversity of resources on site, including habitat, vegetation, wetlands, native species, and other critical resources, balanced with recreation and wildfire protection needs.

Commenter	Date	Letter	Comment	Response
Tracy Salcedo	Wednesday, September 21, 2022	C157-1	Thank you Tracy for your hard work, time and effort in putting this comment together for Sonoma Mountain Preservation. We are all hopeful that Permit Sonoma will in fact take community input seriously and consider the amount of oft repeated volunteer effort and informed and educated thought that went into most all the comments. After all it is our lives that will be impacted by this misconceived and miscalculated DEIR and Specific Plan.	Your comment is noted. Please see MR-3 for an explanation of the programmatic nature of this Draft EIR.
Tracy Salcedo	Wednesday, September 21, 2022	C157-2	On behalf of Sonoma Mountain Preservation, I have attached our comments on the draft environmental impact statement and preferrred specific plan for the Sonoma Developmental Center. Thank you for your consideration. We all hope, with the incorporation of community input into a plan that is truly community driven, we will create a wholesome, viable future for this very special place and for the people who love it.	The comment is noted, however it does not pertain to the adequacy of the DEIR, thus no further response is required.
Neal K. Liddicoat	26-Sep-22	C158-1	Griffin Cove Transportation Consulting, PLLC (GCTC) has completed a review of the transportation analysis completed with respect to the proposed Sonoma Developmental Center Specific Plan project (Project) in Sonoma County, California. Details regarding the Project are presented in the Sonoma Developmental Center Specific Plan Public Review Draft (Dyett & Bhatia, August 2022). The proposed Project is the subject of a Draft Environmental Impact Report (DEIR) prepared for the County of Sonoma (Reference: Dyett & Bhatia, Sonoma Developmental Center Specific Plan Draft Environmental Impact Report, August 2022). Section 3.14 of the DEIR presents the transportation analysis. No separate technical report was prepared, although Appendix F to the DEIR is labeled “Traffic Model Data.” We should note, however, that no traffic model data are actually presented in that appendix; instead, it simply provides a table that is virtually identical to DEIR Table 3.14-3: Projected Traffic Volumes in Plan Area. (DEIR p. 441) Our review focused on the technical adequacy of the transportation analysis presented in DEIR Section 3.14, including the detailed procedures and conclusions documented there.	The comment is noted. Please see MR-6 regarding the use of VMT rather than LOS for CEQA analysis. The Proposed Plan would still adhere to objectives CT-4.1 and CT-4.2 of the Sonoma County General Plan which pertain to vehicle level of service (LOS) standards. While most of the intersections are projected to meet the County’s LOS D standard under future conditions with buildout of the SDC Specific Plan, modifications would be necessary to achieve acceptable operation at Arnold Drive/Harney Street and SR 12/New SDC Connector Road.

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-2	BACKGROUND The proposed Sonoma Developmental Center (SDC) Specific Plan project involves the potential redevelopment of the 180-acre “Core Campus” within the overall SDC site. According to the DEIR Executive Summary (p. 7), the Project would result in buildout of 1,000 housing units, 2,400 residents, and 940 jobs. More specific development plans are described in DEIR Section 3.14 – Transportation, as follows: • 435 single-family residential units, • 345 multifamily residential units, • 220 senior residential units, • 40,000 square feet (SF) of commercial/retail space, • 190,000 SF of office space, • 70,000 SF of institutional space (described in DEIR Table 2.5-3 – Planning Area Non-Residential and Employment Buildout Summary (p. 80) as 30,000 SF of public space and 40,000 SF of institutional space), • 120 hotel rooms, and • 12.1 acres of recreational uses. We note that the specific breakdown of housing unit types addressed in the transportation analysis is not presented in either the DEIR Project Description or in the Specific Plan document. Questions regarding the specific development plan are discussed in our comments below.	Thank you for your comment letter. The comment is noted; however, it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-3	TRANSPORTATION ANALYSIS REVIEW Our review of the DEIR transportation analysis for the proposed Sonoma Developmental Center Specific Plan project revealed several issues that must be addressed prior to certification of the environmental document and approval of the project by the County of Sonoma. These issues are presented below. Flawed Analysis of Plan Consistency – Impact 3.14.4.5 (DEIR p. 443) addresses the issue of potential Project-related conflicts with "a program, plan, ordinance, or policy addressing the circulation system." Among the plans considered here is the Sonoma County General Plan 2020. The DEIR states that: Objectives CT-4.1 and CT-4.2 of the Sonoma County General Plan pertain to upholding vehicle level of service standards. As individual development projects occurring within the Proposed Plan complete traffic impact studies as required by the Sonoma County Department of Transportation and Public Works (DTPW), the potential exists for identification of locations where LOS [Level of Service] targets would be exceeded. The General Plan objectives referenced here require operation at LOS C on roadway segments (except where exceptions have been adopted) and LOS D at intersections. Attachment 1 contains an excerpt from the General Plan, including the figure illustrating where LOS exceptions have been approved.	The comment is noted. Please see MR-6 regarding the use of VMT rather than LOS for CEQA analysis. The Proposed Plan would still adhere to objectives CT-4.1 and CT-4.2 of the Sonoma County General Plan which pertain to vehicle level of service (LOS) standards. While most of the intersections are projected to meet the County's LOS D standard under future conditions with buildout of the SDC Specific Plan, modifications would be necessary to achieve acceptable operation at Arnold Drive/Harney Street and SR 12/New SDC Connector Road.

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-4	The DEIR (p. 444) goes on to state: . . . while traffic congestion effects of the Proposed Plan or development of individual sites within the Planning Area may not comply with the LOS targets established in Sonoma County General Plan Objectives CT-4.1 and CT-4.2, for the purposes of the Proposed Plan's CEQA assessment this would not be considered an adverse environmental impact. We believe this conclusion is erroneous. In fact, we believe that the failure to conform to level of service standards established within the County's adopted General Plan constitutes a clear "conflict with a program, plan, ordinance, or policy addressing the circulation system." Further, the failure to include any documentation within the DEIR regarding conformance to the General Plan LOS objectives is a significant deficiency.	The comment is noted. Please see MR-6 regarding the use of VMT rather than LOS for CEQA analysis. The Proposed Plan would still adhere to objectives CT-4.1 and CT-4.2 of the Sonoma County General Plan which pertain to vehicle level of service (LOS) standards. While most of the intersections are projected to meet the County's LOS D standard under future conditions with buildout of the SDC Specific Plan, modifications would be necessary to achieve acceptable operation at Arnold Drive/Harney Street and SR 12/New SDC Connector Road.
Neal K. Liddicoat	26-Sep-22	C158-5	We note that a detailed traffic impact analysis has been conducted for the Project, although that document has not been included in the DEIR. Specifically, Footnote 118 (DEIR p. 410) references the Focused Traffic Operations Analysis for the SDC Specific Plan (W-Trans, August 2022 [actually July 6, 2022]). Although the traffic analysis is not part of the DEIR, we reviewed it to establish whether the Project conforms to General Plan Objectives CT-4.1 and CT-4.2. Our review revealed that the WTrans report (p. 3) states: Under future conditions with implementation of the SDC Specific Plan, two intersections are projected to operate unacceptably if no modifications to the current roadway configurations are made. The intersection at Arnold Drive/Harney Street would operate unacceptably at LOS F during the p.m. peak hour . . . The future new intersection on SR 12 at the new SDC Connector Road would have unacceptable LOS E operation on the stop-controlled connector road approach . . . Although improvements are identified that would remedy these	The comment is noted. Please see MR-6 regarding the use of VMT rather than LOS for CEQA analysis. The Proposed Plan would still adhere to objectives CT-4.1 and CT-4.2 of the Sonoma County General Plan which pertain to vehicle level of service (LOS) standards. While most of the intersections are projected to meet the County's LOS D standard under future conditions with buildout of the SDC Specific Plan, modifications would be necessary to achieve acceptable operation at Arnold Drive/Harney Street and SR 12/New SDC Connector Road.

Commenter	Date	Letter	Comment	Response
			deficiencies, no assurance is provided that those measures would be implemented.	
Neal K. Liddicoat	26-Sep-22	C158-6	The focused traffic study (p. 5) also says: With the additional traffic generated by the buildout of the SDC Specific Plan, the segment of SR 12 between Arnold Drive and Trinity Road would continue to operate below the County's standard at LOS D, as would the segment of Arnold Drive between SDC and Madrone Road. Although these road segments are also identified as falling short of the County LOS standard without the Project, no mitigation measures were proposed to allow operation at an acceptable LOS. In any event, it is clear that these two roadway segments will fail to meet the County LOS standard upon completion of the Project, thereby violating the General Plan objectives. In conclusion, the information necessary to address conformance with General Plan Objective CT-4.1 and CT-4.2 exists, but was not included within the DEIR, which would have allowed public review. As described here, that information indicates that the Project fails to conform to the County's LOS standard, as two intersections and two road segments will	The comment is noted. Please see MR-6 regarding the use of VMT rather than LOS for CEQA analysis. The Proposed Plan would still adhere to objectives CT-4.1 and CT-4.2 of the Sonoma County General Plan which pertain to vehicle level of service (LOS) standards. While most of the intersections are projected to meet the County's LOS D standard under future conditions with buildout of the SDC Specific Plan, modifications would be necessary to achieve acceptable operation at Arnold Drive/Harney Street and SR 12/New SDC Connector Road.

Commenter	Date	Letter	Comment	Response
			operate at unacceptable levels of service upon completion of the Project, and no assurance was provided that these deficiencies will be remedied. Thus, a significant impact exists with respect to conflicts with the adopted General Plan. Finally, the focused traffic study must be incorporated into the DEIR. The provision of this new information within the DEIR provides grounds for recirculation of the document.	

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-7	Project Trip Generation is Underestimated – The DEIR (p. 440) states that the Project will generate 5,736 daily trips. Of that total, 1,398 of those trips (i.e., 24.4 percent of the total) will be "captured within the campus itself," resulting in net external trip generation of 4,338 trips. We believe the DEIR has substantially underestimated the volume of traffic associated with the Project. The DEIR's Project trip generation estimate was developed using the SCTM19 travel demand forecasting model maintained by the Sonoma County Transportation Authority (SCTA). The specific trip generation factors employed were not revealed in the DEIR. Consequently, it is impossible for the reviewing public to evaluate the reasonableness of either those factors or the resulting trip generation estimates. Traffic impact analyses for proposed development projects commonly use information presented in the Institute of Transportation Engineers (ITE) document Trip Generation Manual (Eleventh Edition, 2021) to develop project-related trip generation estimates. Although we acknowledge that the ITE trip rates often differ from corresponding rates contained within travel demand forecasting models such as the SCTM19 model, comparison of an estimate based on the ITE information versus the estimate documented in the DEIR provides a valuable perspective on the credibility of the DEIR Project's transportation analysis.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-8	Two scenarios are addressed here. The first employs the Project plan as described in DEIR Section 3.14 - Transportation, and the second considers a maximum residential development scenario based on information in the Specific Plan document. DEIR Section 3.14 – Transportation Project Plan Scenario Table 1 provides a trip generation estimate for the Project based on the plan as described in DEIR Section 3.14 - Transportation and on commonly-accepted procedures documented in the ITE Trip Generation Manual. That estimate reflects the following parameters: • The land use values described in DEIR Section 3.14 – Transportation, including the specific housing type breakdown, were evaluated. • The ITE Trip Generation Manual typically provides two methods to develop an estimate of project-related traffic: one using an average rate and one using a fitted curve equation. For this analysis, we have reported whichever of those two methods provides a lower value, so as to provide a conservative estimate of Project trips. The trip generation data sheets for this estimate are presented in Attachment 2. • Within each housing type, it was assumed that 25 percent of the residential units would be inclusionary income-restricted units, in order to conform to Specific Plan Policy 4-14 (Specific Plan, p. 4-25). Because these units generally produce lower volumes of traffic, this assumption again results in a conservative trip generation estimate. • Because the specific uses included within the public/institutional land use are not currently well-defined, no trip generation estimate was included for that land use category. As shown in Table 1, the Project is estimated to generate 12,253 daily trips. This is obviously substantially (i.e., 114 percent) greater than the DEIR estimate of 5,736 daily trips. As we stated above, model-based trip generation factors often differ from the	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
			ITE trip rates. However, a difference of this magnitude is exceptional and is greater than we have ever seen. Consequently, we question the validity of the DEIR trip generation estimate.	

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-9	Maximum Residential Development Scenario As we indicated above, we have questions regarding certain aspects of the proposed development plan. One such question concerns how many residential units will be constructed. Although the DEIR transportation analysis addresses development of 1,000 residential units, the Specific Plan indicates that a greater number of units is possible. Table 4-2: Minimum and Maximum Housing Units by District (Specific Plan, p. 4-12) provides detailed information regarding how many housing units could be constructed within various subareas of the Project. That table reveals that the maximum number of housing units that could potentially be built is 1,210. Further, the notes to the table state that "[u]p to 10% deviations from the minimum and maximum by district are subject to approval by the Community Development Director." If such a deviation from the maximum values were to be approved, the total number of residential units would increase to 1,331 (1,210 X 1.10 = 1,331). To assess the impacts of this maximum development scenario with respect to the volume of traffic associated with the Project we have performed a second trip generation analysis, as summarized in Table 2. The basic parameters of this analysis are similar to those described above for the Table 1 analysis. Attachment 3 contains the data sheets for the residential uses; the non-residential data sheets are unchanged from the previous analysis. With consideration of the larger number of residential units, the Project's total daily trip generation increases to 14,290. This is 149 percent greater than the value claimed in the DEIR.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts. Furthermore, the Proposed Plan evaluates a total of 1,000 residential units, and this is reflective in the Specific Plan.

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-10	Summary The analysis presented here indicates that the Project's daily trip generation has been substantially underestimated. This finding relates directly to the Project's impact with respect to vehicle-miles traveled (VMT). The DEIR acknowledges the relationship between trips and VMT at p. 447, where it says: . . . trip reductions should in theory translate to roughly equivalent VMT reductions. Thus, trip increases, as we have described, will similarly translate to roughly equivalent increases in VMT. Further, as described at DEIR p. 425, the calculation of VMT: . . . is based on the estimated number of vehicles [actually, vehicle-trips] multiplied by the distance traveled by each vehicle. If, as we have found, the number of vehicle trips is 2.14 – 2.49 times greater than the value considered in the DEIR, then the VMT values associated with the Project will also be 2.14 – 2.49 times greater than the DEIR findings. Although the DEIR has already concluded that the Project's VMT impact will be significant and unavoidable, it has failed to accurately portray the magnitude of that impact. This is a serious deficiency in the DEIR, which suggests a need to reevaluate the Project's impact and recirculate the DEIR for further public review.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-11	Internal Trips are Substantially Overestimated – As described above, the DEIR transportation analysis (p. 440) claims that 1,398 of the Project's total 5,736 daily trips will occur completely within the Project site. In other words, 24.4 percent of the vehicle-trips resulting from the Project would never leave the Project site. These trips, which are typically referred to as internal trips, would have no impact on any element of the transportation system beyond the Project boundaries. Because this a substantial percentage, it seemed appropriate to test the validity of this claim. Various tools are available to develop estimates of internal tripmaking at mixed-use developments such as the proposed Project. Three such tools have been employed here: • Institute of Transportation Engineers/NCHRP 684 Internal Trip Capture Estimation Tool – As described in the ITE Trip Generation Handbook (Third Edition, September 2017, p. 46), this approach is based on procedures documented in National Cooperative Highway Research Program (NCHRP) Report 684: Enhancing Trip Capture Estimation for Mixed-Use Developments. That report documents the extensive research, data collection, and analysis undertaken in developing and validating the recommended procedure.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-12	U.S. Environmental Protection Agency (EPA) Mixed Use Trip Generation Model – As described at the EPA website (https://www.epa.gov/smartgrowth/mixed-use-trip-generationmodel), this model was developed cooperatively between EPA and ITE. Six metropolitan regions were evaluated in detail and the resulting model was validated against actual traffic counts at mixed-use developments across the country. This model is in use in California, Washington, and New Mexico, and according to EPA the model has been adopted as a statewide standard by the Virginia Department of Transportation. • San Diego Association of Governments (SANDAG) Smart Growth Trip Generation Spreadsheet Tool – Similar to the EPA method, this tool employs trip generation rates specific to the San Diego region. Although the trip rates vary from the ITE rates, the internal trip capture results should be representative of a development similar to the proposed Project	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts
Neal K. Liddicoat	26-Sep-22	C158-13	The results of these analyses are summarized below. ITE/NCHRP 684 Internal Trip Capture Estimation Spreadsheet Tool Attachment 4 contains a copy of the spreadsheet illustrating the results of this analysis procedure. Although the spreadsheet tool allows for adjustments to be made to reflect transit usage and changes to vehicle occupancy, no such modifications were made. Doing so would simply reduce the number of vehicle-trips estimated (internal, external, and total) with no effect on the resulting internal trip percentages. As shown in Attachment 4, the model projects an internal capture percentage of nine percent (actually 8.8 percent). The gross total of 12,256 daily trips would be reduced to 11,180, with 1,076 internal trips estimated. (Note that three of the individual daily trip totals were rounded up to ensure equal	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
			numbers of entering and exiting daily trips in the spreadsheet. Thus, the total trip generation in the model is 12,256 instead of the 12,253 described earlier.)	
Neal K. Liddicoat	26-Sep-22	C158-14	EPA Mixed Use Trip Generation Model The results of this analysis are presented in Attachment 5. According to the EPA tool, the Project's 12,253 daily trips would be reduced to 11,291 external vehicle-trips (a difference of 962 trips). Those 962 internal trips include 796 vehicle-trips, 114 external walking trips, and 53 external transit trips. Considering only vehicle-trips (and ignoring external walking and transit trips), the 796 internal vehicle-trips represent an internal capture rate of 6.5 percent.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts
Neal K. Liddicoat	26-Sep-22	C158-15	SANDAG Smart Growth Trip Generation Spreadsheet Tool As described above, the SANDAG tool is very similar to the EPA tool, but with minor modifications to reflect local San Diego conditions. Nonetheless, it is believed to provide valuable perspective regarding the level of internal tripmaking at the proposed Project. The SANDAG results are provided in Attachment 6. The SANDAG model estimates that a total of 996 trips will be in the form of 821 internal vehicletrips, 120 external walking trips, and 55 external transit trips. The 821 internal vehicle-trips constitute 6.7 percent of the 12,253 gross total daily trips.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-16	Summary The internal trip values derived from the three models presented here range from 6.5 to 8.8 percent, and all are substantially lower than the 24.4 percent value employed in the DEIR analysis. By substantially overstating the volume of traffic to be captured within the Project site, the number of external trips was excessively reduced. Consequently, the DEIR analysis has failed to accurately assess the off-site impacts of the Project. Specifically, by underestimating the number of external trips, the analysis has similarly understated the Project-related VMT, which serves as basis for determining the significance of the Project's transportation impact. In short, the Project's transportation impact has been greatly understated due to a failure to provide an accurate estimate of the volume of traffic resulting from the Project.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-17	Flawed Project Traffic Assignment – DEIR Table 3.14-3: Projected Traffic Volumes in Plan Area (DEIR p. 441) presents traffic volume information for the three road segments that provide access to the site – Arnold Drive north and south of the site and the proposed Highway 12 connector. (Orchard Road connects to Jack London State Park to the west of the site, but would not be expected to carry a meaningful volume of Project traffic. That road is not included in the DEIR analysis.) Information is presented for various scenarios, both with and without the Project and with and without the Highway 12 connector. Based on this information, it is possible to derive the Project traffic assignment – that is, how many of the Project's claimed 4,338 external daily trips are estimated to be added to each of these three road segments. Table 4 below summarizes that information. (We should note that we were unable to confirm all of the existing traffic volumes, as DEIR p. 419, which apparently includes some of that information, was missing from the document that was available for downloading from the county website.) In each scenario analyzed, the volume of Project traffic assigned to the regional access roads falls substantially short of the 4,338 external trips claimed to be generated by the Project. In both scenarios involving implementation of the Highway 12 connector, the volume of traffic projected on Arnold Drive between Harney and Glen Ellen is actually shown to be reduced upon completion of the Project, which seems unlikely. The volume of Project traffic and its relationship to the claimed Project trip generation is summarized as follows: • Existing + Project (With Highway 12 Connector): 4,070 Daily Trips (93.8% of Project trips) • Existing + Project (No Highway 12 Connector): 3,410 Daily Trips (78.6% of Project trips) • Future + Project (With Highway 12 Connector): 3,320 Daily Trips (76.5% of Project trips)	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
			• Future + Project (No Highway 12 Connector): 2,650 Daily Trips (61.1% of Project trips)	

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-18	The DEIR analysis apparently fails to include a substantial portion of the Project traffic. Oftentimes, this sort of oddity is described as being due to existing or "background" traffic being diverted to other routes when the Project traffic demand is added to the study area roads. This can occur in a travel demand forecasting model when the added traffic causes a particular route to become congested and have high travel times, so the model redirects traffic to other, less congested routes so as to create an equilibrium condition on the study area road network with respect to travel time. In this case, though, no such alternative routes are available, so this explanation would not apply. The only explanation that does seem to apply is that the analysis is defective, and that it fails to accurately account for the full volume of Project traffic. The significance of this deficiency is magnified by the fact that the DEIR analysis only includes about 38 percent of the actual volume of Project traffic (i.e., 4,338 external trips compared to the corrected values of 11,180 – 11,291 documented in Table 3). The transportation analysis must be revised to remedy these substantial deficiencies, and the new analysis must recirculated for public review.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts
Neal K. Liddicoat	26-Sep-22	C158-19	5. Defective Vehicles-Miles Traveled Analysis – The analysis of VMT impacts (Impact 3.14-2, DEIR p. 445) indicates that the Project will have a significant and unavoidable impact, with a significant impact relative to Household VMT and less than significant impacts regarding Employment VMT and Total VMT per Service Population. A significant impact was also found with respect to induced VMT associated with the proposed connector to Highway 12 (which is described as an "east-west emergency access connection from the site"). (DEIR p. 447) We believe the VMT analysis is flawed, as described in the following sections.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-20	Transportation Demand Management Effects The VMT analysis is summarized in DEIR Table 3.14-4: Planning Area VMT Metrics. (DEIR p. 446) That table includes a section labeled “Proposed Plan with 15% TDM Reduction,” which is described as being for informational purposes and “reflect[s] a theoretical 15% reduction in VMT associated with required TDM measures.” We believe this information is misleading, as no support is provided with respect to the feasibility of actually achieving a 15 percent reduction in VMT. Further, based on this “theoretical” information the DEIR makes the questionable and conclusory statement that (DEIR p. 447): . . . it is likely that actual VMT will be less than the projections above. Our analysis has suggested that, to the contrary, the actual VMT will be substantially greater than those projections. In fact, only one paragraph later the DEIR contradicts itself and recognizes the questionable nature of the suggested TDM benefits (DEIR p. 447): However, the ability for individual development projects to achieve a 15 percent reduction in VMT is uncertain. Clearly, any statement regarding the potential benefits of implementing TDM measures at the Project must be taken with a sizable grain of salt.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-21	Employment VMT Analysis As noted above, the DEIR analysis found a less than significant impact with respect to Employment VMT (also referred to as "Home-Work VMT per Worker" in the DEIR), with a finding of 4.8 homebased commute VMT per worker. (DEIR p. 445) Table 3.14-4 lists values for other pertinent geographical areas near the Project, as follows: • Planning Area Baseline Average: 7.1 home-based commute VMT per worker, • Countywide Baseline Average: 12.4 home-based commute VMT per worker, and • Regional Baseline Average: 16.9 home-based commute VMT per worker. These values raise questions regarding the validity of the DEIR's employment VMT finding of 4.8 home-based commute VMT per worker. This value is about 67 percent of the corresponding value for the Planning Area, 39 percent of the Countywide value, and only 28 percent of the Bay Area Region value. Without further substantiation of the DEIR's VMT analysis procedures and background parameters and inputs, it is difficult to readily accept that the Project's VMT result would be so vastly different from the other areas referenced above. Unfortunately, the reviewing public is expected to blindly accept the output of the SCTM19 travel demand forecasting model even though, as described above, the model has obvious flaws with respect to its ability to estimate Project-related traffic volumes. In short, we question whether the employment VMT value derived for the Project is credible.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-22	Proposed Policies Reducing VMT Impact In recognition of the Project's significant and unavoidable VMT impact, the DEIR addresses ways to reduce that impact. The primary approach to achieving this goal is apparently Specific Plan Policy 3- 41, which states, in part (Specific Plan p. 3-12): Require all development to reduce vehicle trips by at least 15 percent below rates listed by the Institute of Transportation Engineers Trip Generation manual using transportation demand management strategies. As we described above, however, the Project's supposed trip generation, as reflected in Section 3.14 – Transportation, is already extremely low. According to the DEIR, the total daily trip generation is 5,736 trips/day. This includes trips associated with 1,000 residential dwelling units and substantial non-residential development types although, unfortunately, no trip generation breakdown is provided between the residential and non-residential land uses. For perspective, if we totally ignore the non-residential development (a frankly ridiculous notion, given that this ignores 190,000 SF of office space and 40,000 SF of commercial space), the Project's trip generation rate would be 5.736 trips per dwelling unit (i.e., 5,736 trips / 1,000 DU = 5.736). If the non-residential land uses were included, the overall Project trip rate would be substantially lower.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts
Neal K. Liddicoat	26-Sep-22	C158-23	For comparison, the current ITE daily trip generation rates for various types of residential uses that are potentially applicable to the Project are as follows: • Single-Family Detached Housing: 9.43 daily trips/dwelling unit, • Single-Family Attached Housing: 7.20 daily trips/dwelling unit, • Multifamily Housing (Low Rise – Not Close to Rail Transit): 6.74 daily trips/dwelling unit. Therefore, it appears that, if the Project's trip generation estimate is to be believed, the Project trip rate is already substantially less than 15 percent below the ITE trip rates. Two conclusions can be	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
			derived from this information: • The Project's trip generation as presented in the DEIR is not to be believed, and • Specific Plan Policy 3-14 is specious.	
Neal K. Liddicoat	26-Sep-22	C158-24	Summary As we have described above, the DEIR transportation analysis is significantly flawed and those flaws relate directly to the validity of the VMT analysis. To briefly summarize: • The Project trip generation estimate substantially understates the volume of traffic that will result from the Project. • The internal trip capture rate is excessive, resulting in further reduction of the Project's traffic volumes. • Only a portion of the Project's trips have actually been assigned to the study area roads. • The purported benefits of implementation of TDM strategies are unlikely to be realized. • The Project's derived Employment VMT value is highly questionable, when viewed in light of corresponding values for nearby geographical areas. • Specific Plan Policy 3-41, which is claimed as a means to reduce Project VMT, is virtually meaningless, unless the Project's trip generation estimate is substantially modified to reflect reality. The VMT analysis must be modified to correct the deficiencies described above. Upon completion of that revised VMT analysis, the DEIR must be recirculated for further public review.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
Neal K. Liddicoat	26-Sep-22	C158-25	Our review of the transportation analysis presented in the Draft Environmental Impact Report for the proposed Sonoma Developmental Center Specific Plan project in Sonoma County, California revealed several issues affecting the validity of the conclusions presented in that document. Particular deficiencies were identified with respect to the volume of traffic associated with the Project, how much of that traffic will be captured internally, the assignment of that traffic to the study area roads, and the validity of the estimate of Project-related vehicle-miles traveled. These issues must be addressed prior to approval of the proposed project and its environmental documentation by the County of Sonoma.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts
Norman Gilroy		C159-1	Comments on Historic Alternative appear to be written as a put-down to downgrade the Historic Alternative and boost the Preferred Plan, with comments prepared by the same author as proposed the Plan. Not appropriate to EIR process. Supposed to be dispassionate examination. Best done by a third party. References to the "community alternative" are to the approach and plan in the proposal presented to DGS on September 9, 2022 by the community in Glen Ellen and the Sonoma Valley most affected by the impacts of the proposed Plan.	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.
Norman Gilroy		C159-2	Comments/questions: On page 561: assumes "a preference for more large lot, single family home to maximize financial feasibility". Based on what analysis or precedent? In fact community's alternative does not rely on large lot, single family homes, but contains a mix of all types of housing in a village community setting. On page 561: "open space available within the Core Campus would be less than in Proposed Plan due to lower densities in existing buildings and the location of buildings within areas reclaimed as open space in Proposed Plan". Based on what analysis? In fact, the community's alternative has more open space than the Proposed Plan and buildings do not interfere with open space. On page 562, paragraph 2: Refers to "lower financial feasibility" of Historic Alternative. Based on what evidence? Community's plan shows more financial feasibility based on compact smaller scale layout rather than sprawling layout in	A financial feasibility study was completed as part of the SDC Specific Plan planning process. Additionally, it is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			Preferred Plan. On page 562 Para 2: “lower potential for well designed active gathering spaces”. Based on what analysis? Community plan has equal or more spaces for active gathering.	
Norman Gilroy		C159-3	On Page 563, Para 2: “area available for habitat and movement would be … lower than the Proposed Plan”. Based on what analysis? Community plan shows increase in space for wildlife habitat and movement over Preferred Plan. “ On Page 564, Para 2 & 4: “lower inefficiency of historic buildings for heating and cooling and difficulty of updating energy systems in existing buildings”. Based on what evidence and what studies? Old fashioned thinking. Not true in light of European and US experience where existing buildings are often brought up to modern standards, producing an efficient, net zero, low carbon footprint using fossil fuel free heat pumps and “second skin” technologies like those suggested in the community plan. On Page 564,, Para 4. “Would provide less support for an expanded transit system in the area”. On what evidence? In fact there is virtually no transit system in the area. The community’s plan includes one, owned and operated by local people, part of the local community at village scale, connecting to County system and even SMART in its present and future service configurations.	Thank you. The comments are not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Norman Gilroy		C159-4	On Page 565, Para 1: "Compared to the Proposed Plan, the Historic Alternative would have a similar degree of (energy and greenhouse gas emission) impacts". On what evidence or studies? In fact, a smaller village plan with a mix of adaptive use of existing buildings would have a smaller degree of impacts in those area than the massive 1000 or more unit and commercial space plan proposed as "preferred" in the draft EIR. On page 565, Para 3: "somewhat greater exposure to hazardous materials, result in hazardous waste materials". Based on what evidence or analyses? With aging infrastructure left in the ground and "second skin" technologies sealing in old materials and replacing plumbing and electrical with new, the exposure is likely to be lower as evidenced by technologies cited here On page 565, Para 4: "impacts on hydrology, drainage and water quality similar to Proposed Plan due to demolition still required for demolition of existing buildings". Again, based on what analysis and evidence? The Historic Alternative would, as in the community plan, result in less demolition and deconstruction where appropriate, resulting in lower impacts on the resources listed	Chapter 3.6.3 of the DEIR analyzes the energy and greenhouse gas emissions impacts of the Proposed Plan. Furthermore, the impacts are compared to the project alternatives in Chapter 4.
Norman Gilroy		C159-5	On Page 566, Para 1: "Larger areas of Core Campus would likely remain developed with creek buffers and wildlife corridors maintaining their current areas instead of expanding as in the Proposed Plan." Again full of suppositions, and based upon what study or evidence? "Likely" is not a term that is appropriate to an evaluation under CEQA (argumentative and imprecise). In the community plan, the wildlife corridor and creek buffers arte greatly expanded and placement of a community of 2500 people in 1000 units with 1500 cars immediately adjacent to those sensitive amenities is avoided. On Page 566, Para 2, Land Use and Planning: "Historical Alternative would reduce affordable housing, maximize historic preservation, focus on single-family detached residential units rather than other typologies of residential in order to support the high costs associated with the adaptive use of historic buildings, and limit stores, services and community amenities on the site". Based on what evidence, research or studies? Again, old fashioned thinking, when the community plan, while admittedly reusing historic buildings (a good thing), will increase the affordable housing available, provide a vibrant	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			mix of types of housing and supporting uses (though in a rural village setting at a scale smaller than the PP), and will handle the supposed "high costs" by innovative means available to anyone who puts his mind to it. On page 566, Para 3 & following page: "the opportunities (for enhancing th streetscape, improving bicycle facilities, and providing a network of paseos, parks and open spaces within the Core Campus) would be limited in this Alternative due to the increase in historic buildings retained which would limit the possible changes in the streetscape" and "alternative would have significantly less housing available for working families, students, seniors and households with low, very low, and extremely low incomes".	
Norman Gilroy		C159-6	Again, where is the evidence to support this statement? Or is it supposition by the author stated to support the Proposed Plan? The community's plan has as many as 470 units of affordable housing able to support those residents while the Proposed Plan has 250 (maybe 275) – a 60% increase, and available to all of the mix referred to in the EIR. The village, even though smaller n scale, would avoid the problem of squeezing all 1,000 units into the same space, likely reducing the opportunities for the amenities listed in the Proposed Plan. On page 570. Para 2 Wildfire: "Impact from Wildfire would be greater than the Proposed Plan, longer evacuation time in certain scenarios". Again, based on what evidence? Nor substantiated in fact. The Historic Alternative would add a substantially smaller population to the area, resulting in fewer dangers and impacts in a wildfire than the more than 1000 units added in the Proposed Plan. The Historic Alternative would function with or without the escape route to Hwy 12 included in other alternatives in the EIR and, with a smaller number of peole needing to escape, would shorten the evacuation time in case of a wildfire rather making it longer as claimed.	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Norman Gilroy		C159-7	On page 570-572: “Significant impacts of the Proposed Plan and the Historic Alternative are largely comparable, but the HA would be less superior in environmental features such as energy use, biological resources, and wildfire risks, and would not support key objectives related to increased housing supply, varied housing opportunities, community vibrancy, and long term fiscal sustainability to the same degree as the proposed plan”. Where is the evidence for any of these claims? Evidence has been provided to the contrary in each of the categories in the EIR. Each of the summary claims is speculative, without supporting data or findings, and seemingly has been presented by the author to support his/her Proposed Plan. Not appropriate for a CEQA evaluation. The draft EIR states “Overall, the Historic Preservation Alternative is the environmentally superior alternative”. We agree, and we urge the Planning Commission to adopt it as the Preferred Alterative and Proposed Plan under the Final EIR. Thank you for the opportunity to testify.	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.
Ritch Foster	Monday, September 26, 2022	C160-1	I am attaching a letter and would appreciate it being included in Public Comments as regards the SDC Specific Plan and the SDC DEIR. Thank you.	Thank you.
Ritch Foster	Monday, September 26, 2022	C160-2	I do not support any of the proposals submitted by Permit Sonoma for development of the SDC Specific Plan. It is MUCH TOO LARGE of a project to be sandwiched in between rural Glen Ellen. The proposals need to be SCALED BACK. Consider the North Sonoma Valley MAC proposal, which included Historic Preservation, increased protection of the wildlife corridor and reduced housing numbers. We need a proposal with fewer significant negative impacts on the surround communities of Glen Ellen, Kenwood and the Sonoma Valley. Why does it seem that you have not heard the majority of people that have spoken out against the huge overreach of the current proposal? I would, however, support a development of 450 or fewer low-income and affordable homes (NOT market rate), especially if many of the buildings could be adaptively reused, and the Historic District preserved.	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Ritch Foster	Monday, September 26, 2022	C160-3	The inclusion of a hotel in this project is wrong for so many reasons. It would only exacerbate traffic and the need for low-income workers to be traveling long distances for work…we are supposed to be CUTTING BACK on traffic and our carbon imprint, not ex- acerbating it. Plus, the water use needed for a hotel is FAR beyond that of residences. We are already experiencing drought conditions and water levels/supply issues with multiple dry years affects our diminishing water supply. A large development (1000 homes plus a hotel) would certainly dangerously diminish our water supply. The only reason to include a hotel in the project is its profitability enticement for a developer, and that is not compelling enough, considering the negative impacts of VMT and traffic that would create.	Thank you for your comment. The Water Supply Assessment, includes analysis for both proposed residential and non-residential uses. It can be found in the Appendix of the DEIR.
Ritch Foster	Monday, September 26, 2022	C160-4	Wildfire evacuations would be significantly negatively impacted with the addition of 1,000 new homes and 2,000+ additional vehicles. It is laughable to say that the impact would be insignificant! For those of us who were caught in real-time long traffic delays during previous evacuations, we would strongly disagree. Why are you ignoring the reality of the impact of overdeveloping this site will have on our small rural community? Why have you not considered or pursued outside or alternative funding sources or implementation of a public trust option?	See Master Response 4 created to address questions about the wildfire evacuation analysis. Furthermore, the Chapter 7 of the Specific Plan includes a financing and implementation strategy.
Ritch Foster	Monday, September 26, 2022	C160-5	Why is the state not being held responsible for the condition they are leaving the buildings, property and infrastructure in? Their neglect and the cleanup costs associated with developing the site seem to be a big factor in your feeling the need to significantly overdevelop the property in order to offset these costs which should not be the responsibility of our local community to absorb. Please consider all of the important points that so many have brought to you and do not accept this current plan.	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.
Robert Baeyen	Monday, September 26, 2022	C161-1	No, no, no. Do not proceed another step with the current plan. The SDC property is worth far more to Glen Ellen, Sonoma Valley, the migrating wild life and the county than any development will ever be. The plan would alter the character of the entire area. I do not understand how our supervisors and permitting department could ever seriously consider such a plan. It is directly opposite to our own 2020 General plan. Our Supervisors and voters just voted to extend the very nature	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			of our beautiful county for another 20 year. Then they approve of this? No we do not.	
Robert Baeyen	Monday, September 26, 2022	C161-2	There are dozens of examples of this in the 2020 plan, for example: Policy OSRC-1a: Avoid amendments to increase residential density in Community Separators, since these densities were established based upon the policies set forth in other elements of this plan as well as the open space, separation and visual considerations identified in this section. The integrity of Community Separators cannot be maintained at densities in excess of one unit per ten acres. However, under no circumstances shall this policy be used to justify an increase in density from that designated on the land use map. How can the current plan be approved if we as a county have vigorously made it known that this plan is not wanted. I haven't even mentioned the strain this would put on the infrastructure etc.	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.
Rowan Schneider	Thursday, September 22, 2022	C162-1	My name is Rowan, I live in El Verano and I have some concerns about pushing the SDC Project in a for-profit direction and I have a potential alternative. You have done a great job weighing community and environmental needs. As someone who lives downstream near the Sonoma Creek, the care and attention brought to this project is very comforting. The broader social and economic goals of creating a new gathering place is inspiring. I fear that the wonderful plan put forward in the SDC Public Review Draft will be compromised in its execution.	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.
Rowan Schneider	Thursday, September 22, 2022	C162-2	The execution of the plan will reflect its funding; if a developer assumes responsibility for this project they will be compelled to complete it in the most profitable manner. Construction would follow conventional production methodologies and produce a space with the heart and character of an outdoor mall. The quality and ethic of the execution of this project will ripple through Sonoma Valley and Sonoma County. This land being left for profit would further entrench us in	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			systems that do not provide the freedom to adequately respond to rising social inequality and changing climates.	
Rowan Schneider	Thursday, September 22, 2022	C162-3	I believe there is an opportunity for a different ethic to emerge: an attitude of respect and generosity already apparent in the Public Review Draft. If we were to use the cooperative legal structure, we could create an entity more capable of representing the needs of Sonoma Valley and her people. The members of the cooperative would be the different organizations interested in engaging with the space. These organizations would be responsible for funding the projects they were interested in, as well as contributing to the collective maintenance of the property. Citizens of the Valley would have the opportunity to patronize the projects they are most passionate about, creating a direct democracy measured in dollars.	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Rowan Schneider	Thursday, September 22, 2022	C162-4	There are several opportunities such an undertaking would facilitate: The ancestral keepers of this land could be invited to participate in the decision making process. This particular land has been a place of intercultural relations prior to European arrival. This is a unique opportunity to honor the people who so masterfully tended this land and be able to build something new together. It could provide a central organizing system for the various philanthropic, socially and environmentally active groups of Sonoma Valley. So much good work is being done here but it is scattered. The property could be developed as needed. This would lower upfront costs as well as reduce the strain on local roadways by construction workers. This would give the property a much more organic and welcoming atmosphere and allow it greater flexibility to precisely meet the needs of its residents. The creation of a Library/Community information center. This center could provide local cloud storage and more equitable access to high powered computers. There are many young people who have been sucked into the internet, especially after the pandemic. Making a space for people to come together to work, learn and play would allow for these activities to be less inherently anti-social while making them easier to regulate. A weekly open air market/festival showcasing craft and food from throughout the Bay Area. A blend between the Sonoma Farmers Market and the Plein Air Art Show, this would give local artisans greater opportunities while further distinguishing Sonoma Valley as a center of the arts. A venue for hosting performances, from musical guests to local performers such as the Avalon Players, Broadway Under the Stars and Rhoten Productions.	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.
Rowan Schneider	Thursday, September 22, 2022	C162-5	The problems facing the SDC and Sonoma Valley are not unique. Everywhere people are facing water shortages that force us to rethink how we use our resources and produce our food. Our farmers need the most support so they can have the freedom to innovate, they are severely limited in their capacity to do this when their survival depends on profitability. A rising cost of living prevents people from purchasing in line with their ethics and ideals, forcing them to choose the cheapest (and most exploitative) products.	Thank you for your comment. The Water Supply Assessment, includes analysis for both proposed residential and non-residential uses. It can be found in the Appendix of the DEIR.

Commenter	Date	Letter	Comment	Response
Rowan Schneider	Thursday, September 22, 2022	C162-6	This cost of living is forcing young people like myself out of this region. I (along with some peers) am starting an organization to be able to address these kinds of problems. Broadly speaking, we are committed to learning how to adapt technologies to satisfy a particular use case. I have spent quite a bit of time familiarizing myself with the cooperative structure in that endeavor, hence the enthusiasm about its potential application in this setting. The first technology we are setting out to master is the personal computer. We are not trying to innovate or redesign anything, just know what technologies are available and help people end up with the tools they actually need and make sure they know how to use and maintain them. The goal of this organization is to be able to build the capacity to address some of the larger issues outlined above, naturally that will take quite a bit of time.	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.
Rowan Schneider	Thursday, September 22, 2022	C162-7	Still, as someone who is very passionate about the Sonoma Creek, I cannot help pondering this issue of what technologies are needed to meet the needs of this valley. The idea of a single entity providing the investment for the SDC project makes me deeply uneasy about the level of influence they would have in that situation. Much of my family still farms and I am very acutely aware of the pressing need for our food system to evolve if my future children are going to be well fed. It seems foolish to me to not draw on the wisdom cultivated over centuries and millennia for coexisting and thriving with this land, but all too often it seems that wisdom and those practices are flaunted by European Legacy institutions with no connection to the people who actually practice and developed it. I know it is likely far too late for such a proposal to be considered for this project, especially in such an undeveloped form. If there is any chance of such an organization emerging I would gladly contribute in any way possible.	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Sonia E. Taylor	24-Sep-22	C163-1	This letter will provide limited comments about the Draft Environmental Impact Report (DEIR) prepared for the Sonoma Developmental Center (SDC) Specific Plan. This letter is not intended to be an inclusive examination of the DEIR, but is intended to address key deficiencies in the DEIR, and specifically includes a comment about one unacceptable purported "policy"/"action."	Thank you.
Sonia E. Taylor	24-Sep-22	C163-2	Specific Plan Standard Conditions of Approval The DEIR prepared for the SDC Specific Plan is a "self-mitigating" DEIR, and relies on the SDC Specific Plan's "Standard Conditions of Approval," as well as other federal, state and local regulations, rules, laws and policies1 for other "conditions" that will allegedly be required of any future development, instead of proposing mitigation measures and a mitigation monitoring program. This is unacceptable for multiple reasons. First, there appears to be no framework requiring that the Specific Plan Standard Conditions of Approval (hereinafter "Conditions") actually be undertaken, or requiring compliance with any existing federal, state and local regulations, rules, laws and policies (hereinafter "Policies"), and there certainly is no way for any interested member of the public to monitor whether those Conditions/Policies have been demanded of any future development, since there is no required reporting process. Second, there is no way to evaluate whether any of those Conditions/Policies are feasible, will have the purported result reported in the EIR and/or are enforceable. Third, many of those Conditions/Policies defer analysis to some later future time, which is impermissible under the California Environmental Quality Act (CEQA), particularly since some or all proposed developments on SDC may not require any future CEQA review. This could lead to a result where the CEQA required analysis of both impacts and cumulative impacts will never have been completed prior to development on the SDC property. Finally, it's astounding to me that many of the Conditions that the DEIR relies on to make its findings – most of which indicate either "less than significant" impact or "no impact" – are NOT included in the required Standard Conditions of Approval. This means, of course, that those missing	Refer to Master Response 1 on the adequacy of a self-mitigating Specific Plan. Additionally, any future project will need to conform with the policies in the Specific Plan, including the Conditions of Approval.

Commenter	Date	Letter	Comment	Response
			Conditions are not actually required, and therefore that any reliance on those Conditions to somehow mitigate impacts, resulting in those findings of "less than significant" impact or "no impact," is contrary to the purpose of CEQA, and renders the DEIR worthless.	
Sonia E. Taylor	24-Sep-22	C163-3	Future Analysis Conditions: Some of the many Conditions contained Exhibit A of the SDC Specific Plan that defer analysis to some later future time include, but are not limited to: 1. Almost all of the Utility Conditions, including "UTIL-3 Complete an analysis of the capacity of SVCSD trunk sewer to serve the SDC at full buildout." Obviously, this future analysis could result in information that the proposed future development would overload the SVCSD trunk sewer, which would be a significant impact requiring specific mitigation, if possible, and/or would cause significant unmitigatable impacts. 2. Many of the Biological Conditions. For instance, the future required analysis of "presence of special-status species and sensitive habitats at proposed development sites" must be conducted now, as part of the DEIR, as that information would inform whether there are significant unmitigatable impacts of the proposed Specific Plan.	The comment is noted. Please see MR-9 and MR-7 regarding the Mitigation Monitoring/Performance Standards, and the adequacy of impacts on wildlife movement or disagreement with analysis/findings.

Commenter	Date	Letter	Comment	Response
Sonia E. Taylor	24-Sep-22	C163-4	Missing Conditions: As just one example of missing Conditions, in DEIR Section 16.1.3.3 “Relevant Policies and Implementing Actions” regarding Wildfire Hazards, the DEIR lists a number of “implementing actions” (hereinafter Actions) that are not contained In the Specific Plan Standard Conditions of Approval, and are not otherwise required by other Federal, State or local regulations, rules, policies, etc., including, but not limited to: Policies 2-31, 2-34, 2-35, 2-37, 2-39, 2-42, 2-54, 6-1, 6-19. 6-21, and 6-27. If there are Federal, State or local regulations, rules, policies, etc. that require2 that any of the Actions listed in the DEIR, including those listed above, be implemented, specifically set forth the exact regulations, rules, policies, etc. for each said Action. To make matters worse, some of the Actions relied on by the DEIR in its finding of “less than significant” impact or “no impact” are vague and unenforceable, including but not limited to by leaving significant discretion to individuals/jurisdictions considering future approvals (which means that any given individual/jurisdiction in the future could make a decision that the Action required by the DEIR doesn’t have to be met). This, of course, would render the DEIR’s findings of “less than significant” impact or “no impact,” which required the Action to be taken to make said finding, worthless, and would require reevaluation of the DEIR’s findings and conclusions.	Refer to Master Response 1 on the adequacy of a self-mitigating Specific Plan. Additionally, any future project will need to conform with the policies in the Specific Plan, including the Conditions of Approval.
Sonia E. Taylor	24-Sep-22	C163-5	There is no question that these Conditions/Actions must be implemented for the DEIR’s findings to be accurate and for the DEIR to be considered adequate. Because there is no requirement for these Conditions/Actions to be implemented, there is a very real possibility that they will be neglected or disregarded, which renders this DEIR fatally flawed. The DEIR’s conclusions of “less than significant” impact and/or “no impact” either hangs together as a whole, with every Condition/Policy/Action required to be met, or those conclusions fail if any one single Condition/Policy/Action is not met.	Refer to Master Response 1 on the adequacy of a self-mitigating Specific Plan. Additionally, any future project will need to conform with the policies in the Specific Plan, including the Conditions of Approval.

Commenter	Date	Letter	Comment	Response
Sonia E. Taylor	24-Sep-22	C163-6	One specific Policy/Action that has no basis in law and cannot be accomplished is the allegedly required "Shelter-In-Place" facility, discussed below. "Required" Shelter- in-Place Facility In Chapter 3.16: Wildfire, the DEIR contains the allegedly required Action that: 2-54 Ensure that the project sponsor proactively plans for emergency wildfire safety by: b. Building or designating an on-site shelter-in-place facility, to be open to both SDC residents and the general public, prior to construction of the 200th housing unit, with specifications for the facility to be included as part of the Emergency Preparedness and Evacuation Plan; In spite of the laundry list of Federal, State and location regulations, rules, policies, etc. listed in Section 3.16 Wildfire preamble, according to my research there is not one single United States or California regulation, rule, policy, or ANY other specific guidance about shelter-in-place facilities with regard to wildfires.3 This complete lack of law and guidance renders this alleged required Action impossible to meet.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.
Sonia E. Taylor	24-Sep-22	C163-7	Specifically, at the Federal level, there are materials covering shelter-in-place for hurricanes, tornadoes, high wind events, chemical attacks and other chemical issues, and similar situations, but not a single direction regarding shelter-in-place facilities for wildfires. Further, this complete lack of regulations, rules, policies, etc., let alone any guidance whatsoever, is true at both the California State and local Sonoma County level.4 It is clear that this Action is "required" because it will be – after construction of 200 residences –impossible to safely evacuate everyone living/working on the SDC site, requiring them to "shelter-in-place" to attempt to survive a wildfire impacting the area. However, given the complete lack of a California definition of shelter-in-place during wildfires (as well as any rules/regulations/guidance about how a shelter-in-place facility for wildfire should be constructed/utilized, etc.), I have no idea how this purported facility will save lives. Perhaps this proposal should actually be for a "temporary refuge" or for a "refuge of last resort," although that clearly is not what is being proposed.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Sonia E. Taylor	24-Sep-22	C163-8	Please state explicitly what allegedly required "specifications" for this shelter-in-place facility would render it an acceptable "mitigation measure" allowing findings of "less than significant" impact in this Wildfire section of the DEIR. Because, frankly, there is literally no evidence that specifications exist, except in a foreign country – Australia, specifically. Clearly California, and the United States, have not adopted any of Australia's rules, regulations and policies regarding shelter-in-place, stay and defend, refuge of last resort, etc.5 Since this is one essential required Action for the Wildfire section of the DEIR, and there are no standards or any evidence that it mitigates evacuation during a wildfire, it cannot be achieved, and therefore every conclusion of "less than significant" impact is rendered meaningless, causing the DEIR to fail with regard to the Wildfire section. Attached for your information please find information I gathered about shelter-in-place earlier this year.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.
Sonia E. Taylor	24-Sep-22	C163-9	Additional comments about Section 3.16 Wildfires: Impact 3.16-1, the DEIR states that any future project: [W] ould also explore the feasibility of providing an additional east-west emergency access connection from the site to SR 12 in order to improve access to the emergency evacuation route (Policy 3-5). Policy 3-5 states: Reuse existing street network to the greatest extent feasible. Improve multi-modal access from the SDC to SR 12 by exploring the feasibility of providing an additional east-west emergency access connection from the site that includes high quality pedestrian and bicycle facilities. (Curiously, in Section ES.2 "Areas of Known Controversy" of the DEIR, it is stated that "The Proposed Plan features a new connection from SDC to Highway 12," which is flatly untrue – the DEIR only proposes "exploring" if said connection is "feasible.") Again, this is a proposed "mitigation measure" Action that relies on some future possible Action that may never happen or may not be feasible (clearly the use of the word "explore" in this proposed policy does not require any action), and therefore this is an impermissible deferral of analysis to some future time.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Sonia E. Taylor	24-Sep-22	C163-10	2. The evacuation times listed in Table 3.16-1 would be hilarious if the consequences of their gross underestimate weren't so potentially dire. While I have never evacuated in the Sonoma Valley, I had to evacuate in the very early morning during the Tubbs fire in 2017 in Santa Rosa. It took me over 10 minutes to just drive three blocks. There is not a chance that the evacuation times listed in Table 3.16-1 are an accurate reflection of reality during a wildfire disaster. Please state what modeling evaluation methods were used to arrive at the DEIR's evacuation times. The purported "evacuation analysis for this EIR prepared by Kittelson & Associates" will apparently not be made available for public review; I explicitly requested that analysis and my request was denied. This renders it impossible for any decision maker or member of the public to adequately evaluate this analysis and comment effectively.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.
Sonia E. Taylor	24-Sep-22	C163-11	After receiving this denial, I did a little research on Kittelson & Associates, learning that of all the many listings on their website of work they have performed/ideas they have, only two items had anything to do with evacuations: "Capacity and Strategy Assessment of North Carolina Hurricane Evacuation Routes" and "Emergency Evacuation Strategies for Every Community." The first item is categorized as "work," and the second item as "ideas." In the description of the first item, which obviously isn't relevant except in the most general sense, since it's discussing freeway behavior and there's generally a great deal of advance notice of hurricanes, Kittelson's website states that they modified the analysis tool Freeval with North Carolina Department of Transportation tools and strategies to evaluate reversal of North Carolina's freeway lanes to allow evacuation during a hurricane. Freeval's website states that it is "powerful macroscopic freeway analysis tool based on Highway Capacity Manual (HCM)." The Freeval website also only lists the North Carolina freeways as a specific use. Did Kittelson use Freeval to evaluate evacuation from SDC during a wildfire event? I have no idea.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Sonia E. Taylor	24-Sep-22	C163-12	For Kittelson's "Ideas" listing about emergency evacuations in general, their website states that they partnered with Stephen Wong, Ph.D., who does research on (among other things) emergency evacuation strategies. Interestingly, in a 2022 paper co-authored by Dr. Wong on California wildfire evacuee behavior, the following statement is made: While extensive research has been conducted on hurricane evacuation behavior, little is known about wildfire evacuation behavior. https://scholar.google.com/citations?view op=view citation&hl=en&user=Y7LlCiAAAAAJ&c itation for view=Y7LlCiAAAAAJ:Tyk-4Ss8FVUC Did Kittelson partner with Stephen Wong to evaluate evacuation from SDC during a wildfire event? I have no idea. It is unacceptable to not release the actual Kittelson & Associates evacuation analysis. Because of this refusal to release this analysis, the public has had no opportunity to evaluate same and provide comments. It's not the public's job to provide an alternative analysis; it's the DEIR's job to prove that its analysis is accurate, and in this regard the DEIR has failed.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.
Sonia E. Taylor	24-Sep-22	C163-13	3. The DEIR is internally inconsistent with regard to its conclusions of "less than significant" impact regarding Impact 3.16-1. As stated above, and by other commenters, the alleged "additional east-west emergency access connection" is not required by the DEIR, and is only to be "explored" for possible feasibility of same. However, Impact 3.16-1 clearly states that a condition for the finding of "less than significant" impact is that the project must: "[Ensure] that every parcel within the Core Campus has two routes for ingress and egress during an emergency" Without the additional access to the property, I believe this is impossible to accomplish. If you believe that every parcel will have two means of ingress/egress without the possible "additional east-west emergency access connection," please explicitly show how that will be accomplished.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Sonia E. Taylor	24-Sep-22	C163-14	4. Also in Impact 3.16-1, the following is stated: "Historically, a fire approaching from the west may be less likely, and therefore did not warrant further specific analysis." While a fire approaching the SDC site from the west "may" be less likely, that is not an adequate reason for not evaluating and analyzing the impacts therefrom. If the DEIR had stated that this possibility "is" less likely, perhaps the conclusion that no analysis was needed could have been reached, but "may" certainly implies that it is possible, and therefore the possibility should have been addressed and evaluated.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.
Sonia E. Taylor	24-Sep-22	C163-15	SHOULD "SHELTER-IN-PLACE" DURING WILDFIRES EVER BE CONSIDERED AN ALERNATIVE TO EVACUATION AND/OR AS AN ACCEPTABLE MITIGATION MEASURE? The short answer is an emphatic "no." I'm starting to hear people talk about "Shelter-In-Place" as an equivalent alternative to wildfire evacuations, or even as a CEQA mitigation measure to allow development in fire prone communities. Sheltering in place during a wildfire conflagration should never be a first choice, as review of information from communities who have Shelter-In-Place policies and experience makes clear, and that is backed up by the opinion of experienced fire professionals. Everyone agrees that while sometimes it can be the only solution for people who have waited too long to evacuate or who are caught with a wind driven wildfire bearing down when it could be even more dangerous to attempt to drive out, it should never be considered the first choice. Ever. In fact, Shelter-In-Place is the last resort.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Sonia E. Taylor	24-Sep-22	C163-16	Critical Experience-Driven Shelter-In-Place Lessons: 1. There is no guarantee of safety or survival while sheltering in place. 2. Shelter-In-Place is not a passive experience; instead it requires physical, mental and emotional fitness, and those who Shelter-In-Place must actively work hard to survive. 3. Shelter-In-Place comes with high risks and should always be a last resort. Locations with Shelter-In-Place Experience: In California, there are two locations with Shelter-In-Place experience: Rancho Santa Fe in San Diego County and Pepperdine University in Malibu. Australia also has many years of Shelter-In-Place experience. I'll discuss each location's policies, recommendations, experiences and the unintended consequences, below.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.
Sonia E. Taylor	24-Sep-22	C163-17	Rancho Santa Fe Rancho Santa Fe, in San Diego County, is often brought up as an example of how "Shelter-In-Place" is an alternative to providing adequate evacuation routes and planning. Nothing could be further from the truth. In Rancho Santa Fe, the community was built to have the best odds possible of surviving wildfires – although it was built to 2003-04 Building/Fire Codes, and we know much more now than we did then, raising the question of whether the community is still adequately protected. Moreover, Shelter-In-Place is not considered the first or safest choice for residents, as the Rancho Santa Fe Fire Department made clear on December 7, 2017: "Clarification for our Shelter-in-Place communities: While your communities were built to a specific standard designed to withstand wildfires, they will still be evacuated if a wildfire is threatening. If evacuation orders are issued for your community, please evacuate and evacuate early. That is still the safest scenario for residents and emergency personnel. Only if you are unable to do so may it be safer to stay in your home, or shelter-in-place, than to	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			evacuate under hazardous conditions." (Emphasis added) https://www.rsf-fire.org/shelter-in-place/	
Sonia E. Taylor	24-Sep-22	C163-18	Further, the materials distributed to residents of Rancho Santa Fe's "Shelter-In-Place" communities make clear that evacuation is still the best option, and that sheltering in place is not. (https://www.rsffire. org/wp-content/uploads/2016/09/SIP for web.pdf) Following is the checklist distributed to residents in these communities considering whether to evacuate or Shelter-In-Place: "Should I stay or should I go Quiz": • Are you physically fit to fight spot fires in and around your home for up to 10 hours or more? • Are you and your family members mentally, physically and emotionally able to cope with the intense smoke, heat, stress and noise of a wildfire while defending your home? • Can you protect your home while also caring for members of your family, pets, etc.? • Do you have the necessary resources, training, and properly maintained equipment to effectively fight a fire? • Does your home have defensible space of at least 100 feet and	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			is it cleared of flammable materials and vegetation? • Is your home constructed of ignition resistant materials? If you answered “No” to any of these questions, then plan to evacuate early.	

Commenter	Date	Letter	Comment	Response
Sonia E. Taylor	24-Sep-22	C163-19	In addition, CalFire's "Ready Set Go Plan" reiterates multiple times that you should evacuate, not "Shelter-In-Place," and has a section titled "If You Are Trapped – Survival Tips." That checklist for people who are trapped includes "Patrol inside your home for spot fires and extinguish them," and "Patrol your property and extinguish small fires." (https://www.fire.ca.gov/media/4996/readysetgo plan.pdf) Obviously, sheltering in place is NOT a passive experience. Individuals/families can't remain in their house and just safely wait for the fire to pass. Individuals must be able to fight spot fires, be mentally, emotionally and physically fit, and have adequate resources and training to have a chance of surviving sheltering in place (and even then, there are no guarantees). Having a structure built to the best fire safety codes, even with "perfect" defensible space, is not enough. During a life threatening event, most people are not going to have the training, physical, mental and/or emotional endurance, or the resources and abilities to be able to cope with sheltering in place, which will not only be dangerous for those individuals, but for the Fire Department, who will likely be called in to rescue them. Sheltering in place should never be the first choice, should never be considered an acceptable substitute for safe and sufficient evacuation routes and planning, and should never be considered an acceptable CEQA mitigation measure in lieu of adequate evacuation routes and planning.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Sonia E. Taylor	24-Sep-22	C163-20	Australia Australia historically had a “Prepare, Stay and Defend or Leave Early” policy, which has undergone significant reevaluation after the 2009 Black Saturday fires, when people died in their homes while sheltering in place. Currently the Australian policy is known as “Prepare. Act. Survive.” and promotes evacuation as the safest option – well before a fire is a threat. The genesis of Australia’s policy is that oftentimes their fires are explosive and unpredictable, leaving residents with no time to evacuate. They have identified “Bushfire Safer Places” and “Bushfire Last Resort Refuges” for those emergency situations. A “safer place” is a “place of relative safety,” that “may save your life but they do not guarantee safety,” and may be subject to “sparks, embers and smoke which may start secondary fires in vegetation, gardens and structures.” A “last resort refuge” is to be used “only if you cannot reach a Bushfire Safer Place,” and is “not suitable for extended use,” providing only limited protection, with no guarantee of safety. (See, as one example of many, https://www.cfs.sa.gov.au/prepare-for-a-fire/be-prepared/bushfire-safer-places/)	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.
Sonia E. Taylor	24-Sep-22	C163-21	Because of Australia’s development patterns, and because of human nature (which is unpredictable, at best), Australia’s policy for the times when residents either will not or cannot evacuate called “Prepare. Act. Survive.”, which is essentially “Shelter-In-Place.” To stay in a building during a fire, however, is acknowledged by Australian officials as requiring significant preparation, including a written and practiced bushfire plan, as well as available water with pumps and hoses and a power source. Of course, the first crucial decision about whether to Shelter-In-Place involves ensuring that the building has been constructed for best survival probabilities during a fire, along with having perfect defensible space. After that, though, the Australian literature for “Prepare. Act. Survive.” emphasizes similar issues as does Rancho Santa Fe.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Sonia E. Taylor	24-Sep-22	C163-22	The first priority is always to evacuate early. Only if you get "caught" should you stay, and if you stay, you should be prepared, with a plan. The recommended preparation includes being mentally, emotionally and physically capable, because individuals will likely experience spot fires, smoke, heat and darkness. Individuals will also likely not have power or running water, and may not have Internet or cell phone connections. Prior to the arrival of the fire, Australian materials state that individuals sheltering in place will have to fight spot fires, prepare their home, and patrol inside and outside extinguishing embers and fires. When the fire arrives, individuals sheltering in place will have to take shelter inside the house, while also patrolling inside the house putting out embers and fires. After the fire has passed, individuals sheltering in place are told they will have to continue to put out spot fires, continue patrols inside and outside their house, and hose down the house as needed. Australia has multiple resources about bushfires, including at https://www.dfes.wa.gov.au/site/ and https://www.abc.net.au/emergency/plan-for-emergency-bushfire/12412042 plus many more (It's important not to refer to anything dated 2010 or earlier, since policies changed after 2009). In other words, Australia does not consider sheltering in place to be a passive activity. "Being in a bushfire could be the most traumatic experience of your life. You may have to fight spot fires for hours, even days at a time." Their bottom line recommendation is: "The best way to survive a bushfire and avoid radiant heat is to leave early and be away from the threat."	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Sonia E. Taylor	24-Sep-22	C163-23	Pepperdine University When Californians cite Shelter-In-Place policies, Malibu's Pepperdine University comes up most frequently, since some of their students sheltered in place during the 2018 Woolsey fire. Unfortunately, I see little evidence that Pepperdine's policy is a realistic one that should be applied elsewhere. Pepperdine allegedly has a "detailed shelter-in-place plan," but I have been unable to find any evidence of said detailed plan – all I can find are general policies. Pepperdine's 2010-11 Emergency Preparedness Guide discusses their Shelter-In-Place policy in general terms (it is not the "detailed plan"), but also states: "Have an evacuation plan in place and identify two exit routes from your neighborhood. If you are asked to evacuate by fire or police officials, do so immediately." (the 2020-21 Guide is apparently only available to students, requiring student ID to review) The President's August 2020 letter states: "Through diligent training, equipping, studying, staffing, and commitment, we are prepared to be our own first responders until local and state agencies reach campus." (emphasis added)	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.
Sonia E. Taylor	24-Sep-22	C163-24	Clearly Pepperdine's Shelter-In-Place plan relies on the LA Fire Department's assistance on the Malibu Pepperdine campus, which is confirmed in their web-based general policies. Pepperdine's own firefighting resources are two "fire trucks" and their " expertly trained staff" "able to respond 24/7" (https://pepemergency.files.wordpress.com/2020/09/fy21-presidents-letter.pdf), but their general webbased policies state that Pepperdine will "host the Los Angeles County Fire Department's Incident Command Post (ICP) on the Malibu campus for wildfires in the area." Further, their Emergency plans state: "University officials maintain and develop relationships with first responders, government officials, utility providers, and others who could assist the University during emergencies." (See,	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			https://emergency.pepperdine.edu/brush-fires/, https://emergency.pepperdine.edu/emergencyoperations-committee-eoc/, https://emergency.pepperdine.edu/shelter-in-place/) This makes clear that Pepperdine is "hoping" that the LA Fire Department will be on the campus pursuant to the relationships Pepperdine has with them, so Pepperdine won't have to rely on their own staff for protection of life and property, or at least only until the Fire Department arrives on site.	
Sonia E. Taylor	24-Sep-22	C163-25	Although Malibu has prepared an August 2020 Mass Evacuation Plan, Malibu's General Plan is dated 1995, and I presume the associated FEIR/DEIR is equally old (it's not readily available online). This means that Malibu doesn't have a city-wide EIR that complies with current CEQA requirements to evaluate potential impacts to existing wildfire evacuation plans, which I consider a significant problem, because all of Malibu is designated as a Very High Fire Hazard Severity Zone. Malibu's 2020 Mass Evacuation Plan unfortunately mentions Shelter-In-Place as if it's a "safe" option, without any discussion of the critical difficulties with doing so, or any indication of when orders to Shelter-In-Place might be issued. The Plan also identifies "Safe Refuge Areas," all of which are on Malibu's beaches – Pepperdine's campus is apparently not considered a "Safe Refuge Area." The Plan makes clear, however, that these areas, no matter how named, are not necessarily "safe" and that evacuation may be necessary: "Safe Refuge Areas are temporary staging areas in a mandatory evacuation. They may also be used to help move traffic off the road to speed up the movement of people out of the	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			immediate danger area. Residents seeking refuge in a Safe Refuge Area will be notified that the Safe Refuge Area is not a 'hard or permanent shelter' and in the event, the evacuation order involves the Safe Refuge Area, those residents will be required to evacuate." (https://www.malibucity.org/DocumentCenter/View/26832/FINAL-Evacuation-Plan-8192020)	
Sonia E. Taylor	24-Sep-22	C163-26	I grew up in Malibu, so am familiar with Malibu in general, as well as the Pepperdine campus. Pepperdine established their Shelter-In-Place policies because: 1) Pepperdine is – for Malibu – in a relatively "open space," 2) their 3000 +/- students may not have the ability to evacuate (many don't have individual vehicles on site), and 3) any significant wildfire in Malibu will likely cause gridlock on the 2 lanes each way Pacific Coast Highway (the only real way to evacuate away from a typical wildfire). Notwithstanding these reasons, I believe Pepperdine's Shelter-In-Place policy has significant downsides.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.
Sonia E. Taylor	24-Sep-22	C163-27	First, any Fire Department will always default to protecting people over buildings, and when people are sheltering in place, that will divert Fire Department resources to protect those people, as appears to have happened during the 2018 Woolsey fire (I've reviewed multiple newspaper articles about the Woolsey fire, as well has had personal communications with Malibu residents). Second, even though Pepperdine is (relatively) open space and has (relatively) fire safe buildings, that cannot protect students from smoke inhalation, from	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			radiant heat, from fear, or from the possibility that they might have to run for their lives if a fire conflagration were to invade the campus.	
Sonia E. Taylor	24-Sep-22	C163-28	There also is no available evidence about who will take the necessary active roles required during Shelter-In-Place. While the University has two "fire trucks" (the photo online is not of full size fire engines), there is no indication of the number of staff assigned to those trucks or about their training, and, frankly, since the campus is 830 acres, there is no possibility that those two trucks could effectively put out all embers and spot fires, or effectively respond should a more significant fire start or enter the property. Unless, of course, the LA Fire Department is already also on site doing that actual work, which seems to be Pepperdine's assumption. There is also no discussion of whether the students and staff sheltering in place are physically, mentally and/or emotionally capable of doing so.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.
Sonia E. Taylor	24-Sep-22	C163-29	In fact, in spite of Pepperdine's 30+ year old Shelter-In-Place policy, during the 2018 Woolsey Fire apparently many of the students did evacuate. And, as a result of the Woolsey Fire, it appears that there will be a reevaluation of Pepperdine's Shelter-In-Place policies, although there is no evidence I can find of any such reevaluation to date. As we've seen around the state, when faced with a life threatening situation such as a wildfire, the odds that residents and personnel will behave in a logical fashion is decreased, oftentimes substantially, and when a large portion of the population consists of very young adults, it should not be surprising when things don't go as planned.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Sonia E. Taylor	24-Sep-22	C163-30	Shelter-In-Place can be a “tool” in the “tool kit,” but should never be the first choice. It should only be used when evacuation has become impossible. I believe Pepperdine should be required to keep adequate buses, with trained employees available to drive them, to fully evacuate the entire campus as early as possible, and should keep their Shelter-In-Place policy only for instances where there is not adequate time to evacuate. I will be watching closely to see how Pepperdine will prepare for a future of wildfires with their University full of young adults in a very high fire danger zone now that fire season is 12 months long, and will be watching to see how they change their Emergency plans. I can find no evidence that Pepperdine has a realistic Shelter-In-Place policy, and do not believe their policy should be used as an example for any other situations.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.
Sonia E. Taylor	24-Sep-22	C163-31	Conclusion: Shelter-In-Place is not an appropriate solution for most people. As one Australian website states: “Being in a bushfire could be the most traumatic experience of your life. You may have to fight spot fires for hours, even days at a time.” (https://mybushfireplan.wa.gov.au/stay-and-defend) If California communities, or California in general, want to consider using Shelter-In-Place as an tool for what is now our Climate Change driven year-round fire seasons, they should first carefully consider the realities and requirements of Shelter-In-Place.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.
Sonia E. Taylor	24-Sep-22	C163-32	Shelter-In-Place as a Mitigation Measure: Shelter-In-Place should never be considered an acceptable mitigation measure to allow the construction of buildings or location of businesses in high/very high fire danger areas without adequate evacuation routes, personnel and planning. Shelter-In-Place requires each individual to assess their own personal physical, mental and emotional fitness and their ability to fight spot fires, survive darkness, heavy smoke and heat, and more. Therefore, no development can either require or assume that the residents/employees and visitors will qualify to Shelter-In-Place. As an example, let’s assume that a development of homes is permitted in a high fire danger zone, but only one means of egress is required, and that road is narrow, because instead of	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			requiring the development to be constructed so everyone can safely evacuate in an emergency, the project approval instead permits the development to have one or more locations where the residents will Shelter-In-Place.	
Sonia E. Taylor	24-Sep-22	C163-33	These are the questions that logically arise: Do all purchasers/renters of the homes have to guarantee that they are physically, mentally and emotionally capable of sheltering in place, will do so during any fire, and will always remain capable? What happens if a resident is injured, develops an illness, or just gets older – would they then be required to move out of the development? What if someone has one or more children – would they be required to move because the children couldn't qualify as capable? What about visitors or employees at the development – would they also be required to agree that they are physically, mentally and emotionally capable of sheltering in place before they visit or take a job in the development? "Do not underestimate what is required to maintain your house as a place of safety during a bushfire. Actively defending your property will take huge physical and mental effort for many hours before, during and after the fire, as conditions will be unbearably hot. You need the right equipment, protective clothing for all your family or household members, and a property prepared to the highest level." https://www.parliament.wa.gov.au/publications/tabledpapers.nsf/displaypaper/3814042a195d0712a147f5514825791a00045feb/$file/4042.pdf As it would be legally impossible to require any individual to be capable of sheltering in place at any time – again, it is an active activity, not a passive activity – Shelter-In-Place should never be used as a mitigation measure.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Sonia E. Taylor	24-Sep-22	C163-34	Shelter-In-Place as a "Tool": Currently, California courts are starting to issue decisions requiring adequate evacuations and planning, supported by California's Attorney General, and I believe that's where we should be focusing our time and attention – on safe evacuations and evacuation planning. However, if California communities want to consider using Shelter-In-Place as a tool, in addition to evacuation, It would be wise for them to thoroughly educate themselves about what Shelter-In-Place actually consists of. As is made obvious above, sheltering in place requires a building – and all surrounding buildings – constructed to the highest fire resistant standards with perfect defensible space. Then, the individuals sheltering in place will be physically, mentally and emotionally challenged for many hours, with no guarantee of their survival or safety.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.
Sonia E. Taylor	24-Sep-22	C163-35	Identification of "Safer Places" and/or "Last Resort Refuges" may make sense to give people a place to go if they have attempted to Shelter-In-Place but then have to run, or for people who are caught because they wait too long to evacuate, but there's no question that those areas should only be used if absolutely necessary. Therefore, those areas – if identified – would need to be explicitly identified as areas where people's safety is not guaranteed, and where they might, in fact, have to run for their lives. If identification of those locations will make individuals feel like they don't really "have" to evacuate, I believe their identification would be a disaster in the making. With human nature the way it is, I have deep concerns that identification of "Safer Places" and even "Last Resort Refuges" would make individuals complacent and less likely to evacuate when requested to do so. While firefighters will always try to first protect against loss of life, I believe that adding to their burdens by putting individuals in what are really unsafe locations, instead of focusing on safe evacuations, is a very bad idea. Sheltering in place puts not just the individuals sheltering in danger, but also the firefighters, and is very likely to delay essential fire suppression efforts. Time spent rescuing people just allows wildfires to grow larger.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Sonia E. Taylor	24-Sep-22	C163-36	The bottom line is that as Climate Change impacts cause more intense, frequent and fast moving wildfires, with devastating losses to lives and property, we should be focused on data-supported analyses of existing road capacity and impacts to evacuation response times during wildfire emergencies. We must – instead of trying to find a magic bullet to allow more development in high fire danger areas – mitigate existing evacuation hazards and ensure adequate evacuation routes and planning, not create new evacuation hazards that will likely result in loss of lives. I believe that Shelter-In-Place is a terrible idea, and should only ever be used as an absolute last resort.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.
Steve Birdlebough	September 23,2022	C164-1	The Sonoma County Transportation and Land-Use Coalition Appreciates this opportunity to comment on the Draft Specific Plan for the Sonoma Development Center (SOC) and to raise questions regarding its Draft Environmental Impact Report (DEIR). Our comments come in the shadow of legislation recently signed by the Governor to address the Climate Crisis by reaching state-wide carbon neutrality, and improvements in available funding for this purpose. We also note that the goal of the Sonoma County Regional Climate Protection Authority is to reach net zero greenhouse gas emissions by 2030. We have queries and concerns about two issues in the Specific Plan and DEIR:	Thank you.
Steve Birdlebough	September 23,2022	C164-2	How seriousl.y would construction of a thousand new housing units at the SDC impact greenhouse gas emissions and the County's plans to reach carbon neutrality? State law (SB 375 - Steinberg - 2008) calls for reductions in driving (VMT) in order to address the climate crisis. The draft environmental analysis finds that the SOC plan to reduce driving by 15% is IlQ.t likely to succeed. Sonoma County's Regional Climate Protection Authority aims to reach carbon neutrality by the year 2030, which will require annual reductions in driving at a rate of up to 6% per year. (Please respond to the attached detailed discussion)	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
Steve Birdlebough	September 23,2022	C164-3	How does the plan to demolish SDC structures impact greenhouse gas emissions at the SDC, as compared with reuse? Although the reconstruction of a building may be proportionately more labor intensive than its replacement, the resulting GHG emissions may be significantly increased. (Please respond to the attached detailed discussions)	Chapter 3.6.3 of the DEIR addresses impacts of greenhouse gas emission of demolition.
Steve Birdlebough	September 23,2022	C164-4	Authors of the DEIR note that failure to deliver a specific plan to the Department of General Services within the next few months might upset the effort to retain local control of the future of the property. However, much has changed recently. The State is now committing $54 billion over the next five years to address the climate crisis. This funding is to be matched by $9 billion per year of federal climate investments in California. In the light of these changes in the fiscal outlook, shouldn't the State Department of General Services be much less concerned about the need to fund $100 million worth of remediations to the existing SOC property?	Thank you.
Steve Birdlebough	September 23,2022	C164-5	Wouldn't proposed project alternative units at the SOC affect the environment in cumulative ways not yet discussed in the Program DEIR, such as the potential redevelopment of the nearby Hanna Boy's Center and other North Sonoma Valley projects currently in the permitting process or planned within Permit Sonoma? The County's concerns should now be focused on limiting suburban sprawl, and salvaging existing structures wherever possible. For these reasons the SCTLC recommends that Sonoma County act now to develop the environmentally superior project, which is Historic Preservation/Reuse. The timeline should be re-negotiated, and the Specific Plan for the SOC should be refocused on reducing greenhouse gas emissions, HISTORIC PRESERVATION AND REUSE, and on protection of the site from wildfire risks. If you wish to discuss any of these issues, please contact me at scbaffirm@gmail.com, or call me at 707-5766632.	The comment is noted. It does not relate to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Steve Birdlebough	September 23,2022	C164-6	WHY IS A PLAN PROPOSED THAT IS INCONSISTENT WITH LONG-ESTABLISHED COUNTY AND VOTER APPROVED COMPACT GROWTH POLICIES THAT PROTECT THE ENVIRONMENT? The DEIR is inadequate, because it fails to recognize that the Proposed Plan is inconsistent with the County's long-standing land use and open space protection policies, with its compact development goals, and with its voter-approved urban growth boundaries. The DEIR fails to justify a major reversal of the County's existing land use policies that have served to maintain its rural character and protect the environment. Page 14 of the DEIR does acknowledge that: "Overall, the Historic Preservation Alternative is the environmentally superior alternative." However, without being specific, it goes on to assert that the environmentally superior alternative "would not support key project objectives related to increased housing supply ... and long-term fiscal stability to the same degree as the Proposed Plan." What is meant by "fiscal stability?"	Thank you for your comment letter. The comment is noted; however, it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Steve Birdlebough	September 23,2022	C164-7	The DEIR fails to mention that there are nine cities and many urbanized areas in Sonoma County that offer more environmentally beneficial housing sites than the SOC. Why does the DEi R fail to admit that the Proposed Plan is in grave conflict with established Sonoma County policies to direct major residential developments into its cities and urbanized communities? The history of these policies is described on the Permit Sonoma web page as follows: "The 1978 General Plan included land use policies intended to focus development within the urban areas, which included the eight incorporated cities. The concept of "community separators" was also first introduced in the 1978 General Plan, which maintained open space between the cities and preserve their distinct community identities along the Highway 101 corridor. A total of 9,300 acres of land considered under pressure for development were designated as community separators: areas north of Santa Rosa;	Thank you for your comment letter. The comment is noted; however, it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			areas north of Rohnert Park and south of Santa Rosa; and Meachum Hill, just north of Petaluma."	
Steve Birdlebough	September 23,2022	C164-8	"The primary focus of the 1989 General Plan was the preservation of the County's agricultural and resource lands that form the scenic resources of the County. Additional policies were added to the Open Space Element for the protection of designated streams. Community separator policies were strengthened and additional Scenic Resources protections were added to include designated Scenic Landscape Units and Scenic Corridors. Allowable densities were reduced in rural areas while other areas identified as unincorporated communities were allowed higher densities." "In 1996, the Community Separator policies became the genesis of the Community Separator ballot measures that required voter approval of any changes in land use density or intensity if the cities had adopted urban growth boundaries. In 1998, an amendment to the General Plan was adopted adding another Community Separator south of Petaluma." "The County's efforts in preserving rural landscapes had a profound effect of encouraging the cities to adopt urban growth boundaries (UGBs) as part of their General Plan updates. Today all nine cities have adopted urban growth boundaries that were subsequently enacted by voter initiatives. The Local Agency Formation Commission has followed the County's lead by adopting policies that mirror the city-centered growth policies of the Sonoma County General Plan."	Thank you for your comment letter. The comment is noted; however, it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Steve Birdlebough	September 23,2022	C164-9	"GP 2020 continued the principals of city-and community-centered growth, with compact boundaries and community separators, and protecting agricultural land. GP 2020 includes robust policies preventing the expansion of urban services. The Agricultural Resources Element precludes converting agricultural lands to nonagricultural uses and establishes policies to increase the economic viability of agricultural properties. The Circulation Element emphasizes alternative modes to automobiles. GP 2020 also updated eight area plans and called for repealing all others where policies have already been implemented or could be incorporated into the General Plan. Sonoma County currently has eight specific and area plans that remain in effect as follows, and one that is currently being developed: -Airport Industrial Area Specific Plan (update in progress) -Bennett Valley Area Plan -Franz Valley Area Plan -Penngrove Area Plan -Petaluma Dairy Belt Area Plan -The Springs Specific Plan (draft) -Sonoma Mountain Area Plan -South Santa Rosa Area Plan -West Petaluma Area Plan." 1	Thank you for your comment letter. The comment is noted; however, it pertains to the Specific Plan and is not related to the adequacy of the DEIR, thus no further response is required.
Steve Birdlebough	September 23,2022	C164-10	WHY IS A PLAN PROPOSED THAT IS INCONSISTENT WITH SONOMA COUNTY GOALS TO ADDRESS THE CLIMATE CRISIS BY REDUCING VEHICLE MILES TRAVELED? Sonoma County has been a leader in efforts to reduce greenhouse gas emissions, and at page 218, the DEIR recognizes that in 2021 the County's Regional Climate Protection Authority (RCPA) has set a goal of carbon neutrality by the year 2030. This Is an ambitious goal, and California law recognizes that success will depend strongly on reduced driving as well as shifts to electric vehicles.2 According to the Authority, the transportation sector is responsible for 60% of the county's GHG emissions.3 The DEi R also acknowledges that Sonoma County Resolution 18-0166 calls for reductions in greenhouse gas emissions, and that "reducing travel demand through focused growth" is the	Your comment is noted. The Proposed Plan would result in significant and unavoidable and cumulatively considerable VMT impacts. See MR-6 for more information regarding whether fewer housing or jobs would result in better VMT outcomes.

Commenter	Date	Letter	Comment	Response
			second-identified strategy for such reductions. (DEIR, p. 217) Why does the DEIR neglect to explain the need for the SDC project to actually accomplish significant reductions in vehicle miles traveled (VMT). The DEIR "conservatively" states that despite the extensive discussion of VMT reduction goals and policies in the Proposed Plan, it must be assumed that the construction of one thousand	
Steve Birdlebough	September 23,2022	C164-11	Three years ago, agencies in Sonoma County began announcing climate emergency goals that focused on 2030 as a target year to reach "carbon neutrality." More recently, an analysis of Sonoma County driving habits by the County Transportation Authority has revealed that merely providing bicycle-pedestrian trails and bridges are not sufficient to reach those goals. We will need changes in culture as great as those of the recent pandemic.4 The DEIR shows that the policies and the proposed SDC Specific Plan will undermine local, regional and state policies and commitments to address the climate crisis due to the significant and unavoidable increases in VMT. The DEi R shows no way to offset or mitigate the extra driving generated by the new housing, retail, and commercial development proposed for the SDC. The County must not approve this project as proposed with these impacts if it is serious about addressing the climate crisis. Taking this approach would fail to meet the standards contained in CEQA because an increase in VMTs can be avoided by focusing the construction	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
			of new housing in existing compact communities rather than building many housing units at the SDC, and renovating all of the useable existing buildings, The DEIR and Specific Plan must be revised to provide for steady reductions in VMT, consistent with	
Steve Birdlebough	September 23,2022	C164-12	Our pre-COVID driving habits caused transportation to become the largest source of the greenhouse gas emissions (GHGs) that feed the climate crisis. Long commutes in single-occupant vehicles have been a major source of GHGs, although most car trips are less than 5 miles. Please describe the justifications for the Proposed Plan, which would locate a thousand families in a sprawling suburban landscape that would hamper all of the above efforts. State Route 12 is already at capacity, and Caltrans has commented that it does not support an additional road connecting Arnold Drive and SR-12. Please describe the effects of a failure to provide this connection.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts

Commenter	Date	Letter	Comment	Response
Steve Birdlebough	September 23,2022	C164-13	WHY ARE EMBEDDED GREENHOUSE GAS EMISSIONS IN EXISTING STRUCTURES AT THE SONOMA DEVELOPMENT CENTER LEFT OUT OF THE ENVIRONMENTAL CALCULATIONS? Why has County Staff/Consultants done the following, and what are your mitigation recommendations?: The EIR & SP preparation violates BPC6731, without a Civil Engineer in responsible charge of Planning? The EIR has committed the County to a course of action,,new development, prior to El R's Certification? Historic Reuse appears proper, yet each price consequence results in expanded project impacts. What is the economic obsolescence impact to the Springs/Glen Ellen of the proposed project? The EIR and SP propose demolition of 1.2M sq-ft of buildings, along with the 1M+0.35M gal fresh water tanks, see Figure 4.3-1: "Historic Assets", without reference to local Wildfire protection. Why?	Chapter 3.6.3 of the DEIR addresses impacts of greenhouse gas emission of construction.
Steve Birdlebough	September 23,2022	C164-14	The EIR & SP propose demolition of Historic Firehouse (c1932) without wildfire impact consideration? EIR & SP neglect wildfire consideration, as not "High Fire Risk", though analysis excluded SOC? Why does EIR & SP use uncalibrated (unrealistic) models, eg without reference to actual fire evacuation? The EIR develops a series of conclusions as analysis, beginning after point in time of project completion? The EIR assumes no cumulative effects to the proposed project; eg. GHG's and solid waste, but does not include project specific demolition, nor constructed lifecycle, GHG's & wastes? Why? The EIR assumes no cumulative effects from combining the proposed project wastewater into a downstream waste treatment facility when a historic facility is located on site to recharge the wetlands/creek. SOC is an Historic opportunity to propose and develop an integrated environmental & climate protective response to wildfire, in a traumatized and sensitized area, without which this proposal has a significant cumulative negative impact to the local & regional environment due to unrealized wildfire protections.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
Steve Birdlebough	September 23,2022	C164-15	Why is EIR & SP preparation biased in favor of Standard-Operating-Procedure for new development? Why does it appear the SOC EIR and associated Specific Plan (characterized by the County's preferred Proposed Project Alternative) have defined and committed the County of Sonoma, as Lead Agency under CEQA, to a series of specific decisions, plans, and/or alternatives without fully considering other acceptable plans (under legislation 14670.10.5), alternatives, mitigation measures, and the Null Project.	The draft EIR considers a range of alternatives, mitigation measures and two No Project Alternatives.
Steve Birdlebough	September 23,2022	C164-16	Please explain why the County (Permit Sonoma) has allowed the EIR to be produced which does not address the mitigatable cumulative effects of waste generated by the proposed alternative over the Null Project hypothesis, to the extent where recommended building demolition of ~1.2M sq-ft produces a minimum of 161,000 cy of debris equal to 67 years of operation of the Proposed Project Alternative in addition to the equal amount of debris produced by the eventual demolition of the Proposed 1.2M sq-ft Project (L=322,000 cy, or 134 years at the rate of the Proposed Project at completion); together with the project waste there will be an average cumulative waste of 19.8 tons/day or 1.5% of daily averages (2016-2020, per SP pg 603}? Since we are already transferring all our solid waste away from Sonoma County because we do not have local landfill capacity, and our waste. charges ($135/ton} are double the charge for Hazardous Waste ($50.97/ton asbestos waste} taken to Kettleman Hills landfill, this must be considered a significant mitigatable impact by Reuse and Historic Preservation of the existing buildings. At the local waste costs, this represents >$960,000/yr = ~$6SM over the 67 years, from these 3 sources.	The comment is noted. See response to comment C168-1.

Commenter	Date	Letter	Comment	Response
Steve Birdlebough	September 23,2022	C164-17	Why is no mention made in the EIR or SP of GHG's which were imbedded and carried within the existing constructed buildings which will be released into the atmosphere by their demolition, nor is any mention made of the GHG emissions which are imbedded in the production of the new materials and resources which are expected to replace the demolished SOC b_uildings, these are significant long term mitigatable cumulative effec:ts? Why has the EIR not addressed either of these cumulative GHG effects, from demolition, neither the before demolition GHG emissions sequestered in the existing buildings which will be released, nor the GHG emissions released in the production of the replacement 1.2M sq-ft of buildings together with their own lifecycle emissions released upon their demolition? These GHG's must be considered a significant mitigatable impact by their Reuse. Why is no mention made in the EIR or SP of the cumulative effects of the opportunity lost to lead this community and the Global Community in re-visioning the future, from the past that we have, into the future that we need while using the existing buildings and infrastructure you demolish?	Chapter 3.6.3 of the DEIR addresses impacts of greenhouse gas emission of construction.
Steve Birdlebough	September 23,2022	C164-18	Why is Historic Preservation of the existing buildings considered by the EIR & SP to be financially infeasible and unmitigatable? This is not a fact, nor is it a reasonable conjecture from any basic set of reasonable assumptions, other than a prejudice against Historic Buildings in preference to the Cult-ofthe-New. Historical Preservation and Reuse of these buildings is relatively simple. In particular, historic lumber is dimensionally greater and structurally superior, providing more insulative cavity, and other materials were more dense historically. History teaches us that the oldest buildings are the most energy efficient for their locations; such as Kiva & Adobe Structures of the America Southwest are stone or adobe to insulate against the heat, raised pole structures in the Indus Valley Civilization and Mounded Structures of the Mississippian Culture prevent flood inundation, Northern Long Houses of the Iroquois in the East and the Suquamish of the West are large multifamily dwellings and made of wood frames and bark covering to insulate against the cold, even Igloos of the Eskimo. Why have you neglected the consideration that	See Chapter 3.6.3 of the DEIR for impact analysis of energy and greenhouse gas emissions related to project construction and operation.

Commenter	Date	Letter	Comment	Response
			almost every older building uses less energy than that which replaces it, despite the efficiency of the New Building?	
Steve Birdlebough	September 23,2022	C164-19	Why is scant consideration, even superficial avoidance, of the topic of Hazardous Materials mitigation and removal given within the EIR and SP as a direct consequence of the building demolition, as opposed to "In-Situ" mitigation in place through reuse and Historic Preservation of the existing buildings; Diesel Tanks, Film Development, Chemical Storage, Paint Shops, Corporate Yards and Transportation buildings, all have significant potential for Hazardous Materials impacts, as well as, the asbestos insulation and lead based paint in the buildings?	Chapter 3.8 of the DEIR examines impact analysis related to hazards and hazardous materials
Steve Birdlebough	September 23,2022	C164-20	Each of the above considerations, taken individually are significant impacts not covered by the EIR and SP, but there is also a cumulative effect of the above neglectful preparation of the EIR and SP, "a death by 1000 cuts" to the Historic Preservation (stated to be unmitigatable). Why has the cumulative effect of this neglectful preparation not been addressed within the EIR and SP, which then augers for and streamlines the process for replacement by the preferred Proposed Project Alternative as opposed to Historic Preservation? Can you explain how you are mitigating this neglect, in producing a cycle of demolition and reconstruction which has a cumulative effect on the environment due to exploitative expectations, the expectation that 'everything I have should be new', 'we need the new', 'I need the new'? Again, why does the EIR and SP neglect the positive environmental impact the development could have by leading, rather than following old worn-out traditions of thinking, that have cumulatively placed us in our Climate Crisis?	The comment is noted. Please see MR-8 regarding the Historic Preservation Alternative.

Commenter	Date	Letter	Comment	Response
Steve Birdlebough	September 23,2022	C164-21	County's evidentiary record is anecdotal @best. Sonoma Valley represents a national treasure, as described as, "The Valley of the Moon". Sonoma is the Native Indigenous American name for the valley. When White settlers asked what Sonoma meant, Natives pointed to the trace of the Moon setting and rising behind the eastern ridgetops during certain times of the year, the White's interpretation was that "Sonoma" meant 'the valley that the Moon touches' ("The Valley of the Moon"). My Anthropology studies and linguistic avocation has taught me to hear the phonetic sounds (the basic phonemes), particularly for significant language words, words that have cultural, spiritual, or international usage, such as words which are adopted into a language from another. The basis of this study is Multi-critical analysis as opposed to diacritical analysis. Typically there will be very little understanding of the actual meaning of an adopted word. Then, if it ret_ains a high referential standing, it indicates it's an adopted word, not merely a forgotten word. Typical adopted words with high Referential standing and forgotten meanings are: Alleluia, precious, and Amen. In this case we have Sonoma: what are the phonemes for "Sonoma", they are "Tsu" (not Tso) & "Noma"; so in this case our supposition is correct, because these are two very important international words. "Tsu" or "Tzu" represents the name given by the Chinese to one of their greatest Philosophers, "LaoTzu" the founder of Taoism (from UCI Anthropology studies "Chinese, Taoism & Confucianism", 1983), "LaoTzu" was originally named "LoTzu", meaning "Man-Master" (Philosopher) and when he was older it was changed to "LaoTzu", meaning "Old-Man-Master" (or Great Philosopher): Therefore "Tzu" means "Master". "Noma" is the Aramaic word for 'name' establishing the identity and essence of a thing and thereby giving man control over the substance, and in the Greek "Nomo" means "law or control", again, in Western parlance the essence is unknowable but the manifestation is controllable by the 'name': so control and name are the same thing, therefore "Noma" means "name" (from participation in Antiochian and Greek culture, which develops from a multi-critical analysis as opposed to diacritical). "Sonoma" therefore means "The Master's Name", and in a	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			Spiritual sense, it means the highest name above all names. "The Master's Holy Name", in an Eastern Spiritual sense describing God's, the Creator's, or Great Spirit's control over the location by the Moon's contact with the Earth, not Man's control over God by invocation of the Name. This we hear many times from Joseph Campbell, man's search for control vs man's search for God.	

Commenter	Date	Letter	Comment	Response
Steve Birdlebough	September 23,2022	C164-22	Analysis of EIR Historical Asset discussion: The Program Draft EIR is silent on the above discussion, while reporting Environmental Impact Report - County Summary "5.3 Significant and Unavoidable Impacts: According to CEQA Guidelines 15126.2(b), an EIR must discuss any significant environmental impacts that cannot be avoided under full implementation of the proposed program ... However the Proposed Plan aims to be self-mitigating. Thus, all proposed policies aim to address environmental impacts (to the, sic) to the greatest extent feasible and no mitigation measures are required. The analysis in Chapter 3 determined that the Proposed Plan would result in significant impacts to the cultural/historic resources and transportation (home-based work trip vehicle miles traveled per capita) that, even with implementation of mitigation measures, would remain significant and unavoidable". This language neglects real analysis of the Null Hypothesis Project, and only considers the Proposed Plan impacts which it states (along with all other alternatives) have similar impacts [without discernment as to avoidable, mitigatable, or unmitigatable], which is entirely untrue in the Null Hypothesis case.	See Master Response 1 created to address questions about the adequecy of a self-mitigating Specific Plan. Furthermore, the DEIR includes a range of alternatives, including two No Project Alternatives.
Steve Birdlebough	September 23,2022	C164-23	Continuing; "5.3.1 Cultural, Historic, and Tribal Resources: new construction under the Proposed Plan has the potential to disconnect the remaining contributing resources in the Core Campus from those in the Community Separator and Regional Parks lands to the east and west, disrupting the SSHHD's overall integrity to the point that it would no longer be eligible for listing in the National Register of Historic Places, CRHR, or as a California Historic Landmark. This impact, in addition to demolition of the aforementioned resources would result in a substantial adverse change to the significance of the historic district such that the significance of the historic district would be materially impaired pursuant to Section 15064.5. Implementation of goals 2-1 and 2-J and policies 4-20 through 4-32 as well as Standard Conditions of Approval (LUl through LU6) would partially compensate for the impact associated with the demolition of historically contributing resources and physical alteration of the historic district to the maximum extent practicable; however, because these measures would not be enough to avoid or reduce the impact completely, the Proposed Plan's impact would remain significant and	Chapter 3.5 of the DEIR explains the tribal consultation process that has been completed for this project. Additionally, a number of related conditions are included as part of the Specific Plan policies and Standard Conditions of Approval.

Commenter	Date	Letter	Comment	Response
			unavoidable". No mention is made of the Tribal Resources, because no artifacts remain or they could be recovered in a project excavation, but this does not address the transcendent value ,of the space and place name as a World Heritage Cultural Site, which can be subsumed in the potential Project construct, where we have heard discussed 2-3Msf of Commercial Construction.	
Steve Birdlebough	September 23,2022	C164-24	Again, the Program Draft EIR's considerations of the impacts, mitigations, and alternatives appear limited to the Proposed Plan Project Alternative, and do not address the Alternatives, nor the Null Hypothesis Project, continuing a foregone conclusion (see 2-3Msf of Commercial Construction discussed above, is that unmitigatable?). Please see the following analysis of project conceptual iteration for planning and design. Please see pg4 p3 San Mateo Gardens, re "substantial evidence in the record, is a predominantly factual question ... for the agency ... drawing on its particular expertise"; here we are bringing your attention to the word "expertise ". Friends of the College of San Mateo Gardens v. San Mateo County Community College District https ://law .justia.com/ cases/california/ cou rt-of-appeal/2017 /a135892.html We want to accept the presumption of legal operation, b_ut we must also accept and correct the illegal condition when evidence is presented to the contrary. In a County system, Engineering is not conducted without Accounting. But if the Accounting fails such as for Northwestern Pacific Railroad, the sad evidence must be accepted, and correction immediately made or we suffer the loss of funding or function. No one was there to accept the Trucker's weighmaster's tickets when the washout deliveries were made in the upper NWP line, none could be found, none ever delivered, no NWP.	The comment is noted. Please see MR-1 regarding the adequacy of a self-mitigating Plan.

Commenter	Date	Letter	Comment	Response
			The reason we approach the initial determination of a project this way, using California Supreme Court's remand for San Mateo Gardens, is, here we equate the Court EIR analysis process to the Engineering process, in that there are a sequence of iterative steps involved. This process is best exemplified from the CA Supreme Court's remand expressed in San Mateo Gardens, where a series of back-and-forth evaluations and propositions are made in analyzing a project (one such method is CPM,Critical Path Method), which is the same process we use in conceptual design or planning. A comparison is made by question; does the "initial concept" with its features fit the need and the existing space, then we may have to adjust the concept's features to the needs, or to the space? Conceptual planning designs forward & backward many times.	

Commenter	Date	Letter	Comment	Response
Steve Birdlebough	September 23,2022	C164-25	This comparison is not to decry the effort expended or the information obtained through Planning education or product, but a marathon runner prepares for a marathon, not Law or Engineering. Preparation for a marathon may be great preparation for someone wanting to become a Lawyer, Doctor, or Engineer, but by itself does not make one a Lawyer, Doctor, or Engineer. Nor is an Urban Planner a qualified Civil Engineer, and therefore is unable to make prpfessional judgments in respect to the Planning of "fixed works" identified in BPC 6731. [See Licensing BPC 6730-6730.2(a); 6731; 6734; 6735(a). See also Administrative Mandamus case, Morris v Harper (2001) 94 Cal.App.4th 52 . "After all, ""[i]t is the refusal or neglect to perform an act which is enjoined by the law as a present duty that serves as the very foundation for the [mandamus] proceeding.'" (Morris v. Harper, supra, at p. 60.)"] San Mateo Gardens; "Instead of resting on whether a project is new "in an abstract sense, " the "decision to proceed under CEQA's subsequent review provisions must ... necessarily rest on a determinationwhether implicit or explicit-that the original environmental document retains some informational value . " (Id. at p. 951.) Such an inquiry "is a predominantly factual question ... for the agency to answer in the first instance, drawing on its particular expertise." (Id. at p. 953.)" From where does this "expertise" derive, Planners require no Science education?	The comment is noted. Please see MR-3 regarding the level of detail of analysis and programmatic nature of the Draft EIR

Commenter	Date	Letter	Comment	Response
Steve Birdlebough	September 23,2022	C164-26	The EIR standard is, if/when there are sign{ficant environmental impacts, then a review of impacts and mitigations must obtain (other than stating overriding or unmitigatable conditions), and a "judicial review must reflect the exacting standard that an agency must apply". San Mateo (ibid) pg 8. What this is referring to is, that the evidence must be prepared to a very high standard, from the beginning, in order for it to be considered "substantial evidence in the record". Where is the "exacting Standard" & "expertise"? According to the National Society of Professional Engineers code of ethics, Professional Engineers may disagree without a single outcome obtained, but must remain decorous. ["The Supreme Court in San Mateo Gardens provided guidance for how to apply the subsequent review provisions. It explained that whether "major revisions" will be required as a result of project changes "necessarily depends on the nature of the original environmental document," i.e., whether it was an EIR or a negative declaration. (San Mateo Gardens, supra, 1 Cal.5th at p.958.) It further explained that the appropriate standard of review also depends on the nature of the original environmental document. Although an agency's determination of whether major revisions are required is reviewed for substantial evidence, "judicial review must reflect the exacting standard that an agency must apply when changes are made to a project that has been approved via a negative declaration,11 as opposed to the deferential standard that applies when the project was originally approved by an EIR. (Id. at p. 953; see Committee for Re-Evaluation ofTLine Loop v. San Francisco Municipal Transportation Agency (2016) 6 Cal.App.5th 1237, 1247, 1251-1252 [applying San Mateo Gardens in case where project originally approved by EIR]; Latinos Unidos de Napa v. City of Napa (2013) 221 Cal.App.4th 192,"]	The comment is noted. Please see MR-1 regarding the adequacy of a self-mitigating Plan.

Commenter	Date	Letter	Comment	Response
Steve Birdlebough	September 23,2022	C164-27	In planning, we have said, the process is intensely exhaustive and iterative, and what is described as the Court EIR review process is also exhaustive and iterative. The Court ceding competency to the local agency is similar to the process of presenting a case to a Court of Competent Jurisdiction. A Court of Competent Jurisdiction is composed firstly of a trained lawyer, either by a Law School or by preparation and passing the Baby Bar. Then of course, the prospectant Judge must pass the National Bar Exam locally administered, next the Judge must practice law for a minimum of 10 years. At some point the Judge is appointed or runs for election, and finally, the Judge is selected to hear a case by the Chief Judge. The Court itself must also be of Competent Jurisdiction, meaning it is the proper venue, as established by our system of Jurisprudence. These are significant tests. If someone went to College and studied English or Political Science, they could learn a lot of laws, but they would not be presumed to know how to practice Law, And they did not go to Law School or pass the Baby Bar, and they have not prepared to be a Lawyer, let alone a Judge.	The comment is noted. Please see MR-2 regarding the need for more time/selection of a developer before finalizing the Specific Plan
Steve Birdlebough	September 23,2022	C164-28	Engineering is one of the most complex problems in supply & demand, as evidenced by the number of divorces in custom home remodeling and construction, and why Public Works requires Licensed Civil Engineers. Our critique is not meant to characterize the work of any Engineers having completed reports for the SOC □IR-SP, since we do not know what instructions they were given. But we contend that recommended demolition for over l.2Msf without analysis of 400,000sf, and recommended demolition of ~75,000sf of Hospital Treatment Building rated at "not requiring any updates", represents an incomplete analysis at best, and certainly a neglect of the impacts on the resources being analyzed. As we spoke of backward-and-forward analysis in design, this is required in Planning as well, unless a truncated process is employed. It is far easier to make the facts fit the design, than to make the design fit the facts. If your timeline is short, it is far easier for you to establish the Project, and make the analysis fit	The comment is noted. Please see MR-1 and MR-3 regarding the adequacy of a self-mitigating Plan and level of detail of analysis and programmatic nature of the Draft EIR

Commenter	Date	Letter	Comment	Response
			the Project by not addressing impacts except in a standard way, such as, "(h)owever the Proposed Plan aims to be self-mitigating". "from Program Draft EIR 5.3 Significant and Unavoidable Impacts"	
Steve Birdlebough	September 23,2022	C164-29	Subsequent to the very specific State Law being passed to sell SOC, incorporating significant intent for community participation, many meetings were held with studied interest and good comments. Comments were sent to Permit Sonoma and the Planners involved in SDC's NOP of Program Draft EIR & SP, but these comments were not incorporated in the evaluation nor in the Proposed Alternative Project SP, nor were they forwarded to the Planning Commission, nor were they provided to other participants or commenters to the EIR & SP. This is not standard practice, and violates CEQA Code 15300(a)&(b)(l)-(3); "(a) Before granting any approval of a project subject to CEQA, every lead agency or responsible agency shall consider a final EIR or negative declaration or another document authorized by these gujdelines ... (b) Choosing the precise time for CEQA compliance involves a balancing of competing factors, El R's and negative declarations should be prepared as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment."	Chapter 1.3 of the DEIR includes information about the planning process, including the notice of preparation and public participation that have gone into the process. These comments are available to the public, including the Planning Commission, as Appendix A of the DEIR.

Commenter	Date	Letter	Comment	Response
Steve Birdlebough	September 23,2022	C164-30	(b)(l) "With public projects, at the earliest feasible time, project sponsors shall incorporate environmental considerations into project conceptualization". The timeframe window for "cumulative impacts" evaluation was limited to after Proposed Alternative Project completion, leaving out the demolition and construction of the entire project, let alone the life cycle embedded costs, GHG's and energy to be demolished as a consequence from the new construction. This time frame results in unsubstantiated conclusions for the Proposed Project Alternative in ES.3 Alternatives to the Proposed Plan, "As discussed in Impacts 3.6-2, the Proposed Plan would thus support and reflect the increasingly stringent State and local goals and regulations that seek to increase energy efficiency, reduce energy consumption, and prioritize renewable energy - reinforcing that the Proposed Plan would not result in cumulatively cons_iderable impact with respect to wasteful, inefficient, or unnecessary consumption of energy resources." They left out 161,000 tons of waste. 15300 (b)(3), "With private projects, the Lead Agency shall encourage the project proponent to incorporate environmental considerations into project conceptualization, design, and planning at the earliest feasible time." This truncated analysis appears to be the type that establishes priorities, goals, and objectives before the certification of the EIR is complete, therefore "limiting alternatives or mitigation measures".	The comment is noted. Please see MR-1 and MR-3 regarding the adequacy of a self-mitigating Plan and level of detail of analysis and programmatic nature of the Draft EIR

Commenter	Date	Letter	Comment	Response
Steve Birdlebough	September 23,2022	C164-31	This truncated analysis would violate CEQA Code 15300 (b)(2), "public agencies shall not undertake actions concerning the proposed public project that would have a significant adverse effect or limit the choice of alternatives or mitigation measures, before completion of CEQA compliance";"and for example, agencies shall not:(b)(2)(B)", "Otherwise take any action which gives impetus to a planned or foreseeable project in a manner that forecloses alternatives or mitigation measures that would ordinarily be part of CEQA review of that public project". Given that Permit Sonoma will only provide the public's comments to the Planning Commission upon final EIR Certification, and a series of comments have been made to the SDC Comprehensive Planning Manager which has not incorporated the public's comments into the Proposed Project Alternative, "at the earliest feasible time", they appear to have violated See's 15300(a)&(b)(l)-(3), inclusive. What we contend here is, that the proper "back-and-forth" process has not occurred, as within the planning process proper, within the design process proper, within the EIR process, as would be the same within the Court's evaluation of the EIR process itself, from San Mateo Gardens remand from the California State Supreme Court, which constitutes proper Authority to all jurisdictions within California.	Chapter 1.3 of the DEIR includes information about the planning process, including the notice of preparation and public participation that have gone into the process. These comments are available to the public, including the Planning Commission, as Appendix A of the DEIR.
Steve Birdlebough	September 23,2022	C164-32	We also contend that "particular expertise" and "the exacting standard that an agency must apply" is not available to the review that the "judicial review must reflect", without a Licensed Civil Engineering in Responsible Charge of "Fixed Works" Planning, BPC 6731. Also, in another form of Transcendence, both "Tsu" and "Noma" mean "control", so they are like conjoined twins, in a simple manifestation of the "Rosetta Stone". Looked at separately, we call this a "Translation", but conjoining them is a form of transcendence in the physical plane of existence. The name "Sonoma" appears to be used as a descriptive tool, by connecting physical transcendence (translation of place) with the location of a Spiritual Transcendence (in reference to the verticality of the Moon's	Section 6.1 of the DEIR lists the agencies, names and titles of people that contributed to the DEIR.

Commenter	Date	Letter	Comment	Response
			touching the Earth), it again mirrors the "Rosetta Stone" representing two kinds of Transcendence, with the Earthly "T" crossing the Spiritual vertical demarcation.	
Steve Birdlebough	September 23,2022	C164-33	More than the mere analysis of the word and its application to the space, is the significance of "Sonoma" in the cross-cultural linguistic representation of deification using ancient language references from across the sea, and linked only by many thousands of years. There is no other place name which connects so perfectly the unity of man, the Name itself transcends both the ages and the seas, thus we have the essence of a World Heritage Cultural Site. Like many other UNESCO World Heritage Sites, which are in disrepair and in danger of destruction, Sonoma's "Valley of the Moon" is suffering an existential threat from the Proposed Project Alternative. Located at near the exact geographic center of Sonoma Valley, 10 miles from it's head along Hwy 12, and 12 miles from it's outlet at Skagg's Island. And transected by a vital Wildlife Corridor connecting 2 Mountain Parks: Sugarloaf/Hood and Jack London Parks; no discussion or analysis has been given to the significance of this World Heritage Cultural Site, or the impacts or any mitigation from the significantly new, taller, and dense construction within the Program Draft EIR-SP Project analysis (cursory discussion was given to light pollution, but none to the physicality of the presence of tall, dense, populous village construction in the midst of an Historic Treasure, McDonalds centered in Teotihuacan).	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR, and MR-7 regarding the adequacy of impacts on wildlife movement or disagreement with analysis/findings.

Commenter	Date	Letter	Comment	Response
Steve Birdlebough	September 23,2022	C164-34	The significance of this Spiritual location was not lost on those who created the Sonoma Developmental Center for a healing center for their developmentally disabled children. We should hope that at this more enlightened time, and consistent with CEQA, the Historical Preservation Act, and the 50th Anniversary of the World Heritage Convention (Sept 17, 2022), we should be prepared to preserve both the content and the context, as much as is physically possible, for this National Treasure, "The Valley of the Moon". Under the UNESCO World Heritage Convention, which the United States was signatory (though withdrawn from 2018), we should "strengthen Credibility of the World Heritage List, ensure Conservation of World Heritage properties, promote Capacity-building measures, increase public awareness, involvement and support for World Heritage, and enhance the role of Communities in implementation of the World Heritage Convention". What has been done here appears to be the opposite, a complete neglect of not only Native American cultural values, but World Heritage Convention values.	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Tadashi Nitasaka	26-Sep-22	C165-1	We are writing today following our review of the draft environmental impact report pertaining to the Sonoma Developmental Center's (SDC) future. As most following this planning process, including Sonoma County Planning Commissioner Greg Carr, have stated (repeatedly, loudly, emphatically) – we find that this report fails, either in part or in total, to account for several environmental impacts essential to any meaningful understanding of the ways in which the public's safety, true protections for the natural environment, and the many human needs are to be addressed. And so, with but a few scant weeks to pour through a 789 page report that bases its assessments, conclusions, and recommendations on the previous "Plan" - and so is itself deeply flawed and grossly inadequate, we will once more howl into the void. Others with more advanced professional qualifications have pinpointed the flaws in those sections of the report pertaining to the natural environment, historic preservation, public safety, and traffic. We will restrict our comments to concerns for the future housing uses of SDC's Core Campus - and to a planning process that appears to have now gone off the rails – disappearing into the abyss of railroaded transparency! The first of our issues concerns the so-called "SDC Specific Plan" and the "reasonable range of alternatives to the Proposed Plan" - as required by CEQA in an EIR. Is it just us? We find that the community's input is nowhere to be seen in either of these deeply deficient reports. To illustrate, we and others have proposed, as one reasonable alternative, using SDC's built footprint, referred to elsewhere as its "historical 180-acre built area," as a campus for those seeking training in the trades, in the applied sciences, public service occupations, and other professions of financial and social benefit to the students, their families, and the entire state.	The comment is noted. Please see MR-3 regarding the level of detail of analysis and programmatic nature of the Draft EIR

Commenter	Date	Letter	Comment	Response
Tadashi Nitasaka	26-Sep-22	C165-2	We see no evidence that this invaluable, desperately needed (see any number of actual empirical studies) educational use was given a moment of consideration. Remarkably shortsighted given that use of SDC's Core Campus as a campus would come with fewer vehicle miles travelled, allocations for affordable housing, to name but a few of the benefits, in part because students, staff, and educators could be offered housing within the campus. Please see the attached letter sent to the Sonoma County Board of Supervisors on November 21, 2021 as it offers a deeply researched look at just such a use. Further, the Draft EIR ignores the county's dire need for affordable housing, calling instead for allocating 90% of the 1,000 proposed new houses as market rate homes. This in defiance of The Final Regional Housing Needs Allocation (RHNA) Plan , adopted in December 2021 which determined that Sonoma County's fair share of regional housing would be 3,881 units, with 1,632 allocated as housing affordable to very low- and low-income households. That would be about half the homes to be built, not 10% as this draft EIR calls for! Just a disgraceful display of the preference throughout the draft for meeting the needs of the wealthy over the rest of us. "SDC Core Campus: Consists primarily of residential buildings, with medical, educational, recreational, and administrative buildings interspersed. A cluster of utility and support buildings, and fire station sit at the western edge of the Core Campus. On the eastern portion of the site, historic agriculture uses…" Government Code Section 14670.10.5 (c) (4): The agreement shall require that housing be a priority in the planning process and that any housing proposal determined to be appropriate for the property shall include affordable housing. It is further the intent of the state that priority be given to projects that include housing that is deed restricted to provide housing for individuals with developmental disabilities. To this end, we propose developing cottage clusters throughout the campus designed to meet specific needs such as supportive housing for individuals with disabilities, older adults, agricultural workers, and young families in need of starter homes. As an enriching environment affording access to the educational, recreational, social, health, and support resources, all on this technical college campus, all bringing full circle the many necessities of	The comment is noted. However, it does not relate to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			life - all without segregating this campus from the rest of Glen Ellen - what could be better?	

Commenter	Date	Letter	Comment	Response
Tadashi Nitasaka	26-Sep-22	C165-3	It is outrageous to propose 100 of the 1,000 housing units might be deemed affordable, especially when communities such as Glen Ellen have been ravaged for Tourist Occupancy Taxes since Sonoma County's Vacation Rental Ordinance went into effect more than a decade ago. One hundred units doesn't begin to make up for the hundreds of homes converted into commercial tourist traps over these years. We need to actually, truly, add to our housing stock. By "add to" we mean in addition to recovering, by some means, those dwelling units sacrificed for profit, private and public. The proposed housing outline comes nowhere near to meeting the documented need for affordable housing in Sonoma County. Although state housing element law is cited in Chapter 3.1.2: Population and Housing, we believe that, beyond this scant mention, it ignores state law and the Sonoma County Housing Element. Certainly, it does not begin to touch on the county's requirement to provide for its burgeoning homeless population, a significant aging population unable to live on its paltry retirement income, or an agricultural community ignored in this process - as usual. Our second point also concerns process. While the people of Sonoma County, of the State of California have been encouraged to participate in a planning process sold to us as public, above board, and time constrained, we have just learned of another process (see attached 9/23/22 Index-Tribune article). This one private, ongoing, underhanded, free of transparency, a play for SDC by a real estate developer and his business partner - both with lengthy histories of questionable business ethics. This time, having sufficiently inserted themselves into the state system, carrying satchels of cash, of many millions of tax dollars, all offered to Sonoma County in exchange for a deal requiring NO Environmental Impact Report and benefitting only the few, the wealthiest schemers. "Public records reveal that two Sonoma County businessmen — Darius Anderson and Doug Bosco — played central roles in the backdoor negotiations for the easement sales" in a sham process meant to deflect the public's attention away from the dealmaking between a little-known state agency headed by the same man working to bring coal through Sonoma County on the Sonoma-Marin Area Rail Transit district — SMART line (see two attached 2021 Bohemian articles)	The comment is noted. However, it does not relate to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Tadashi Nitasaka	26-Sep-22	C165-4	Former congressman Doug Bosco is the CEO of the private freight company Northwestern Pacific Railroad Company (NWP Co.). Along with his business partner, real estate developer (e.g., Treasure Island: Radioactive debris) and owner of the powerful Platinum Advisors political consulting firm, Darius Anderson, they leveraged their influence to lobby state and federal lawmakers for the right to transport coal, among other commodities on the SMART rail line. Although most of their plans failed to pan out, through a series of complex loans and contracts (according to The Bohemian's 2021 report), a publicly chartered rail agency, North Coast Railroad Authority (NCRA), now owes NWP Co. millions of dollars. And today they continue running freight on the SMART rails. It should be noted that Anderson and Bosco are founding members of Sonoma Media Investments, which owns most of the print media in Sonoma County including the Press Democrat, Sonoma Index-Tribune, Sonoma County Gazette, Petaluma Argus-Courier, North Bay Business Journal, Sonoma Magazine, and La Prensa. So it's business as usual as the high rollers operate behind the scenes, leveraging millions of tax dollars in a play for possession of a community resource. Doug Bosco believes he and he alone can secure SDC, work around the usual requirements for an EIR, and buy off Sonoma County to create his next dream project. When Supervisor Gorin spoke at last week's (September 21) meeting of the North Sonoma Valley Municipal Advisory Council, there was no mention of the Bosco/Ocean Conservancy deal. Nor did County Planner Oh indicate that he was negotiating a deal with Doug Bosco when he addressed the Sonoma County Planning Commission at its September 15 meeting. The public is entitled to an explanation - NOW! This planning process must be halted until those who will pay (in oh so many ways) are fully informed of the facts. And now, one final point that cannot be ignored: The Sonoma Developmental Center, Eldridge, the neighborhoods south of SDC - WE ARE ONE! We are Glen Ellen. We will not stand for further planning hellbent on separating our neighborhoods by this or any other planning process!	The comment is noted. Please see MR-2 regarding the need for more time/selection of a developer before finalizing the Specific Plan

Commenter	Date	Letter	Comment	Response
Teri Shore	Wednesday, September 21, 2022	C166-1	Please find below and attached my official detailed public comments on the SDC Draft Environmental Report and Specific Plan to be entered into the public record and administrative record. Looking forward to the county's responses. It consists of 12 pages of a letter; 20 pages of a table with comments; and 8 pages of an article. Please include all. Thanks for your consideration. Dear Permit Sonoma, Board of Supervisors and Sonoma County Planning Commission, As a long-time resident of Sonoma Valley who cares deeply about the lands, wildlife and people who live here, I do not support the Sonoma Developmental Center (SDC) Specific Plan as proposed by Permit Sonoma and find that the DEIR is inadequate to meet the requirements of the California Environmental Quality Act. Please see my general comments followed by comments on the DEIR and a detailed table with more detailed comments.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Teri Shore	Wednesday, September 21, 2022	C166-2	GENERAL COMMENTS on SDC DEIR, Specific Plan and Planning Process Reversal of County Land Use Policies: The proposed SDC Specific Plan and DEIR comprise a complete reversal on decades of city centered growth and open space protection in Sonoma County. Instead of providing a visionary plan that addresses climate change and environmental protection while providing appropriate affordable housing, the County of Sonoma is deciding to forever urbanize the heart of rural and agricultural Sonoma Valley. Whether or not the Specific Plan is implemented or not, the rezoning of these lands for residential, hotel, commercial, retail and other new land uses will forever transform these lands.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Teri Shore	Wednesday, September 21, 2022	C166-3	Public Land for Public Good: This public land has always served the public good. For decades, everyone from local residents to county elected officials to open space agencies and the general public have envisioned these lands for protected open space and serving the needs of people with developmental disabilities and others who may need housing and services. So, it is extremely heartbreaking to realize that the county is instead intent on building a giant new subdivision here despite the many other options that have been forwarded by the community and stakeholders. The state statute is being willfully misinterpreted by the County of Sonoma to the detriment of the	The comment is noted. Please see MR-8 regarding the Historic Preservation Alternative.

Commenter	Date	Letter	Comment	Response
			people of California who own these lands. Turning public lands over to private developers for profit is simply wrong when there are many models for repurposing public lands without doing so, such as Marin Headlands, Presidio Trust, and Mare Island.	
Teri Shore	Wednesday, September 21, 2022	C166-4	Open Space: My comments are primarily focused on the open space lands surrounding the campus. These lands are critical for conservation, biodiversity and habitat linkage at a regional and state level. These lands qualify for and are prioritized for recognition in Governor Newsom's 30 X 30 Executive Order among environmental leaders such as Sierra Club, Sonoma Land Trust and Sonoma Mountain Preservation. It is unfortunate that the DEIR and Specific Plan do not give these treasured lands the level of analysis and protection as the development on the historic campus. Definitions are unclear and there are no requirements or details on how, when or through what process the open space will be permanently protected in public ownership. No doubt it is because the primary focus has been on urban planning. It might be a very good urban plan for a town or city but not for the center of the Sonoma Valley Wildlife Corridor and open space that provides easy access to nature and quiet recreation for all, across the income spectrum. Here the urban plan constitutes old fashioned sprawl.	The comment is noted. Please see MR-7 regarding the adequacy of impacts on wildlife movement or disagreement with analysis/findings, and MR-8 regarding the Historic Preservation Alternative.
Teri Shore	Wednesday, September 21, 2022	C166-5	Housing: While we all recognize the need for affordable housing, we also know that we can't build our way out of it. Just look to the rest of the Bay Area and places like Los Angeles where affordable housing is even more scarce. There is room in existing cities and towns to provide affordable housing for the people who need it. But of course, we need to change the way we provide housing; build-baby-build isn't it. The SDC lands are the wrong place for massive housing development comprised primarily of market rate housing. This will simply create another high-end wine country enclave and profits for private developers. Timeline: While I don't have any confidence that the county intends to change course, I do request that the county provides	The comment is noted. However, it does not relate to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			the public, Planning Commission and Board of Supervisors adequate and appropriate time to revies and finalized the DEIR and Specific Plan. The County must ask the State of California for more time to accomplish this important planning process. The County and State should not adopt a plan just to meet an arbitrary deadline. There is no rush given that the SDC property will be in transition for decades to come.	
Teri Shore	Wednesday, September 21, 2022	C166-6	DEIR COMMENTS REVISE DEIR TO MEET CEQA: Revise and strengthen the Draft Environmental Impact Report to meet the requirements of California Environmental Quality Act by analyzing and preventing or reducing all negative environmental impacts generated by the proposed Specific Plan by scaling back project, avoiding impacts and providing legally enforceable mitigation measures in a Mitigation and Monitoring Program. As drafted the DEIR is not adequate to meet CEQA. It has zero mitigations for any environmental impacts, including two that are "significant and unavoidable:" historic preservation and VMTs. 2. REVISE SELF-MITIGATED SPECIFIC PLAN: Revise and strengthen the Specific Plan Conditions of Approval to be legally enforceable requirements and recast as mitigation measures in the DEIR, as above. As drafted, the "self-mitigating" Specific Plan does not mitigate significant negative environmental impacts. The Conditions of Approval (CofAs) only apply to half of the environmental areas required for study under CEQA. And there are none for critical issues such as wildfire. Most of the CofAs for biological resources apply only to construction, not operations or maintenance, and are based mostly on existing state law or Best Management Practices, which are not in statute and therefore not legally enforceable. All Specific Plan Goals and Policies need to be specific, strong and enforceable. Otherwise, they are practically meaningless. Please remove vague words such as "promote" or "encourage" or "if feasible." Replace with "require", "shall" or "must." These strengthened Goals and Polices then need to be made Conditions of Approval and recast as Mitigations in the DEIR in a Mitigation and	The comment is noted. Please see MR-1 regarding the adequacy of a self-mitigating Plan.

Commenter	Date	Letter	Comment	Response
			Monitoring Program. If CofAs, policies or goals can't be made specific, then remove them as they do not mitigate environmental impacts. Having a Self-Mitigated Plan is not part of CEQA and does not necessarily meet CEQA; and certainly not in the case of the SDC Specific Plan and DEIR.	
Teri Shore	Wednesday, September 21, 2022	C166-7	3. SCALE BACK DEVELOPMENT AND CHANGE PREFERRED ALTERNATIVE: Scale back the development to 450 or fewer homes in scale with the rural character of the property; utilize existing buildings, preserve historic features. Require that 100 percent of the homes be affordable to low, very low- and moderate-income working people and to individuals with developmental disabilities. Require that all homes and buildings meet Visitability Standards for access by Americans with Disabilities (ADA), prioritizing those who currently live in Sonoma Valley. - Eliminate the hotel, retail and commercial space that is not needed as those services already exist nearby in Sonoma Valley. - Change the Preferred Alternative to the Historic Preservation Alternative, which is the most environmentally sound, and amend to reflect the requirements above.	The comment is noted. Please see MR-8 regarding the Historic Preservation Alternative.

Commenter	Date	Letter	Comment	Response
Teri Shore	Wednesday, September 21, 2022	C166-8	ANALYZE OPEN SPACE AND PUBLIC INSTITUTUION ALTERNATIVES: All the alternatives studied by the County of Sonoma are variations on a major mixed-use development that maximizes urban style use. The scaled back Historic Alternative is the closest to what the public and community has asked for over the years. However, the Open Space and Public Institution Alternatives that were dismissed by the County of Sonoma offer significantly difference alternatives that deserve further analysis. The Marin Headlands and Presidio Trust are good examples of how public land was repurposed without overdevelopment that could be analyzed further in the Open Space Alternative. Providing more details on the Historic, Open Space and Public Institution Alternatives will serve to meet CEQA criteria to provide the public and decisionmakers with a true range of alternatives. While the DEIR claims that these alternatives were dismissed due lack of consistency with state statute, I would argue that the various development alternatives that were presented are too narrow and also inconsistent with state statute. State statute calls for housing as appropriate on the SDC site and to prioritize affordable housing and housing for developmentally disabled individuals. What's present is very much out of scale and not appropriate for rural land. In addition, the DEIR and Specific Plan calls for the introduction of commercial agriculture throughout the preserved open space areas, which was never mentioned in state statute. Many other new land uses never mentioned in state statute are also proposed. In there any legal, statutory or other reason why County of Sonoma should not analyze and provide more details on the Historic, Open Space and Public Institution Alternatives?	The comment is noted. Please see MR-8 regarding the Historic Preservation Alternative.

Commenter	Date	Letter	Comment	Response
Teri Shore	Wednesday, September 21, 2022	C166-9	5. PROVIDE SPECIFICS AND ADDRESS IMPACTS TO OPEN SPACE – The Specific Plan and the DEIR mentions open space protection in general terms in several places, in various ways, but fails to provide a clear definition of "preserved open space," or to give the exact boundaries (other than in one general overlay map), or give details on how or when it will be protected, transferred or managed. Vague Goals and Policies contained the Specific Plan and DEIR do not suffice, such as "future developers at the site must work with the County to ensure proper management and stewardship" and "Work with Sonoma County to dedicate the preserved open space as regional parkland." Not resolving these issues is likely to create confusion and conflict later for all involved, as elected officials, agency staff and developers change over time. The DEIR and Specific Plan cannot rely on state statute to protect the open space lands [1] as that language is vague, only as "feasible" and in the "best interests of the state." These inadequacies need to be resolved in the DEIR and Specific Plan by adding clear descriptions of the open space lands with exact boundaries; likely mechanisms for transferring the lands and to what possible entities or types of entities; a timeline; and how the lands will be managed and under what authority. Environmental impacts and mitigations for impacts to the open space lands from development of the campus and ongoing operations must be provided.	The comment is noted. Please see MR-8 regarding the Historic Preservation Alternative.

Commenter	Date	Letter	Comment	Response
Teri Shore	Wednesday, September 21, 2022	C166-10	Preserved Open Space and Agriculture: The Specific Plan and DEIR make sweeping statements about “historic agriculture” but do not explain the extent of past agriculture in terms of types or amount of acreage. The impacts of allowing commercial agriculture on open space that is currently not in agriculture must be analyzed and the environmental impacts avoided or mitigated in the DEIR. Unacceptable New Uses in Preserved Open Space: Table 4-3 (attached) of the Land Use Section of the Specific Plan outlines many new uses in “preserved open space” including wine tasting rooms, timber conversion, wholesale nurseries, sports facilities and several others that have not been analyzed under CEQA or addressed at all in the goals, policies or CofAs of the Specific Plan. These “permitted” new uses in Preserved Open space must be analyzed, avoided or prevented and mitigated as required under CEQA and in my view NOT ALLOWED OR PERMITTED in Preserved Open Space. SHOULD NOT ALLOW AS PROPOSED THESE USES IN PRESERVED OPEN SPACE TABLE 4-2 SPECIFIC PLAN Agricultural Crop Production and Cultivation Agricultural Processing Animal Keeping: Beekeeping Animal Keeping: Confined Farm Animals Animal Keeping: Farm Animals Animal Keeping: Pet Fancier - Farm Retail Sales Farm Stands Indoor Crop Cultivation Mushroom Farming Nursery, Wholesale Timberland Conversions, Minor Nursery, Wholesale Tasting Rooms SHOULD NOT ALLOW AS PROPOSED IN SPECIFIC PLAN WITH CONDITIONAL USE PERMIT Recreation and Sports Facilities: Recreation Facility, Outdoor Recreation and Sports Facilities: Rural Sports and Recreation	The comment is noted. Please see MR-8 regarding the Historic Preservation Alternative.

Commenter	Date	Letter	Comment	Response
Teri Shore	Wednesday, September 21, 2022	C166-11	6. SONOMA VALLEY WILDLIRE CORRIDOR MAPPING AND RIPARIAN SETBACKS: Increase setbacks along Sonoma Creek, Riparian areas and the Sonoma Wildlife Corridor to at least 100 feet, instead of inadequate 50 feet as proposed. Explain why 50 feet is adequate to protect riparian areas and the wildlife corridor. In this section, I will defer to comments by the experts, including the Sonoma Land Trust and Center for Biological Diversity. Mapping: Neither the DEIR nor the Specific Plan provides an accurate map of the Sonoma Valley Wildlife Corridor. The DEIR refers to Figure 1.6-3, which does not appear in the DEIR. The Specific Plan Figure 1.6-3 is a map of Existing Vegetation. In the Specific Plan Figure 1.6-2 titled “Wildlife Constraints,” something that appears to represent the Sonoma Wildlife Corridor consists of two wavy green lines labeled as “Critical Wildlife Linkage Marin Blue Ridge.” However, that term is not defined, does not contain the words “Sonoma Valley Wildlife Corridor” and is never used anywhere else in the Specific Plan or DEIR. And, in fact, the Sonoma Valley Wildlife Corridor does not appear to be specifically mapped anywhere in the Specific Plan or DEIR that I could find. To meet CEQA by providing the public and decisionmakers with accurate information, the Sonoma Wildlife Corridor needs to be clearly mapped and defined with consistent terms. You must revise the DEIR and Specific Plan to specifically map and describe the boundaries of the Sonoma Valley Wildlife Corridor.	The comment is noted. Please see MR-7 regarding the adequacy of impacts on wildlife movement or disagreement with analysis/findings.

Commenter	Date	Letter	Comment	Response
Teri Shore	Wednesday, September 21, 2022	C166-12	7. WILDFIRE: There are no mitigation conditions of approval for wildfire; and the goals and policies are based on a future Emergency Response Plan that will be developed at some point. This is inadequate under CEQA. The DEIR and Self-Mitigating SDC Specific Plan do not eliminate risk or wildfire hazard to insignificant levels. Develop and add enforceable Mitigations in the DEIR and Conditions of Approval in the Specific Plan for Wildfire to reduce and prevent risk as there currently are none. The Evacuation Time analysis seems unrealistic and not based on fact as it suggests that "added times" for travel during an evacuation range from 1 or 2 minutes to 37 minutes to get to Napa. It took people HOURS to evacuate from Kenwood and Sonoma Valley during recent fires. Also, the DEIR calls for the "requirement" for a shelter-in-place facility at SDC after 200 homes are built. There is no proven rationale for sheltering in place particularly in a High Fire Risk Area. Revise wildfire evacuation impacts to reflect on-the-ground experiences during recent wildfires and new state and county wildfire risk and hazard maps. Eliminate the shelter-place as there is no evidence it would save lives. The DEIR and Specific Plan must also consider a wildfire mitigation that includes retreat from wildfire areas. Please see attached article in Bay Nature from experts on land use and wildfire which explains why developing in high wildfire areas is no longer appropriate or safe. Please include by reference the comments on wildfire and evacuation from the State Alliance for Firesafe Road Regulations and other commenters with expertise on these issues.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis .

Commenter	Date	Letter	Comment	Response
Teri Shore	Wednesday, September 21, 2022	C166-13	8. CLIMATE CRISIS and VMTs: The DEIR finds that the proposed Specific Plan will produce “significant and unavoidable” environmental impacts due to huge increases in Vehicle Miles Traveled that will be generated primarily by new residents driving to and from the SDC site. The DEIR offers no mitigations or conditions of approval to reduce or avoid the amount of driving. The DEIR finds that the proposed SDC Specific Plan will undermine local, regional and state policies and commitments to address the climate crisis as it found significant and unavoidable impacts in the areas of vehicle miles traveled. That means that there is NO WAY to offset or mitigate the extra driving generated by all the new housing, retail, commercial development proposed at SDC. The County must not approve this project as proposed with these impacts if it is serious about addressing the climate crisis. Taking this approach fails to meet the standards contained in CEQA because VMTs can be avoided and reduced by building fewer homes, reusing and demolishing fewer buildings, requiring public transit, and other measures that were never considered. The DEIR and Specific Plan must be revised to analyze and provide mitigations and measures to reduce VMTs.	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts.

Commenter	Date	Letter	Comment	Response
Teri Shore	Wednesday, September 21, 2022	C166-14	9. CONFLICTS WITH EXISTING COUNTY AND VOTER APPROVED POLICIES: Statements in the DEIR and Specific Plan that the proposals do not conflict with existing county policies are inaccurate. The proposed Specific Plan is a complete reversal of land use policy in the County of Sonoma dating back to the original General Plan in 1989. It constitutes urbanization of rural and open space lands not seen since the 1970s; and the type of development that paved over places such as Silicon Valley. As proposed, the DEIR and Specific Plan violates decades of city-centered growth policies adopted and supported by the voters of Sonoma County and contained in the General Plan. Until now, the County of Sonoma has mostly upheld policies to grow inside existing cities and towns, honor voter-approve Urban Growth Boundaries, protect greenbelts and open space, and respect voter-approved community separators. The voters of Sonoma County have taxed themselves to create the Ag + Open Space District, the SMART Train, and provide expanded funding to Sonoma County Regional Parks. The DEIR must analyze and mitigate the impacts to these long-standing land use and open space protection policies and voter-approved measures from the proposed Specific Plan and complete reversal of land use policy in order to comply with CEQA.	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR, and MR-8 regarding the Historic Preservation Alternative.

Commenter	Date	Letter	Comment	Response
Teri Shore	Wednesday, September 21, 2022	C166-15	10. HOUSING AND POPULATION New housing at SDC is not required or necessary for the County of Sonoma to meet its state mandated Regional Housing Needs Allocation of 3,881 housing units for the next 8-year cycle (2023-2031), as cited in the DEIR. In fact, housing at SDC was never considered as part of the RHNA process because the property's future remains uncertain and is currently zoned for public facilities, not housing. The DEIR cites the Association of Bay Area Governments (which also assigns RHNA numbers) that between 2020 and 2040, the number of housing units in Sonoma County will grow by 15 percent, while the population grows by 9 percent. These facts indicate that adequate housing units will be provided if housing units grow twice as fast as population. These projections of housing and population indicate that housing needs are likely to be met without building 1,000 units at SDC. In addition, the DEIR discloses that unincorporated Sonoma County is in fact losing population. It is clear that the housing numbers proposed in the Specific Plan and analyzed in the DEIR do not reflect actual official population or housing needs. It is based solely on Permit Sonoma's assumptions about how to make the development profitable for developer. This is the wrong baseline and approach. The DEIR fails to consider that Sonoma County Transportation Authority has previously determined that the county and cities could build at least 30,000 new and rebuilt (post fire) housing units without expanding outside of UGBs or existing USAs. SDC was neither referenced nor considered as a location for housing. The DEIR fails to make note that the City of Sonoma has adequate room to meet and exceed its RHNA allocations for the next 8-year cycle; or that according to the Springs Specific Plan Notice of Preparation of an EIR, there is potential for 700 new	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts.

Commenter	Date	Letter	Comment	Response
			housing units there. The county Housing Rezone EIR has also identified parcels for higher density housing in the Springs and around the unincorporated county which would result in additional housing. With these facts in mind, the DEIR must analyze and mitigate the growth inducing impacts of adding 1,000 extra housing units to Sonoma Valley and the County of Sonoma. One alternative the DEIR should consider is putting those 1,000 units into existing towns and cities, possible through a Transfer of Development Rights agreement with cities and the county of Sonoma itself.	

Commenter	Date	Letter	Comment	Response
Teri Shore	Wednesday, September 21, 2022	C166-16	11. ENDANGERED, THREATENED SPECIES The DEIR and Specific Plan fail to adequately analyze or mitigate the negative environmental impacts to endangered and threatened species on the SDC lands. The mitigations, goals, policies and Conditions of Approval are inadequate because they are weak with unenforceable actions, rely primarily on existing laws that have to be followed anyway, and/or rely on future studies and assessments as assessments – all of which fail to meet CEQA. In addition, the DEIR and Specific Plan fail to provide any analysis or even discuss the fact that mountain lions and bears and other predators utilize the SDC lands; or any of the research on this wildlife and others that is published or available. The DEIR and Specific Plan must recognize and provide details on this wildlife and provide analysis and mitigations to reduce negative environmental impacts; and prevent human-wildlife interactions – at the least. I will defer to comments on this section to the experts including Center for Biological Diversity and Sonoma Land Trust.	The comment is noted. Please see MR-7 regarding the adequacy of impacts on wildlife movement or disagreement with analysis/findings.

Commenter	Date	Letter	Comment	Response
Teri Shore	Wednesday, September 21, 2022	C166-17	12. COMMUNITY BENEFITS AGREEMENTS The DEIR and Specific Plan need to consider and analyze the benefits of the use of a Community Benefits Agreements at SDC with the community, labor, and public and appropriate stakeholders as a way to provide certainty that the mitigations and measures to protect the environment and community are upheld over the decades as SDC is being transformed. For example, county residents, particularly in the Sonoma Valley could determine what is most important based on community needs and particulars of the project once a property owner or manager is identified. For example, we could require the property owner or manager to commit to high levels of affordable and workforce housing, good, living wage jobs, protecting wildlife corridors, supportive and accessible housing for disabled people, and much more. We could fill in the gaps that the DEIR and Specific Plan don't provide, particularly if the state choose a different plan and/or the county never adopts or implements the Specific Plan.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Teri Shore	Wednesday, September 21, 2022	C166-18	13. STATE STATUTE: The County of Sonoma needs to revisit its interpretation of the state statute in respect to the Specific Plan and EIR as follows: Housing: State Statute says the following: It is the intent of the Legislature that priority be given to affordable housing in the disposition of the Sonoma Developmental Center state real property. The agreement shall require that housing be a priority in the planning process and that any housing proposal determined to be appropriate for the property shall include affordable housing. It is further the intent of the state that priority be given to projects that include housing that is deed restricted to provide housing for individuals with developmental disabilities. Nowhere does the statute call for maximum urbanization of the SDC nor to create a new town, hotel, commercial or retail. The scale of housing and development is not appropriate for the rural property surrounded by ag land. Therefore, the County of Sonoma's Specific Plan and DEIR are not consistent with and misinterpret the state statute. Both need to be revised to align with state statute and public comment by scaling back the development, eliminating market rate housing and other development, and providing deed-restricted affordable housing to individuals with developmental disabilities. Open Space: State Statute says the following: The Department of General Services recognizes the exceptional open-space, natural resources, and wildlife habitat characteristics of the Sonoma Developmental Center. It is the intent of the Legislature that the lands outside the core developed campus and its related infrastructure be preserved as public parkland and open space. The disposition of the property or property interests shall provide for the permanent protection of the open space and natural resources as a public resource to	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts; and MR-8 regarding the Historic Preservation Alternative.

Commenter	Date	Letter	Comment	Response
			the greatest extent feasible and shall be upon terms and conditions the director deems to be in the best interests of the state.	

Commenter	Date	Letter	Comment	Response
Teri Shore	Wednesday, September 21, 2022	C166-19	The state statute makes clear that the permanent protection of open space lands is for public parkland and natural resources as a public resource. The County's Specific Plan and DEIR are inconsistent with state statute as they propose introducing agriculture, sports fields and other uses without consider the negative environmental impacts of doing so. However, the state statute also conditions protection of the open space "to the extent feasible" and to "be in the best interests of the state." That is why the county Specific Plan and DEIR must provide details on how, when and with what entities that the open space will be protected. If not, then the state legislature will need to act to ensure the protection of the open space and that none of it is sold off for development or other inappropriate use.Economic Feasibility: State Statute says the following: The planning process shall facilitate the disposition of the property by amending the general plan of the county and any appropriate zoning ordinances, completing any environmental review, and addressing the economic feasibility of future development.	The comment is noted. Please see MR-8 regarding the Historic Preservation Alternative.

Commenter	Date	Letter	Comment	Response
Teri Shore	Wednesday, September 21, 2022	C166-20	The County of Sonoma's entire Specific Plan and DEIR is tied to this one mention of economic feasibility to the exclusion of just about everything else. The state did not mandate that the project be economically feasible or financially feasible but to address it. Economic feasibility changes constantly with market conditions. Specific Plans and General Plans are written for long periods of time when economic feasibility is certain to change. The County is misinterpreting state statute to maximize urban development at the SDC site. The proposal could also be economically feasible if, for example, the state paid to clean up the site, then transferred it to state parks or another public conservation entity. A bond measure or initiative could be written. However, the County looked at only one option or alternative: making profits for a private developer. This lacks visionand is inconsistent with state statute and CEQA The Planning Commission must direct Permit Sonoma to revise the Specific Plan and DEIR to be consistent with state statute and public comment and provide new alternatives that don't focus entirely on urbanization and developer profits.There are many other concerns that I have regarding the DEIR and Specific Plan, but these arewhat I am able to provide with the time and energy that I have at this time. PLEASE SEE DETAILED TABLE OF COMMENTS BELOW AS WELL AS ARTICLE MENTIONED ABOUT WILDFIRE RETREAT.	The comment is noted. Please see MR-2 regarding the need for more time/selection of a developer before finalizing the Specific Plan , and MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	18-Sep-22	C167-1	Why has County Staff/Consultants done the following, and what are your mitigation recommendations?: The EIR & SP preparation violates BPC6731, without a Civil Engineer in responsible charge of Planning? The EIR has committed the County to a course of action, new development, prior to EIR's Certification? Historic Reuse appears proper, yet each price consequence results in expanded project impacts. What is the economic obsolescence impact to the Springs/Glen Ellen of the proposed project? The EIR and SP propose demolition of 1.2M sq-ft of buildings, along with the 1M+0.35M gal fresh water tanks, see Figure 4.3-1: "Historic Assets", without reference to local Wildfire protection. Why? The EIR & SP propose demolition of Historic Firehouse (c1932) without wildfire impact consideration? EIR & SP neglect wildfire consideration, as not "High Fire Risk", though analysis excluded SDC?	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis .
Thomas Chase Ells	18-Sep-22	C167-2	Why does EIR & SP use uncalibrated (unrealistic) models, eg without reference to actual fire evacuation? The EIR develops a series of conclusions as analysis, beginning after point in time of project completion? The EIR assumes no cumulative effects to the proposed project; eg. GHG's and solid waste, but does not include project specific demolition, nor constructed lifecycle, GHG's & wastes? Why? The EIR assumes no cumulative effects from combining the proposed project wastewater into a down-stream waste treatment facility when a historic facility is located on site to recharge the wetlands/creek. SDC is an Historic opportunity to propose and develop an integrated environmental & climate protective response to wildfire, in a traumatized and sensitized area, without which this proposal has a significant cumulative negative impact to the local & regional environment due to unrealized wildfire protections. Why is EIR & SP preparation biased in favor of Standard-Operating-Procedure for new development? There is, at great expense, no Professional caliber analysis within these documents, explain?	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	18-Sep-22	C168-1	Though Permit Sonoma worked hard, produced >4000pgs, & created many potential alternatives within their Specific Plan/EIR process, they have overshot the mark creating a plan for the past, “fighting the last war” as we often do, and not taking advantage of the opportunity to present a plan for the future. Why does it appear the SDC EIR and associated Specific Plan (characterized by the County’s preferred Proposed Project Alternative) have defined and committed the County of Sonoma, as Lead Agency under CEQA, to a series of specific decisions, plans, and/or alternatives without fully considering other acceptable plans (under legislation 14670.10.5), alternatives, mitigation measures, and the Null Project. Please explain why the County (Permit Sonoma) has allowed the EIR to be produced which does not address the mitigatable cumulative effects of waste generated by the proposed alternative over the Null Project hypothesis, to the extent where recommended building demolition of ~1.2M sq-ft produces a minimum of 161,000 cy of debris equal to 67 years of operation of the Proposed Project Alternative in addition to the equal amount of debris produced by the eventual demolition of the Proposed 1.2M sq-ft Project (∑=322,000 cy, or 134 years at the rate of the Proposed Project at completion); together with the project waste there will be an average cumulative waste of 19.8 tons/day or 1.5% of daily averages (2016-2020, per SP pg 603) ? Since we are already transferring all our solid waste away from Sonoma County because we do not have local landfill capacity, and our waste charges ($135/ton) are double the charge for Hazardous Waste ($50.97/ton asbestos waste) taken to Kettleman Hills landfill, this must be considered a significant mitigatable impact by Reuse and Historic Preservation of the existing buildings. At the local waste costs, this represents >$960,000/yr = ~$65M over the 67 years, from these 3 sources.	The comment is noted. The comment is noted. The DEIR does analyze a reasonable range of alternatives. Section 15126.6 of the CEQA Guidelines states that: An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. See also Impacts 3.15-4 and 3.15-5. Demolition and construction activities associated with implementation of the Proposed Plan would result in a temporary increase in solid waste generation periodically during construction. However, the increase would be minimal and temporary. Standard Conditions of Approval UTIL-5 is included to ensure preservation of topsoil removed during construction for reuse in revegetation. The Proposed Plan would not generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure during construction. This impact would be less than significant. See also Chapter 5 for an analysis of cumulative impacts.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	18-Sep-22	C168-2	Why is no mention made in the EIR or SP of GHG's which were imbedded and carried within the existing constructed buildings which will be released into the atmosphere by their demolition, nor is any men-tion made of the GHG emissions which are imbedded in the production of the new materials and resour-ces which are expected to replace the demolished SDC buildings, these are significant long term mitigat-able cumulative effects? Why has the EIR not addressed either of these cumulative GHG effects, from demolition, neither the before demolition GHG emissions sequestered in the existing buildings which will be released, nor the GHG emissions released in the production of the replacement 1.2M sq-ft of buildings together with their own lifecycle emissions released upon their demolition? These GHG's must be considered a significant mitigatable impact by their (building) Reuse. Why is no mention made in the EIR or SP of the cumulative effects of the opportunity lost to lead this community and the Global Community in re-visioning the future, from the past that we have, into the future that we need while using the existing buildings and infrastructure you demolish? Why is Historic Preservation of the existing buildings considered by the EIR & SP to be financially infeasible and unmitigatable? This is not a fact, nor is it a reasonable conjecture from any basic set of reasonable assumptions, other than a prejudice against Historic Buildings in preference to the Cult-of-the-New. Historical Preservation and Reuse of these buildings is relatively simple. In particular, historic lumber is dimensionally greater and structurally superior, providing more insulative cavity, and other materials were more dense historically. History teaches us that the oldest buildings are the most energy efficient for their locations; such as Kiva & Adobe Structures of the America Southwest are stone or adobe to insulate against the heat, raised pole structures in the Indus Valley Civilization and Mounded Structures of the Mississippian Culture prevent flood inundation, Northern Long Houses of the Iroquois in the East and the Suquamish of the West are large multifamily dwellings and made of wood frames and bark covering to insulate against the cold, even Igloos of the Eskimo. Why have you neglected the consideration that almost every older building uses less energy than that which replaces it, despite the efficiency of the New Building?	The environmental impacts related to traffic, noise, and air quality and GHG emissions during construction and operation of the park facilities have been considered throughout this EIR (see Section 3.3: Air Quality, Section 3.6: Energy and Greenhouse Gas Emissions, Section 3.11: Noise, and Section 3.14: Transportation). Please see also MR-3 regarding the programmatic nature of the DEIR.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	18-Sep-22	C168-3	Why is scant consideration, even superficial avoidance, of the topic of Hazardous Materials mitigation and removal given within the EIR and SP as a direct consequence of the building demolition, as opposed to “In-Situ” mitigation in place through reuse and Historic Preservation of the existing buildings; Diesel Tanks, Film Development, Chemical Storage, Paint Shops, Corporate Yards and Transportation buildings, all have significant potential for Hazardous Materials impacts, as well as, the asbestos insulation and lead based paint in the housing, hospital, and office buildings? Lack of consideration of this impact has direct impacts of needlessly and costly filling existing hazardous waste landfills, both individually and cumulatively, though mitigatable. Each of the above considerations, taken individually are significant impacts not covered by the EIR and SP, but there is also a cumulative effect of the above neglectful preparation of the EIR and SP, “a death by 1000 cuts” to the Historic Preservation (stated to be unmitigatable). Why has the cumulative effect of this neglectful preparation not been addressed within the EIR and SP, which then augers for and streamlines the process for replacement by the preferred Proposed Project Alternative as opposed to Historic Preservation (HP)? Can you explain how you are mitigating these neglected impacts which should be further compared to the environmentally preferred HP, in producing a cycle of demolition and reconstruction which has a cumulative effect due to volume of waste, and on the environment due to exploitative expectations, the expectation that ‘everything I have should be new’, ‘we need the new’, ‘I need the new’? Again, why does the EIR and SP neglect the positive environmental impact the development could have by leading, rather than following old worn-out traditions of thinking, that have cumulatively placed us in our Climate Crisis?	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-1	County's evidentiary record is anecdotal @best. Sonoma Valley represents a national treasure, as described as, "The Valley of the Moon". Sonoma is the Native Indigenous American name for the valley. When White settlers asked what Sonoma meant, Natives pointed to the trace of the Moon setting and rising behind the eastern ridgetops during certain times of the year, the White's interpretation was that "Sonoma" meant 'the valley that the Moon touches' ("The Valley of the Moon"). My Anthropology studies and linguistic avocation has taught me to hear the phonetic sounds (the basic phonemes), particularly for significant language words, words that have cultural, spiritual, or international usage, such as words which are adopted into a language from another. The basis of this study is Multi-critical analysis as opposed to diacritical analysis. Typically there will be very little understanding of the actual meaning of an adopted word. Then, if it retains a high referential standing, it indicates it's an adopted word, not merely a forgotten word. Typical adopted words with high Referential standing and forgotten meanings are: Alleluia, precious, and Amen.	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-2	In this case we have Sonoma: what are the phonemes for "Sonoma", they are "Tsu" (not Tso) & "Noma"; so in this case our supposition is correct, because these are two very important international words. "Tsu" or "Tzu" represents the name given by the Chinese to one of their greatest Philosophers, "LaoTzu" the founder of Taoism (from UCI Anthropology studies "Chinese, Taoism & Confucianism", 1983), "LaoTzu" was originally named "LoTzu", meaning "Man-Master" (Philosopher) and when he was older it was changed to "LaoTzu", meaning "Old-Man-Master" (or Great Philosopher): Therefore "Tzu" means "Master". "Noma" is the Aramaic word for 'name' establishing the identity and essence of a thing and thereby giving man control over the substance, and in the Greek "Nomo" means "law or control", again, in Western parlance the essence is unknowable but the manifestation is controllable by the 'name': so control and name are the same thing, therefore "Noma" means "name" (from participation in Antiochian and Greek culture, which develops from a multi-critical analysis as opposed to diacritical). "Sonoma" therefore means "The Master's Name", and in a Spiritual sense, it means the highest name above all names. "The Master's Holy Name", in an Eastern Spiritual sense describing God's, the Creator's, or Great Spirit's control over the location by the Moon's contact with the Earth, not Man's control over God by invocation of the Name. This we hear many times from Joseph Campbell, man's search for control vs man's search for God. Also, in another form of Transcendence, both "Tsu" and "Noma" mean "control", so they are like conjoined twins, in a simple manifestation of the "Rosetta Stone". Looked at separately, we call this a "Translation", but conjoining them is a form of transcendence in the physical plane of existence. The name "Sonoma" appears to be used as a descriptive tool, by connecting physical transcendence (translation of place) with the location of a Spiritual Transcendence (in reference to the verticality of the Moon's touching the Earth), it again mirrors the "Rosetta Stone" representing two kinds of Transcendence, with the Earthly "T" crossing the Spiritual vertical demarcation.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-3	More than the mere analysis of the word and its application to the space, is the significance of "Sonoma" in the cross-cultural linguistic representation of deification using ancient language references from across the sea, and linked only by many thousands of years. There is no other place name which connects so perfectly the unity of man, the Name itself transcends both the ages and the seas, thus we have the essence of a World Heritage Cultural Site. Like many other UNESCO World Heritage Sites, which are in disrepair and in danger of destruction, Sonoma's "Valley of the Moon" is suffering an existential threat from the Proposed Project Alternative. Located at near the exact geographic center of Sonoma Valley, 10 miles from it's head along Hwy 12, and 12 miles from it's outlet at Skagg's Island. And transected by a vital Wildlife Corridor connecting 2 Mountain Parks: Sugarloaf/Hood and Jack London Parks; no discussion or analysis has been given to the significance of this World Heritage Cultural Site, or the impacts or any mitigation from the significantly new, taller, and dense construction within the Program Draft EIR-SP Project analysis (cursory discussion was given to light pollution, but none to the physicality of the presence of tall, dense, populous village construction in the midst of an Historic Treasure, McDonalds centered in Teotihuacan).	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-4	The significance of this Spiritual location was not lost on those who created the Sonoma Developmental Center for a healing center for their developmentally disabled children. We should hope that at this more enlightened time, and consistent with CEQA, the Historical Preservation Act, and the 50th Anniversary of the World Heritage Convention (Sept 17, 2022), we should be prepared to preserve both the content and the context, as much as is physically possible, for this National Treasure, "The Valley of the Moon". Under the UNESCO World Heritage Convention, which the United States was signatory (though withdrawn from 2018), we should "strengthen Credibility of the World Heritage List, ensure Conservation of World Heritage properties, promote Capacity-building measures, increase public awareness, involvement and support for World Heritage, and enhance the role of Communities in implementation of the World Heritage Convention". What has been done here appears to be the opposite, a complete neglect of not only Native American cultural values, but World Heritage Convention values. Analysis of EIR Historical Asset discussion: The Program Draft EIR is silent on the above discussion, while reporting Environmental Impact Report - County Summary "5.3 Significant and Unavoidable Impacts: According to CEQA Guidelines 15126.2(b), an EIR must discuss any significant environmental impacts that cannot be avoided under full implementation of the proposed program...However the Proposed Plan aims to be self-mitigating. Thus, all proposed policies aim to address environmental impacts (to the, sic) to the greatest extent feasible and no mitigation measures are required. The analysis in Chapter 3 determined that the Proposed Plan would result in significant impacts to the cultural/historic resources and transportation (home-based work trip vehicle miles traveled per capita) that, even with implementation of mitigation measures, would remain significant and unavoidable". This language neglects real analysis of the Null Hypothesis Project, and only considers the Proposed Plan impacts which it states (along with all other alternatives) have similar impacts [without discernment as to avoidable, mitigatable, or unmitigatable], which is entirely untrue in the Null Hypothesis case.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-5	Continuing; "5.3.1 Cultural, Historic, and Tribal Resources: new construction under the Proposed Plan has the potential to disconnect the remaining contributing resources in the Core Campus from those in the Community Separator and Regional Parks lands to the east and west, disrupting the SSHHD's overall integrity to the point that it would no longer be eligible for listing in the National Register of Historic Places, CRHR, or as a California Historic Landmark. This impact, in addition to demolition of the aforementioned resources would result in a substantial adverse change to the significance of the historic district such that the significance of the historic district would be materially impaired pursuant to Section 15064.5. Implementation of goals 2-I and 2-J and policies 4-20 through 4-32 as well as Standard Conditions of Approval (LU1 through LU6) would partially compensate for the impact associated with the demolition of historically contributing resources and physical alteration of the historic district to the maximum extent practicable; however, because these measures would not be enough to avoid or reduce the impact completely, the Proposed Plan's impact would remain significant and unavoidable". No mention is made of the Tribal Resources, because no artifacts remain or they could be recovered in a project excavation, but this does not address the transcendent value of the space and place name as a World Heritage Cultural Site, which can be subsumed in the potential Project construct, where we have heard discussed 2-3Msf of Commercial Construction.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-6	Again, the Program Draft EIR's considerations of the impacts, mitigations, and alternatives appear limited to the Proposed Plan Project Alternative, and do not address the Alternatives, nor the Null Hypothesis Project, continuing a foregone conclusion (see 2-3Msf of Commercial Construction discussed above, is that unmitigatable?). Please see the following analysis of project conceptual iteration for planning and design. Please see pg4 p3 San Mateo Gardens, re "substantial evidence in the record, is a predominantly factual question...for the agency...drawing on its particular expertise"; here we are bringing your attention to the word “expertise”. Friends of the College of San Mateo Gardens v. San Mateo County Community College District https://law.justia.com/cases/california/court-of-appeal/2017/a135892.html We want to accept the presumption of legal operation, but we must also accept and correct the illegal condition when evidence is presented to the contrary. In a County system, Engineering is not conducted without Accounting. But if the Accounting fails such as for Northwestern Pacific Railroad, the sad evidence must be accepted, and correction immediately made or we suffer the loss of funding or function. No one was there to accept the Trucker's weighmaster's tickets when the washout deliveries were made in the upper NWP line, none could be found, none ever delivered, no NWP.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-7	The reason we approach the initial determination of a project this way, using California Supreme Court’s remand for San Mateo Gardens, is, here we equate the Court EIR analysis process to the Engineering process, in that there are a sequence of iterative steps involved. This process is best exemplified from the CA Supreme Court's remand expressed in San Mateo Gardens, where a series of back-and-forth evaluations and propositions are made in analyzing a project (one such method is CPM,Critical Path Method), which is the same process we use in conceptual design or planning. A comparison is made by question; does the "initial concept" with its features fit the need and the existing space, then we may have to adjust the concept's features to the needs, or to the space? Conceptual planning designs forward & backward many times. This comparison is not to decry the effort expended or the information obtained through Planning education or product, but a marathon runner prepares for a marathon, not Law or Engineering. Preparation for a marathon may be great preparation for someone wanting to become a Lawyer, Doctor, or Engineer, but by itself does not make one a Lawyer, Doctor, or Engineer. Nor is an Urban Planner a qualified Civil Engineer, and therefore is unable to make professional judgments in respect to the Planning of "fixed works" identified in BPC 6731. [See Licensing BPC 6730-6730.2(a); 6731; 6734; 6735(a). See also Administrative Mandamus case, Morris v Harper (2001) 94 Cal.App.4th 52 . “After all, ‘“‘[i]t is the refusal or neglect to perform an act which is enjoined by the law as a present duty that serves as the very foundation for the [mandamus] proceeding.’ ” (Morris v. Harper, supra, at p. 60.)"]	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-8	San Mateo Gardens; "Instead of resting on whether a project is new “in an abstract sense,” the “decision to proceed under CEQA’s subsequent review provisions must . . . necessarily rest on a determination—whether implicit or explicit—that the original environmental document retains some informational value.” (Id. at p. 951.) Such an inquiry “is a predominantly factual question . . . for the agency to answer in the first instance, drawing on its particular expertise.” (Id. at p. 953.)" From where does this “expertise” derive, Planners require no Science education? The EIR standard is, if/when there are significant environmental impacts, then a review of impacts and mitigations must obtain (other than stating overriding or unmitigatable conditions), and a "judicial review must reflect the exacting standard that an agency must apply". San Mateo (ibid) pg 8. What this is referring to is, that the evidence must be prepared to a very high standard, from the beginning, in order for it to be considered "substantial evidence in the record". Where is the “exacting Standard” & “expertise”?	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.
Thomas Chase Ells	23-Sep-22	C169-9	According to the National Society of Professional Engineers code of ethics, Professional Engineers may disagree without a single outcome obtained, but must remain decorous. ["The Supreme Court in San Mateo Gardens provided guidance for how to apply the subsequent review provisions. It explained that whether “major revisions” will be required as a result of project changes “necessarily depends on the nature of the original environmental document,” i.e., whether it was an EIR or a negative declaration. (San Mateo Gardens, supra, 1 Cal.5th at p. 958.) It further explained that the appropriate standard of review also depends on the nature of the original environmental document. Although an agency’s determination of whether major revisions are required is reviewed for substantial evidence, “judicial review must reflect the exacting standard that an agency must apply when changes are made to a project that has been approved via a negative declaration,” as opposed to the deferential standard that applies when the project was originally approved by an EIR. (Id. at p. 953; see Committee for Re-Evaluation of TLine Loop v. San Francisco Municipal Transportation Agency (2016) 6 Cal.App.5th 1237, 1247, 1251-1252 [applying San Mateo Gardens in case where project originally approved by EIR];	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			Latinos Unidos de Napa v. City of Napa (2013) 221 Cal.App.4th 192,"]	
Thomas Chase Ells	23-Sep-22	C169-10	In planning, we have said, the process is intensely exhaustive and iterative, and what is described as the Court EIR review process is also exhaustive and iterative. The Court ceding competency to the local agency is similar to the process of presenting a case to a Court of Competent Jurisdiction. A Court of Competent Jurisdiction is composed firstly of a trained lawyer, either by a Law School or by preparation and passing the Baby Bar. Then of course, the prospectant Judge must pass the National Bar Exam locally administered, next the Judge must practice law for a minimum of 10 years. At some point the Judge is appointed or runs for election, and finally, the Judge is selected to hear a case by the Chief Judge. The Court itself must also be of Competent Jurisdiction, meaning it is the proper venue, as established by our system of Jurisprudence. These are significant tests. If someone went to College and studied English or Political Science, they could learn a lot of laws, but they would not be presumed to know how to practice Law, And they did not go to Law School or pass the Baby Bar, and they have not prepared to be a Lawyer, let alone a Judge.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-11	Engineering is one of the most complex problems in supply & demand, as evidenced by the number of divorces in custom home remodeling and construction, and why Public Works requires Licensed Civil Engineers. Our critique is not meant to characterize the work of any Engineers having completed reports for the SDC EIR-SP, since we do not know what instructions they were given. But we contend that recommended demolition for over 1.2Msf without analysis of 400,000sf, and recommended demolition of ~75,000sf of Hospital Treatment Building rated at "not requiring any updates", represents an incomplete analysis at best, and certainly a neglect of the impacts on the resources being analyzed. As we spoke of backward-and-forward analysis in design, this is required in Planning as well, unless a truncated process is employed. It is far easier to make the facts fit the design, than to make the design fit the facts. If your timeline is short, it is far easier for you to establish the Project, and make the analysis fit the Project by not addressing impacts except in a standard way, such as, "(h)owever the Proposed Plan aims to be self-mitigating". “from Program Draft EIR 5.3 Significant and Unavoidable Impacts”	See Master Response 1 created to address concerns about the adequacy of a self-mitigating Specific Plan.
Thomas Chase Ells	23-Sep-22	C169-12	Subsequent to the very specific State Law being passed to sell SDC, incorporating significant intent for community participation, many meetings were held with studied interest and good comments. Comments were sent to Permit Sonoma and the Planners involved in SDC's NOP of Program Draft EIR & SP, but these comments were not incorporated in the evaluation nor in the Proposed Alternative Project SP, nor were they forwarded to the Planning Commission, nor were they provided to other participants or commenters to the EIR & SP. This is not standard practice, and violates CEQA Code 15004(a)&(b)(1)-(3); “(a) Before granting any approval of a project subject to CEQA, every lead agency or responsible agency shall consider a final EIR or negative declaration or another document authorized by these guidelines…(b) Choosing the precise time for CEQA compliance involves a balancing of competing factors, EIR’s and negative declarations should be prepared as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
			provide meaningful information for environmental assessment." (b)(1) "With public projects, at the earliest feasible time, project sponsors shall incorporate environmental considerations into project conceptualization".	
Thomas Chase Ells	23-Sep-22	C169-13	The timeframe window for "cumulative impacts" evaluation was limited to after Proposed Alternative Project completion, leaving out the demolition and construction of the entire project, let alone the life cycle embedded costs, GHG's and energy to be demolished as a consequence from the new construction. This time frame results in unsubstantiated conclusions for the Proposed Project Alternative in ES.3 Alternatives to the Proposed Plan, "As discussed in Impacts 3.6-2, the Proposed Plan would thus support and reflect the increasingly stringent State and local goals and regulations that seek to increase energy efficiency, reduce energy consumption, and prioritize renewable energy – reinforcing that the Proposed Plan would not result in cumulatively considerable impact with respect to wasteful, inefficient, or unnecessary consumption of energy resources." They left out 161,000 tons of waste. 15004 (b)(3), "With private projects, the Lead Agency shall encourage the project proponent to incorporate environmental considerations into project conceptualization, design, and planning at the earliest feasible time." This truncated analysis appears to be the type that establishes priorities, goals, and objectives before the certification of the EIR is complete, therefore "limiting alternatives or mitigation measures".	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-14	This truncated analysis would violate CEQA Code 15004 (b)(2), "public agencies shall not undertake actions concerning the proposed public project that would have a significant adverse effect or limit the choice of alternatives or mitigation measures, before completion of CEQA compliance";"and for example, agencies shall not:(b)(2)(B)", "Otherwise take any action which gives impetus to a planned or foreseeable project in a manner that forecloses alternatives or mitigation measures that would ordinarily be part of CEQA review of that public project". Given that Permit Sonoma will only provide the public's comments to the Planning Commission upon final EIR Certification, and a series of comments have been made to the SDC Comprehensive Planning Manager which has not incorporated the public's comments into the Proposed Project Alternative, "at the earliest feasible time", they appear to have violated Sec's 15004(a)&(b)(1)-(3), inclusive.	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.
Thomas Chase Ells	23-Sep-22	C169-15	What we contend here is, that the proper "back-and-forth" process has not occurred, as within the planning process proper, within the design process proper, within the EIR process, as would be the same within the Court's evaluation of the EIR process itself, from San Mateo Gardens remand from the California State Supreme Court, which constitutes proper Authority to all jurisdictions within California. We also contend that "particular expertise" and "the exacting standard that an agency must apply" is not available to the review that the "judicial review must reflect", without a Licensed Civil Engineering in Responsible Charge of "Fixed Works" Planning, BPC 6731. CEQA Guideline 15149 "USE OF REGISTERED PROFESSIONALS IN PREPARING EIRS" suggests nontechnical preparation of EIR documents, but this does not exempt Program EIR's completed in conjunction with Specific Plans from the "particular expertise" and "exacting standards" of the Court, nor from State Law BPC 6731 declaring "City and Regional Planning to be Civil Engineering" requiring "responsible charge engineering"	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-16	Appendix of additional CEQA Guideline Violations, following: 15064.5. DETERMINING THE SIGNIFICANCE OF IMPACTS TO ARCHAEOLOGICAL AND HISTORICAL RESOURCES (a) For purposes of this section, the term "historical resources" shall include the following: (3) Any object, building, structure, site, area, place,… Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852) including the following: (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; (D) Has yielded, or may be likely to yield, information important in prehistory or history	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.
Thomas Chase Ells	23-Sep-22	C169-17	15065 MANDATORY FINDINGS OF SIGNIFICANCE (a) A lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur: (1) The project has the potential to: … eliminate important examples of the major periods of California history or prehistory. (2) The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals. (3) The project has possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-18	(c) Following the decision to prepare an EIR, if a lead agency determines that any of the conditions specified by subdivision (a) will occur, such a determination shall apply to: (1) the identification of eff-ects to be analyzed in depth in the environmental impact report or the functional equivalent thereof, (2) the requirement to make detailed findings on the feasibility of alternatives or mitigation measures to substantially lessen or avoid the significant effects on the environment, (3) when found to be feasible, the making of changes in the project to substantially lessen or avoid the significant effects on the envir-onment, and (4) where necessary, the requirement to adopt a statement of overriding considerations. Note: Authority cited: Section 21083, Public Resources Code. Reference: Sections 21001(c), 21082.2, and 21083, Public Resources Code; San Joaquin Raptor/Wildlife Center v. County of Stanislaus (1996) 42 Cal.App.4th 608; Los Angeles Unified School District v. City of Los Angeles (1997) 58 Cal.App.4th 1019, 1024; and Communities for a Better Environment v. California Resources Agency (2002) 103 Cal.App.4th 98.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-19	15088 EVALUATION OF AND RESPONSE TO COMMENTS (a) The lead agency shall evaluate comments on environmental issues received from persons who reviewed the draft EIR and shall prepare a written re-sponse. The Lead Agency shall respond to comments received during the noticed comment period and any extensions and may respond to late comments. (b) The lead agency shall provide a written proposed response to a public agency on comments made by that public agency at least 10 days prior to certifying an environmental impact report. (c) The written response shall describe the disposition of significant environmental issues raised (e.g., revisions to the proposed project to mitigate anticipated impacts or objections). In particular, the major environmental issues raised when the Lead Agency‘s position is at variance with recommendations and objections raised in the comments must be addressed in detail giving reasons why specific comments and suggestions were not accepted. There must be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice. Note: Authority cited: Section 21083, Public Resources Code. Reference: Sections 21092.5, 21104, and 21153, Public Resources Code; People v. County of Kern (1974) 39 Cal. App. 3d 830; Cleary v. County of Stanislaus (1981) 118 Cal. App. 3d 348. 15088.5 RECIRCULATION OF AN EIR PRIOR TO CERTIFICATION (a) A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification… “Significant new information” requiring recirculation include, for example, a disclosure showing that: (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project’s proponents decline to adopt it. (4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (Mountain Lion Coalition v. Fish and Game Com. (1989) 214 Cal.App.3d 1043)	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-20	15091. FINDINGS (a) No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are: (1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR. (2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency. (3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR. (b) The findings required by subdivision (a) shall be supported by substantial evidence in the record. (c) The finding in subdivision (a)(2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives. The finding in subdivision (a)(3) shall describe the specific reasons for rejecting identified mitigation measures and project alternatives. (d) When making the findings required in subdivision (a)(1), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-21	15092. APPROVAL (a) After considering the final EIR and in conjunction with making findings under Section 15091, the Lead Agency may decide whether or how to approve or carry out the project. (b) A public agency shall not decide to approve or carry out a project for which an EIR was prepared unless either: (1) The project as approved will not have a significant effect on the environment, or (2) The agency has: (A) Eliminated or substantially lessened all significant effects on the environment where feasible as shown in findings under Section 15091, and (B) Determined that any remaining significant effects on the environment found to be unavoidable under Section 15091 are acceptable due to overriding concerns as described in Section 15093. 15093. STATEMENT OF OVERRIDING CONSIDERATIONS (a) CEQA requires the decision-making agency to balance, …the adverse environmental effects may be considered "acceptable." (b) When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Thomas Chase Ells	23-Sep-22	C169-22	15097. MITIGATION MONITORING OR REPORTING. (a) This section applies when a public agency has made the findings required under paragraph (1) of subdivision (a) of Section 15091 relative to an EIR or adopted a mitigated negative declaration in conjunction with approving a project. In order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented, the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program. (b) Where the project at issue is	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			the adoption of a general plan, specific plan, community plan or other plan-level document (zoning, ordinance, regulation, policy), the monitoring plan shall apply to policies and any other portion of the plan that is a mitigation measure or adopted alternative. The monitoring plan may consist of policies included in plan-level documents. The annual report on general plan status required pursuant to the Government Code is one example of a reporting program for adoption of a city or county general plan.	
Thomas Chase Ells	23-Sep-22	C169-23	15126. CONSIDERATION AND DISCUSSION OF ENVIRONMENTAL IMPACTS All phases of a project must be considered when evaluating its impact on the environment: planning, acquisition, development, and operation. The subjects listed below shall be discussed as directed in Sections 15126.2, 15126.4 and 15126.6, preferably in separate sections or paragraphs of the EIR. If they are not discussed separately, the EIR shall include a table showing where each of the subjects is discussed. (a) Significant Environmen-tal Effects of the Proposed Project. (b) Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented. Association of Environmental Professionals 2018 CEQA Guidelines 174 (c) Significant Irreversible Environmental Changes Which Would be Involved in the Proposed Project Should it be Implemented. (d) Growth-Inducing Impact of the Proposed Project. (e) The Mitigation Measures Proposed to Minimize the Significant Effects. (f) Alternatives to the Proposed Project.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-24	15126.2 CONSIDERATION AND DISCUSSION OF SIGNIFICANT ENVIRONMENTAL IMPACTS. (a) The Significant Environmental Effects of the Proposed Project. An EIR shall identify and focus on the significant environmental effects of the proposed project….The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas. (b) Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented. Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described. (c) Significant Irreversible Environmental Changes Which Would be Caused by the Proposed Project Should it be Implemented. Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since …generally commit future generations to similar uses. (d) Growth-Inducing Impact of the Proposed Project. Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. … projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-25	15126.4 CONSIDERATION AND DISCUSSION OF MITIGATION MEASURES PROPOSED TO MINIMIZE SIGNIFICANT EFFECTS. (a) Mitigation Measures in General. (1) An EIR shall describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy. (A) The discussion of mitigation measures shall distinguish between the measures which are proposed by project proponents to be included in the project and other measures proposed by the lead, responsible or trustee agency or other persons which are not included but the lead agency determines could reasonably be expected to reduce adverse impacts if required as conditions of approving the project. This discussion shall identify mitigation measures for each significant environmental effect identified in the EIR. (B) Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way. (C) Energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant. Examples of energy conservation measures are provided in Appendix F. (D) If a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed. (Stevens v. City of Glendale (1981) 125 Cal.App.3d 986.) (2) Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments. In the case of the adoption of a plan, policy, regulation, or other public project, mitigation measures can be incorporated into the plan, policy, regulation, or project design.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-26	15126.6. CONSIDERATION AND DISCUSSION OF ALTERNATIVES TO THE PROPOSED PROJECT. (a) Alternatives to the Proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. … There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason. (Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553 and Laurel Heights Improvement Association v. Regents of the University of California (1988) 47 Cal.3d 376). (b) Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. (c) Selection of a range of reasonable alternatives. The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are:(i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-27	(d) Evaluation of alternatives. The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed. (County of Inyo v. City of Los Angeles (1981) 124 Cal.App.3d 1). (e) "No project" alternative. (1) The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (see Section 15125). (2) The "no project" analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-28	(3) A discussion of the "no project" alternative will usually proceed along one of two lines: (A) When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the "no project" alternative will be the continuation of the existing plan, policy or operation into the future. Typically this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan. (B) If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the "no project" alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed. In certain instances, the no project alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment. (C) After defining the no project alternative using one of these approaches, the lead agency should proceed to analyze the impacts of the no project alternative by projecting what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. (f) Rule of reason. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.	

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-29	(1) Feasibility. Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives. (Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553; see Save Our Residential Environment v. City of West Hollywood (1992) 9 Cal.App.4th 1745, 1753, fn. 1). 15130. DISCUSSION OF CUMULATIVE IMPACTS (a) An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065 (a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. (1) As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR. (2) When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency shall identify facts and analysis supporting the lead agency's conclusion that the cumulative impact is less than significant.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	23-Sep-22	C169-30	15355. Def. CUMULATIVE IMPACTS “Cumulative impacts” refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. (a) The individual effects may be changes resulting from a single project or a number of separate projects. (b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. 15144. FORECASTING Drafting an EIR or preparing a Negative Declaration necessarily involves some degree of forecasting. While foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can. Note: Authority cited: Section 21083, Public Resources Code; Reference: Sections 21003, 21061, and 21100, Public Resources Code. 15151 ‘Standards of Adequacy of EIR: good faith effort at full disclosure’. Re Historical Preservation Alt. Guidelines Information Only [15152 Tiering: Program EIR] [15168 Program EIR] [15182 Art 12 Special Situations; Residential Project to S.P. No Further EIR] [15183.3 Streamlinging] [15231-15233 Writ Article 15 Litigation] Definitions: 15355 Cumulative 15364 Feasible 15370 Significant refers to “Adverse” 15384 Substantial Evidence 15387 Urbanized Area = 1000 residents/1 Sq-Mi	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Thomas Chase Ells	26-Aug-22	C170-1	Galen's Gardens/Samaritan Housing Society's offer is $1B for "Improvements to the Environment" at Sonoma Developmental Center (SDC) to such an extent as to offset the value & price of any other offer. The current process has gone off track, while Permit Sonoma's efforts at creating an EIR & Specific Plan process for development of SDC have produced Yeomen's effort of planning & exceptional avenues for creative visioning at SDC, they have shot clear past the demarcations of the community's desires/needs. Galen's Gardens/Samaritan Housing Society offer is a "Null Hypothesis Project" proposal for "Improve-ment of the Environment" at SDC and Historic Restoration of the Historic main building ("Professional Education Building/PEC"), which exempts the proposal from CEQA. We in America suffer from a lack of vision, we have been convinced that the proper thing to do is to "Think Globally, but Act Locally" only. This is not correct, this is unscientific, it is anti-scientific and anti-American, we need to "Think Locally, and Act Globally", because that is scientific. What we want locally around us, we should want for all, and similarly with what we don't want near us. We've lost the Public will. See Appendix"A"Term Offer Sheet.	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.
Thomas Chase Ells	26-Aug-22	C170-2	Our offer is simple: create a Climate Crisis Center; establish a Polytechnic Environmental Institute; reuse as many of the buildings and facilities as possible; prevent waste & GHG emissions in the demolition of the County Proposed Project Alternative (CPPA) of ~161,000 tons waste along with the replacement of these same buildings with another ~161,000 tons of future waste (∑=134yrs waste); establish 6-Agencies with 100units/ each of affordable housing, with each reserving 10 of these units for "short term rentals". We will use Camp Via as an RV site, and re-establish the water & waste treatment systems for wetlands. The value of this proposal to the State is $1.133 Billion, and we would return all the property to the State at any time they wish (subject to the Housing & School Leases, and $100M Rehab Loan). Our only conditions for the creation of the Climate Crisis Center, the Polytechnic Environmental Institute and the affordable housing is $100M Endowment from California Coastal Conservancy, $25M/yr Operating Budget (per CalPoly	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			Humboldt) for the Polytechnic Institute, and the use of the property until it's return to the State. Please see attached Appendices for details.	
Thomas Chase Ells	Friday, September 23, 2022	C171-1	Dear Brian Oh, Comprehensive Planning Manager, and To Whom This May Concern, Please find, consider, and respond to the following SDC EIR & Specific Plan comments; 2 Comment letters (Demolition 1a, and Process Comments 2a) were dated 9/18/22. 1 Comment letter (Process Comments 3a) is dated 9/23/22. 1 Proposed Null Project Alternative Development (Transaction Cover Letter), with Environmental Benefits. Thomas C. Ells, RCE 40656	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.
Thomas Chase Ells	Sunday, September 18, 2022	C172-1	Please see attached, additional SDC Program Draft EIR Comments (1a & 2a). No where in the Sept 15th Planning Commission meeting comments did I see my original set of Draft EIR comments, which were emailed to you, and which you responded "no problem" you would include them in with all the other comments at that time. I saw none of those prior comments. Please respond.	The comment is noted and relates to the Specific Plan and not the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Tiare Welch	Monday, September 26, 2022	C173-1	I've been wanting to submit my contribution to the SDC planning process. The lighting that is part of any development at SDC needs to be low lighting to preserve dark sky and nocturnal animal hunting and activities. My husband is an amateur astronomer and has to drive up to Lake Sonoma with his local astronomers group to do sky viewing. The new lighting these days is atrocious and needs to be carefully planned to preserve quality of life and looking up at the stars. With attention to detail this can be accomplished - Please include this planning in the SDC going forward - Super Important to minimize the impact of lighting. Thank-you. I didn't see anything about lighting in the EIR report. Did I miss it? I've lived in the valley since 1977. Our quality of life and wild land habitat are of extreme importance. Our care for nature is what makes this valley the special place that it is.	Section 3.1.3 of the DEIR analyzed the aesthetic impacts of the Proposed Plan.
Tracy Salcedo	Wednesday, September 21, 2022	C174-1	On behalf of Sonoma Mountain Preservation, I have attached our comments on the draft environmental impact statement and preferrred specific plan for the Sonoma Developmental Center. Thank you for your consideration. We all hope, with the incorporation of community input into a plan that is truly community driven, we will create a wholesome, viable future for this very special place and for the people who love it.	Thank you.
Vivien Hoyt	31-Aug-22	C175-1	I am writing because I strongly disagree with the most recent proposal to develop SDC for the following reasons: 1) 1000 housing units and 940 on-site jobs is too large for our small town. This monstrosity would significantly impact traffic, water use, and greenhouse gas emissions. We are already in a severe drought and we don't have the water supply to house that many people. 2) It is an extreme fire risk to add 2000+ cars onto our roads as it took hours to evacuate during the last big fire. Your plan will be putting many people's lives and animals at risk. The idea that creating another road to Highway 12 wouldn't remotely solve the problem. The fire chief's assessment that this new	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			development would only cause 1-2 minutes extra time for evacuation is not based on the reality of the citizens who live here. 3) The plan will negatively effect our wildlife, which is the glory of living here in Glen Ellen. One of the reasons we choose to live here 35 years ago, is because of the wildlife and openness of the area. I believe that is also why tourists love coming to our pristine valley.	
Vivien Hoyt	31-Aug-22	C175-2	My vision for the property is mostly reserved open space, transferring the property to a public or non-profit company, offering community based programs ie: educational, sustainable green techlology center, historic preservation of the main building, bicycle paths and an organic farm. The Wildlife Corridor and Sonoma Creek should be well protected with no more then 200 affordable, sustainable homes with priority to people with disabilities. The State of California should pay to clean up the mess left behind, which is something we were taught as children. Pushing this expense onto Sonoma County or the new builder is unethical. The State has a surplus of funds so they can afford it. We have an opportunity to behave differently then our previous generations. The model of “bigger is better” isn't working any more. The planet is suffering so we need to approach this jewel in a sustainable, carbon neutral way. Thank you for your careful consideration.	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.
Will Ivancovich	Saturday, September 24, 2022	C176-1	Our farm labor community could desperately use the housing on site. Don't tell me the buildings aren't suitable to live in. If you ever went to Mexico and saw what the majority of people live in, you would agree that the accomadations at Sonoma Development Center look like palaces. If that is to difficult for the majority to comprehend than do nothing with the property. Let it rot away and become open space for nature to enjoy and the public also!	Thank you for the feedback. It is not related to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
William B Hirsch	Friday, September 23, 2022	C177-1	I live on Arnold Drive, just south of Sobre Vista Drive. These comments are directed to the Sonoma Development Center Specific Plan Draft Environmental Impact Report, dated August 22, 2022. I am quite disturbed by many of the assumptions and conclusions included in the report, and would like a detailed response to the questions and issues raised below. FIRE EVACUATION In the Specific Plan, the Vision and Guiding Principles are full of references to “well-planned evacuation routes” and "proactively planning for community safety in natural disasters,” but the DEIR somehow concludes that pouring a couple of thousand cars onto Arnold Drive in the event of a disastrous fire will somehow not have a significant impact on emergency evacuation plans. This is a flawed and inadequate analysis for many reasons.	The comment is noted. Please see MR-1 regarding the adequacy of a self-mitigating Plan.
William B Hirsch	Friday, September 23, 2022	C177-2	FIRE FROM THE WEST The DEIR states on p. 515: “Historically, a fire approaching from the west may be less likely, and therefore did not warrant further specific analysis.” This is troubling for at least three reasons. First, the lower likelihood of a fire coming from the west is based on historical records that are less and less relevant given the impact of global warming and changing weather patterns. For these reasons, it is very difficult to predict how and where fires will originate and spread. Lightning strikes could occur anywhere, as we saw in 2020, and wind and drought conditions could make previously rare situations more common. Second, the DEIR should be planning for all contingencies, even “black swans.” This is particularly important since the project will have a permanent impact on the community and will impose threats for decades. Third, a fire from the west would be particularly devastating, as it likely would give residents much less time to evacuate and cause massive and sudden evacuation by residents and workers at the SDC and the surrounding communities. The assumptions on p. 515 that 25% of residents and employees would evacuate when given an Evacuation Warning and 65% would evacuate when given an Evacuation Order seems false and irrelevant, as most everyone would immediately flee when they saw the fire racing down the mountain (as would the other people on	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis .

Commenter	Date	Letter	Comment	Response
			Arnold Drive and the surrounding areas). Given all this, please respond to these concerns and explain in detail why the impact of a fire from the west was not considered. A full and complete study of this issue needs to be completed, and its results need to be considered and incorporated into the Specific Plan, before the DEIR can be approved	

Commenter	Date	Letter	Comment	Response
William B Hirsch	Friday, September 23, 2022	C177-3	FIRE FROM THE NORTHEAST AND SOUTHEAST As for the analysis of evacuation from the northeast and southeast, the analysis in the DEIR is also faulty and disconnected with real life experience. On p. 512, the DEIR states that "the travel model represents a typical weekday peak hour…" and then proceeds to add the potential impact of additional traffic from residents and workers at SDC. The total number of cars from residents and workers according to the DEIR would be over 2200. Although the DEIR never directly says how many additional vehicles will flood onto Arnold Drive from the SDC in the result of a fire emergency, it does state that 75% of the residential units, including two cars from each household, and 75% of the workers, with one car each, will be involved (p. 515)- given the Proposed Plans goal of adding 1000 new housing units and employing 940 people (Table 4.1-1 Summary of Alternatives, p. 534), the total is approximately 2205 vehicles. Add hotel guests (possibly one vehicle for each of the 120 rooms) and visitors (shopping, recreation, friends), and the total is probably closer to 2500. The first problem is that there is insufficient data supporting the travel model which is relied upon. In the Appendix to the DEIR, Appendix F is entitled "Traffic Model Data." It consists of one page. There is no information regarding how the study was done, when it was done, or what criteria was used. It could have been done so long ago it is irrelevant, or during Covid, when traffic was not typical. According to p. 512 of the DEIR, the DEIR relied upon the Sonoma County Regional Travel Model which "estimates traffic generated by land uses and tracks traffic volume relative to road capacities to calculate the associated levels of congestions and congested speeds." No other information is given regarding the travel model and, significantly, it does not appear to be based on a detailed and empirical study of realistic and existing traffic patterns. This is not acceptable for a project of this magnitude, especially when it is supposed to seriously evaluate emergency evacuation routes in the event of what could be a huge, fast-moving catastrophic fire.	The comment is noted. Please see MR-4 regarding the inadequacy or disagreement with wildfire evacuation analysis .

Commenter	Date	Letter	Comment	Response
William B Hirsch	Friday, September 23, 2022	C177-4	Second, the DEIR again assumes that only 25% of the residents will evacuate when they receive an Evacuation Warning. It seems risky and irresponsible to bet the lives of so many people on that assumption, rather than assuming that there will most likely be widespread panic if disaster strikes, especially now that we all know about what happened in Paradise and other communities. It also is important to note that the study that the DEIR cites for these evacuation rates only relies on three fires which took place in 2017 and 2018.[1] Besides the fact that the analysis is based on a limited sample and is therefore unreliable, this raises the question of whether the cumulative psychological impact of yearly devastating fires since 2017-8 has in itself begun to change behavior. That question is unasked and thus unanswered. Further, the study itself states the following in the section entitled Evacuation or Stay: For wildfires, the direct implications of high and variable shadow evacuation rates (ranging form 29.1% to 75% for the three fires) are unclear. One possible explanation is that officials were often unable to issue mandatory evacuation orders before residents needed to evacuate. Another explanation is that residents may have found the environmental cues of the fire to be very high risk, leading them to evacuate without an order. Future research is needed to separate the impacts of poor messaging and environmental cues on shadow evacuations for wildfires.	See Master Response 4 created to address concerns about the inadequeacy or disagreement with wildfire evacuation analysis.
William B Hirsch	Friday, September 23, 2022	C177-5	This suggests that the statistical analysis relied upon by the DEIR is tentative at best and needs further study, something that the DEIR does not recognize. Much more needs to be studied before an emergency evacuation plan can be based on such tenuous assumptions about evacuation rates. The third problem is that the DEIR ignores the fact that if there is a fire, the traffic on Arnold Drive will not be the same as a “typical weekday peak hour.” The reason, of course, is that all the people in the area will be impacted during a massive explosive fire emergency, and they will swell Arnold Drive and Highway 12 well beyond “typical weekday peak” traffic. However, it is odd and indefensible that the DEIR focuses only on daily traffic patterns and employees and residents of the new town envisioned by the Specific Plan, but ignores the significantly increased volume of traffic that would occur from	See Master Response 4 created to address concerns about the inadequeacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			all the other residents of Glen Ellen and along Arnold Drive, as well as those fleeing the fire from other locations in the area. The DEIR also does not take into account the additional traffic that will be generated by the guests at the proposed 120 room hotel (possibly another 120 vehicles) or the visitors to the new commercial and recreational space they seek to build.	
William B Hirsch	Friday, September 23, 2022	C177-6	The fourth problem is that the analysis of the impact of the Proposed Plan on fire evacuation itself provides no backup material explaining exactly how the results were obtained. Table 3.16-1: Peak Hour Travel Times With Fire Evacuation (p. 517) is presented without any further explanation of how the results were actually calculated. This is particularly relevant as the invalid or limited assumptions discussed above skew the results, and a more accurate model would undoubtedly yield different results. It is therefore important to provide a detailed description of the statistical model and the methodology and imputs relied upon, so that the appropriate corrections can be made to yield more accurate results. Finally, none of what the DEIR states is consistent with actual events or personal experience. The DEIR concludes that travel time in the event of an evacuation will increase by only 1.2 minutes - actually, in my experience, even during normal traffic, sometimes it takes several minutes before I can even get onto Arnold Drive, so it seems unlikely that a huge influx of traffic will delay me, and many others, no more than a minute. It seems that the DEIR overlooks the basic fact that Arnold Drive is a two lane country road with hundreds if not thousands of residents on either side of the road with no other escape route. Arnold Drive was backed up for miles and barely moved during the Nuns Canyon Fire and the Kincade Fire evacuations. And sending people to Highway 12 is not the solution – that too is a small congested two -lane road and it is jam packed during normal rush hour traffic, and will be a poor evacuation route	See Master Response 4 created to address concerns about the inadequeacy or disagreement with wildfire evacuation analysis.

Commenter	Date	Letter	Comment	Response
			under the best of conditions. However the study is skewed to obtain the desired results of "no impact," the actual experiences of people in the area and common sense starkly contradict the conclusion that the addition of close to 2500 vehicles (including hotel guests and visitors) will have no significant impact. Please address each of these concerns in detail and explain why the DEIR does not adequately address the public safety issues they raise.	
William B Hirsch	Friday, September 23, 2022	C177-7	CONCLUSION All this raises serious questions about the DEIR's conclusion that "implementation of the Proposed Plan would not impair an emergency response or emergency evacuation plan and impacts would be less than significant" (p. 517) and that therefore "no mitigation is necessary." (p. 518). This defies logic and needs to be explained in detail in light of the questions and issues raised above. Beyond this, the DEIR should not be approved until there is a serious, complete and evidentiary based Emergency Response Plan in place and only after there has been a comprehensive and objective study of how the Planned Project will impact public safety and traffic conditions on Arnold Drive during a fire emergency	See Master Response 4 created to address concerns about the inadequeacy or disagreement with wildfire evacuation analysis.
Alexandra D. Syphard	Monday, September 26, 2022	C178-1	I apologize, but I forgot to send you a link to the appendices. Please find them here: Attach E Appendices.pdf	The comment is noted. It does not relate to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Caroline Hipkiss	26-Sep-22	C179-1	We provide these comments in response to the County of Sonoma's (County) Sonoma Developmental Center Specific Plan (Specific Plan) Draft Environmental Impact Report (DEIR) published on August 10, 2022. As long-time residents of Glen Ellen and the greater Sonoma Valley, we have significant interests in the Specific Plan and ultimate development of the former Sonoma Developmental Center (SDC) site. We are concerned that the DEIR does not provide substantial information about the environmental impacts of the County's proposed Specific Plan (Proposed Plan) as compared to alternatives. While our concerns extend to the cumulative environmental impacts of development under the Proposed Plan, we are particularly struck by the DEIR's failure to study or disclose the impacts to the resources and existing communities in and around the SDC. The analysis in the DEIR focuses on how the proposed development would be experienced by future residents and workers at the SDC site and does not adequately consider how doubling the current population of Glen Ellen would affect the surrounding community. This bias is laid bare by the DEIR's finding that more than doubling the residential population would have comparable impacts to increasing the population by approximately 50 percent. In short, the DEIR does not fulfill its basic purpose, which is to demonstrate that the County has fully considered and disclosed the potential impacts of implementing the Proposed Plan and alternatives.	See Master Response 3 created to respond to concerns about the level of analysis and programmatic nature of the DEIR.

Commenter	Date	Letter	Comment	Response
Caroline Hipkiss	26-Sep-22	C179-2	COMMENTS We organize our comments according to the headings in the DEIR for ease of reference. Table of Contents The Table of Contents shows the DEIR is over 600 pages, exclusive of appendices. That is a lot of paper for the public to review and provide written comments on within 45 days. Thus, while the Table of Contents does not contain substantive information, it nonetheless conveys a fundamental deficiency running throughout the EIR, namely that the DEIR does not facilitate the public's understanding of the County's proposal or the environmental impacts of implementing that proposal. A 600-plus page DEIR is not just a hardship for the public, it is contrary to the California Environmental Quality Act (CEQA). CEQA Guidelines direct that environmental documents be clear and easy to understand: "EIRs shall be written in plain language and may use appropriate graphics so that decisionmakers and the public can rapidly understand the documents."1 Further, EIRs should be concise: "the text of draft EIRS should normally be less than 150 pages and for proposals of unusual scope or complexity should normally be less than 300 pages."2 An EIR should "effectively disclose to the public the 'analytic route the ... agency traveled from evidence to action.'"3 Indeed, making the EIR accessible and understandable to the public is necessary to achieve the policy objectives behind CEQA's requirement that state agencies prepare an EIR, which include "protect[ing] the environment but also … demonstrat[ing] to the public that it is being protected. (County of Inyo v. Yorty, 32 Cal. App. 3d 795)," and "demonstrat[ing] to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action. (People ex rel. Department of Public Works v. Bosio, 47 Cal. App. 3d 495.)."4 The DEIR is over 600 pages and includes an additional 3,500 pages of appendices, yet it still fails to present a clear picture of the County's proposed action or the environmental consequences of it. In making the DEIR unduly long and confusing and providing the public only 45 days to review and provide comments, despite many requests for additional time, the County has effectively deprived the public a fair and meaningful opportunity to understand and engage in the environmental review and consideration of the Proposed Plan	Chapter 1 of the DEIR provides a description of the Proposed Project. See Master Response 3 created to respond to concerns about the level of analysis and programmatic nature of the DEIR.

Commenter	Date	Letter	Comment	Response
Caroline Hipkiss	26-Sep-22	C179-3	Section 1.1 Purpose of the EIR According to the County, the DEIR is intended to serve multiple purposes: • To satisfy CEQA requirements for analysis of environmental impacts by including a complete and comprehensive programmatic evaluation of the physical impacts of adopting and implementing the Proposed Plan; • To recommend a set of measures to mitigate any significant adverse impacts; • To analyze a range of reasonable alternatives to the Proposed Plan; • To inform decision-makers and the public of the potential environmental impacts of the Proposed Plan prior to taking action on the Proposed Plan, and to assist County officials in reviewing and adopting the Proposed Plan; and • To provide a basis for the review of subsequent development projects and public improvements proposed within the Planning Area. Subsequent environmental documents may be tiered from the Final EIR.	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.
Caroline Hipkiss	26-Sep-22	C179-4	As described below the DEIR does not achieve these purposes. The DEIR does not provide a complete or comprehensive evaluation of the physical impacts of adopting and implementing the Proposed Plan. Under CEQA, "[t]he purpose of an [EIR] is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided."6 To this end, an EIR must describe, in detail, the significant effects on the environment of the project, including cumulative effects.7 Contrary to the requirements under CEQA, the DEIR's impacts analysis here is largely limited to a description of goals and policies applicable to a given resource or category of resources, followed by a conclusion that, if all future development activities contemplated by the Proposed Plan are perfectly designed and implemented to comply with those goals and policies, then there will be no significant impacts. In other words, the DEIR finds that any and all development under the Proposed Plan would effectively be self-mitigating across all resource areas, except for historic resources and transportation. The DEIR's impacts analysis does not appear to cite to specific evidence as the basis for these findings.8 The DEIR does not	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
			show that the County undertook specific studies or evaluation of the potential impacts of development activities covered under the Proposed Plan. Instead, the DEIR repeatedly states that the County chose to defer field and other site-specific studies.9	
Caroline Hipkiss	26-Sep-22	C179-5	This facile analysis, which does not point to any mechanism for the County (or other regulatory entity) to ensure that future development activities perfectly comply with all applicable goals and policies for resource protection, is insufficient to support the DEIR's conclusory findings that any and all reasonably foreseeable impacts of implementing the Proposed Plan can be avoided or effectively mitigated to the point of insignificance. As indicated above, we were unable to locate discussion of specific field studies or site-specific analyses that the County undertook to evaluate the potential impacts of development under the Proposed Plan or alternatives. Based on our review, the DEIR does not provide information or substantive explanation adequate to resolve or narrow the issues we raised in our Scoping Comments, including, but not limited to: § Biological Resources o Analysis of impacts to fish and wildlife resources and habitat, including any federally listed endangered or threatened species that are or have the potential to occur in the project area o Analysis of impacts to plant and botanical resources o Analysis of the potential for development activities to introduce non-native, invasive species	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
Caroline Hipkiss	26-Sep-22	C179-6	Energy Resources o Analysis of whether there are adequate, cost-effective renewable energy sources available to timely meet anticipated energy needs on the campus under the Specific Plan and alternatives o Analysis of whether proposed development under the Specific Plan and alternatives would affect reliability or cost of energy resources locally or regionally § Greenhouse Gas Emissions o Quantitative analysis of any changes to greenhouse gas emissions caused by the development program proposed under the Specific Plan and alternatives § Hydrology and Water Quality o Analysis of hydrogeologic impacts, including whether restoration of onsite water supply systems would potentially impact surficial expression of interconnected groundwater sources o Analysis of potential geomorphological impacts to natural waterways caused by increased runoff volume and duration from additional impervious surfaces	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.
Caroline Hipkiss	26-Sep-22	C179-7	oPublic Services, Recreation o Analysis of the Specific Plan's impacts to existing recreational use on the SDC campus, particularly passive recreation o Analysis of opportunities to meet latent and future recreational demand under the Specific Plan and alternatives § Utilities and Service Systems o Analysis of whether there are adequate water supplies to reliably meet demand on the campus under the Specific Plan and alternatives into the future, including description of specific sources and whether those sources could be cumulatively affected by other developments within the region, e.g., implementation of the Sustainable Groundwater Management Act, or potential changes to regional surface water supplies caused by the decommissioning of the Potter Valley Hydroelectric Project (FERC No. 77).	Chapter 3.15 of the DEIR addresses utilities and service systems impact. Additionally, the appendix includes a Water Supply Assessment done for the Proposed Plan.

Commenter	Date	Letter	Comment	Response
Caroline Hipkiss	26-Sep-22	C179-8	Transportation and Traffic o Analysis of the availability of feasible existing or future public transit alternatives to serve increased population given the relative geographic isolation of the SDC campus from urban and suburban commercial districts and other services and amenities o Analysis of impacts related to pedestrian and bicycle safety on two-lane roads in the broader area, not just within the project boundary § Wildfire Hazards o Analysis of the increased risks of wildfire occurrence and severity locally and regionally under the Specific Plan and alternatives o Analysis of the impacts to safe and effective evacuation routes locally and regionally in the event of wildfire or other natural disasters.10	The comment is noted. Please see MR-6 regarding the inadequacy of or disagreement with transportation analysis, or call for reducing the number of housing units or jobs at the site to reduce traffic impacts.
Caroline Hipkiss	26-Sep-22	C179-9	The DEIR does not recommend a specific set of measures to mitigate any significant adverse impacts. Under CEQA, "[a]n EIR shall describe feasible measures which could minimize significant adverse impacts."11 As stated above, here the DEIR generally finds that the Proposed Plan will not have any significant impacts that require mitigation.12 These findings are based on assumptions that specific development projects will be designed and implemented by unknown developer(s) to achieve and adhere to all current goals and policies related to resource protection. However, these assumptions are not supported by any specific analysis based on record evidence for how specific development projects could be designed or reliably implemented to attain all resource goals and policies and effectively mitigate project impacts. Further, the DEIR states that the Proposed Plan is non-binding on the state or any future owner. The DEIR does not provide any basis for the assumption underlying the impacts analysis that the state or future owner will implement specific development projects in a manner that is self-mitigating, even where attainment of all the listed resource goals and policies may exceed legal and regulatory requirements. The DEIR's assumption that specific development projects under the Proposed Plan will be designed and built to be self-mitigating is meaningless in the absence of any demonstrated authority to require that outcome.	The comment is noted. Please see MR-1 regarding the adequacy of a self-mitigating Plan.

Commenter	Date	Letter	Comment	Response
Caroline Hipkiss	26-Sep-22	C179-10	The DEIR does find that development under the Proposed Plan would adversely impact cultural and historic resources and transportation. However, it finds that these impacts would be "significant and unavoidable" and does not propose any specific mitigation measures for either category of impacts.13 In sum, the Proposed Plan does not include any specific mitigation measures to lessen even those impacts that the DEIR concedes would be significant. The DEIR does not provide adequate analysis to meaningfully compare the Proposed Plan to alternatives. "One of [an EIR's] major functions ... is to ensure that all reasonable alternatives to proposed projects are thoroughly assessed by the responsible official."14 The discussion of alternatives must "include sufficient information about each alternative to allow evaluation, analysis, and comparison with the proposed project." 15 "Under the 'rule of reason,' an EIR's discussion of alternatives is adequate if it provides sufficient information to compare the project with a reasonable choice of alternatives."16 The DEIR's alternatives analysis does not meet these standards.	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.
Caroline Hipkiss	26-Sep-22	C179-11	In response to the County's Notice of Preparation, we requested that the EIR consider a reasonable range of alternatives to the County's proposal, and further requested that the range of alternatives "not be limited to variations on the same development plan differing only slightly by number of housing or other building units proposed to be constructed."17, 18 Despite this request, the only meaningful difference in the alternatives considered in the DEIR is the density of the proposed development. The DEIR does not even consider a true no action alternative. Under CEQA, an EIR's discussion of alternatives must include a "no project" alternative.19 The purpose of discussing a no project alternative is to permit a comparison of the impacts of approving the proposed project with the effects of maintaining the status quo.20 The no action alternative "is a factually based forecast of the environmental impacts of preserving the status quo. It thus provides the decision makers with a baseline against which they can measure the environmental advantages and disadvantages of the project and alternatives to the project."21	Chapter 2.6 of the DEIR provides a description of the intended uses of the DEIR. Additionally, see Master Response 3 created to respond to concerns about the level of analysis and programmatic nature of the DEIR.

Commenter	Date	Letter	Comment	Response
Caroline Hipkiss	26-Sep-22	C179-12	Rather than continuation of the status quo, the DEIR defines the no action alternative to include a similar or greater level of development as the Proposed Plan: “the No Project Alternative would result in a palette of uses similar to those outlined in the Proposed Plan, and like in the Proposed Plan, these uses would be located at the Core Campus, and the surrounding land would be preserved as open space.”22 By assuming there would be comparable development under the No Project Alternative and the Proposed Plan, the DEIR omits analysis of the environmental impacts of the Proposed Plan as compared to existing (baseline conditions). This hides the actual environmental impacts of the Proposed Plan and all alternatives considered in the DEIR. Under CEQA, “[a] public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures available that would substantially lessen any significant effects that the project would have on the environment.”23 Here, the DEIR identifies the Historic Preservation Alternative as the environmentally superior alternative because it would reduce the “significant and unavoidable” impacts to historic resources under the Proposed Plan to be “less than significant.”24 However, the DEIR does not recommend the Historic Preservation Alternative because it would have “overall environmental impacts that are largely comparable between the Proposed Plan and the alternatives,” but would not provide as much housing or “long-term fiscal stability.”25 The DEIR’s impacts analysis, which is not based on any specific development design scenarios or supported by field or other site-specific studies, is inadequate to demonstrate that the environmental impacts of the Historic Preservation	Refer to Master Response 8 to assess how the DEIR evaluates impact differences between the Proposed Plan and the Historic Preservation Alternatives. The DEIR analyzes the impacts of the Proposed Plan compared to the baseline, which is the current conditions at the time of Notice to Preparation.

Commenter	Date	Letter	Comment	Response
Caroline Hipkiss	26-Sep-22	C179-13	Alternative would be comparable for all resources other than historic resources. 26 It strains credulity to predict that the Proposed Plan for 1,000 housing units and a population of 2,400 would have comparable impacts to a plan for 450 housing units and population of 1,080 (i.e., less than half the housing and population density as the Proposed Plan).27 Contrary to CEQA's policy objectives, this conclusory analysis does not demonstrate to the public that the County "has, in fact, analyzed and considered the ecological implications of its action."28 The DEIR is inadequate to inform decision-makers or the public of the potential environmental impacts of the Proposed Plan. An EIR should inform decisionmakers of the environmental impacts of a proposed project and ensure that the "government at all levels to make[s] decisions with environmental consequences in mind."29 For the reasons discussed above, the DEIR's analysis of the impacts of the Proposed Plan as compared to alternatives is too vague and conditional to provide clear understanding of the environmental impacts of the Proposed Plan or alternatives, or to demonstrate that any government decisions based on the DEIR's analysis will have been made "with environmental consequences in mind."	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.
Caroline Hipkiss	26-Sep-22	C179-14	The DEIR is too vague to serve as a basis for future, project-specific environmental documents. The DEIR acknowledges that additional environmental analysis for specific development projects will be required: "As a program EIR, the preparation of this document does not relieve the sponsors of specific projects from the responsibility of complying with the requirements of CEQA (and/or NEPA for projects requiring federal funding or approvals)." 30 However, the DEIR indicates that future environmental documents may rely upon the DEIR's analysis to some extent: "These projects may, however, use the discussion of impacts in this EIR as a basis of their assessment of these regional, countywide, or cumulative impacts, provided that the projects are consistent with the Proposed Plan and the data and assumptions used in this EIR remain current and valid."31 For the reasons described above, we strongly disagree that the impacts analysis provided in the DEIR could or should be relied upon in future project-specific environmental documents.	The comment is noted. Please see MR-3 for the level of detail of analysis and programmatic nature of the Draft EIR.

Commenter	Date	Letter	Comment	Response
			IV.CONCLUSIONWe request the County revise the DEIR to address the deficiencies described above prior to finalizing the document. In particular, the County should reconsider its definition and analysis of the No Project Alternative, and rejection of the Historic Preservation Alternative. We thank the County for considering these comments.	
Charles Mikulik	Aug-22	C180-1	Sonoma Developmental Center Specific Plan: Draft Environmental Impact Report, August 2022 Comments by Charles Mikulik Numbers in parenthesis proceeding a comment refer to the PDF page number and the document page number of the Draft EIR respectively. 1. It is not clear how the potential loss of historic integrity under CEQA is being assessed. Furthermore, the Draft EIR indicates that the Specific Plan, if implemented, would result in the property to no longer qualifying as a National Register eligible Historic District. How specifically did you determine this? What are the criteria for determining the level of integrity tied to the number of historic buildings that are necessary to retain eligibility? This is particularly confusing as this is something that would generally be determined by the State Historic Preservation Officer. Did Page & Turnbull somewhere state that this loss of integrity is unavoidable? If so, based on what?	This comment is noted. As described on page 296 of the DEIR, "New construction has the potential to disconnect the remaining contributing resources in the Core Campus from those in Community Separator and Regional Parks lands to the east and west, consequently disrupting the feeling and character within the historic district. This would affect the cohesiveness of SSHHD's overall integrity to the point that it would no longer be eligible for listing in the NRHP, CRHR, or as a California Historic Landmark. The impact of such activities is considered significant because they would cause a substantial adverse change to the historical district as defined by CEQA Guidelines Section 15064.5.

Commenter	Date	Letter	Comment	Response
Charles Mikulik	Aug-22	C180-2	ES.1.2 Purpose 2. (13/4) “Allow County departments, other public agencies, and private developers to design projects that will enhance the character of the Planning Area, preserve environmental resources, and minimize hazards”. While this sounds great, it is vague at best. More specific language would be nice. What do you mean by enhance the character of the Planning Area? Please explain why the preservation of as much the structures, buildings, and landscape does specifically meet this purpose? ES.1.3 Objectives 3. (16/6) Please explain and define what the criteria for determining feasibility are? My understanding is that cost is not a legal factor for determining whether something is feasible. 4. The use of “feasibility” appears to be open to interpretation. It appears that if adopted, the individual responsible for determining what is feasible will define what that means for themselves. Is true? Why are there no clear guidelines presented in the document?	This comment is noted. Please see Section 3.1 starting on page 85 of the DEIR in regards to the potential impacts of the Proposed Plan on the environmental lanscape and MR-9 in regards to the performance standards.
Charles Mikulik	Aug-22	C180-3	ES.2.1 Cultural, Historic, and Tribal Resources 5. (18/8) Similar to questions 3 and 4 the statements on this page appear to state that the impacts to the historic district are unavoidable and would reduce the integrity to a point where the property is no longer eligible. How was this determined and by whom? Has the State Historic Preservation Officer been notified that the eligibility status has been predetermined without concurrence from the Office of Historic Preservation? 6. Regarding California Code of Regulations Title 14: 15064.5 (which can be reviewed here: https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-5-preliminary-review-of-projects-and-conduct-of-initial-study/section-150645-determining-the-significance-of-impacts-to-archaeological-and-historical-resources#:~:text=Download-,Section%2015064.5%20%2D%20Determining%20the%20Significance%20of%20Impacts%20to%20Archaeological%20and,Commission%2C%20for%20listing%20in%20the).), there is no discussion regarding what the impacts to the community could be if this lost its integrity. Please explain what consequences are expected if this were to occur?	This comment is noted. As described on page 296 of the DEIR, "New construction has the potential to disconnect the remaining contributing resources in the Core Campus from those in Community Separator and Regional Parks lands to the east and west, consequently disrupting the feeling and character within the historic district. This would affect the cohesiveness of SSHHD’s overall integrity to the point that it would no longer be eligible for listing in the NRHP, CRHR, or as a California Historic Landmark. The impact of such activities is considered significant because they would cause a substantial adverse change to the historical district as defined by CEQA Guidelines Section 15064.5." Please see Section 5.2.5 of the DEIR starting on 589 regarting the cumulative impacts to cultural, historic and tribal resources.

Commenter	Date	Letter	Comment	Response
			7. Implementation of goals 2-I, 2-J and policies 4-20 through 4-32 and Standard Conditions of Approval LU1 – LU-6 would be a partial mitigation but not enough but do not legally appear to be enough. Why are there no project specific mitigation measures to support and guarantee proper implementation?	
Charles Mikulik	Aug-22	C180-4	ES.4.2 Identification of Environmentally Superior Alternative 8. (23/14) While it is acknowledged that the Historic Preservation Alternative is the more environmentally sound approach, it is then indicated that it would be inferior regarding energy use, biological resources, and wildfire risks. Please present the data used to make this determination. . 2.4.4.1 Core Campus Districts 9. (83/Figure 2.4-2: Districts) I am not sure what to make of this as this depiction of the “Historic Core” seems to fly in the face of everything we know about the history of the campus. 3.1.3.4 Impacts 10. (110/101) Impact 3.1-1. This section does not make sense and is contradictory to other statements. Please explain how the assumption that there is a “less than significant impact” was determined? By definition, a property losing its status as a historic district is a significant impact. This section needs to be redone and the impacts need to be appropriately acknowledged. Section 3.5: Cultural, Historic, and Tribal Cultural Resources 11. (269/260) The first paragraph on this page states that they are providing a list of all previously identified cultural resources, however, this is not true as no one has consulted	This comment is noted. Please see MR-8 regarding the Historic Preservation Alternative. Regarding Impact 3.1-1, as noted on page 94 of the DEIR, "Appreciation of aesthetics and visual resources is generally subjective by nature, andtherefore the extent of visual impact associated with adoption and implementation of theProposed Plan can be difficult to quantify. In addition, it is difficult to estimate the impactfuture development would have on scenic resources, since individual developmentprojects can be designed to be compatible with and/or enhance the aesthetic quality of anarea. As such, this analysis was based onthe overall amount of new development atbuildout of the Proposed Plan, the potential location of new development, and policies andstandards in the Proposed Plan."

Commenter	Date	Letter	Comment	Response
			with me. My professional assessment is that there are many more contributing resources on the property. I am more than willing to provide that data. 3.5.3.3 Relevant Policies and Implementing Actions	
Charles Mikulik	Aug-22	C180-5	3.5.3.4 Impacts 12. (303-304/294-295). Anything that would impact the integrity of the district is a significant impact. Why is that not acknowledged? 13. (304-305/295-296) Lots to be disappointed about here. Every effort should be made to preserve the district including construction of buildings replicating the architectural styles, etc.	This comment is noted. Regarding Impact 3.1-1, as noted on page 94 of the DEIR, "Appreciation of aesthetics and visual resources is generally subjective by nature, andtherefore the extent of visual impact associated with adoption and implementation of theProposed Plan can be difficult to quantify. In addition, it is difficult to estimate the impactfuture development would have on scenic resources, since individual developmentprojects can be designed to be compatible with and/or enhance the aesthetic quality of anarea. As such, this analysis was based onthe overall amount of new development atbuildout of the Proposed Plan, the potential location of new development, and policies andstandards in the Proposed Plan."

Commenter	Date	Letter	Comment	Response
Collin Thoma		C181-1	The following comments are to make sure that the SDC is transformed into a neighborhood that is accessible and affordable to all, epically people with disabilities. Given the SDC's history of being an old hospital for people with disabilities it is vital that the entire development is acesaaible. One of the ways to achieve this is to build as many homes using the Visibility method. Visitability requires a zero-step entrance with a slope no greater then (1:12), 32-inch width pathways and doorways. Bathrooms are also equipped with grab bars and are big enough for a mobility device user. Additionally, the climate controls and light switch are low enough for those who use a mobility device. Petaluma passed their own Visitability ordinance earlier this year and it's a great example. The highlight of their ordinance is the width measurements are several inches great then the minimum 32 inches. Visitability has less extremity requirements then Universal Design which requires lower counters or a roll in shower. This could Visitability more appealing to build since it has less extensive design requirements. It was good to see at least 5 parcels be set aside for people with Developmental Disabilities. Ideally there will be more then 5-10 parcels and are built using Universal Design or Visitability.	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.
Collin Thoma		C181-2	It is great that a top priority is to transform the SDC into a pedestrian ordinated and multimodal neighborhood. However, it will need to be acesaaible and safe for people with disabilities. This will mean having a sidewalk network that has no gaps and is well maintained. People with disabilities are more likely to be hit by a car if they need to go into the street to due to a sidewalk gap or an obstacle. They are at greater risk as they may not hear or see the car and if they are in a mobility device they may not be seen by motorist. In addition, sidewalks in disrepair can higher trip/fall hazard. They may not see the crack or bump or it could cause their mobility device to get stuck potentially causing it to flip over. Ideally as much of the bicycle network is built with raised curbs or another physical barrier. This is important for people with disabilities as they may a have specially adopted bike which may be lower the ground and harder to see. It will also allow for someone to safely avoid heavy foot traffic or an obstacle on the sidewalk. The sidewalk and bicycle network should also extend outside of the SDC and provide access to Glen Ellen, and other	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
			surrounding areas. In addition, wayfinding will also need to be acesaaible with large bold text and have a section that's in brail. Furthermore, intersections and crosswalks will need to be highly visible by being pained in large bold stripes. In addition, curb extension or cut outs should be built to maximize visibility. Having crosswalks that are signalized and adequately timed is also vital for safety and accessibility. For example, a crosswalk may to be extended from 10 seconds to 20 seconds to allow for a safe crossing. While it is good to see Complete Streets as one of the goals adding Vision Zero elements should also be considered.	
Collin Thoma		C181-3	Figure 5.1-4 the Arnold Drive concept is overall pretty good. It excels in having a highly visible intersections, crosswalks and protected bike lanes. Having a narrower road will help motorist driver slower enhancing pedestrian safety. Still other ways to make motorist slow down such as landscaping separating opposite lanes of travel should be considered. Signalized crosswalks, traffic lights or stop signs will need to be added to make it accessible. Figure 5.1-6 Harney Street concept is good in that it has wider sidewalks however, the bike lanes should be protected like the ones on Arnold Drive. The bike lane in the middle should be removed as it is too dangerous for bicyclists with disabilities. It is also hard to tell if the intersections are highly visible which is needed given the potential for heavy traffic. In figure 5.1-8 it is good to see a Class 1 bike lane and should be on both sides of the street. Since there is a Class 1 pathway the bikeways on the streets should be removed. The intersection and crosswalk could also be highly visible with signalized crosswalks. Public transportation is also important for those who may not drive due to their disability. More routes into the Santa Rosa, and other major hubs in the area should be added to enhance service. In addition, the county should strongly consider having some express buses to these major hubs. The stops should also	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
			provide real time info on routes and schedules with information being provided in both audio and visual format. The stops will need to be covered to provide protection from the elements. The county should also improve its paratransit service so it is easier to get same day rides.	
Collin Thoma		C181-4	The SDC presents a great opportunity to build affordable housing and help alleviate the housing crisis. The severe housing widely felt for people with disabilities due to the lack of very and extremely low-income housing. This is because many people with disabilities rely on Social Security Insurance (SSI) and/or other public benefits. All of these benefits pay a few hundred or up to around a thousand dollars less than the average rent across the county. Thus, they fall into the very and extremely low-income. Furthermore, the recipient may receive the money from their benefits after rent is due resulting in late fees. This can further reduce one's budget for the month as they may not have the luxury of getting bi weekly. In addition to everyday items extra costs may include medical, support services, or assistive technology to help them with their disability. Given the severe economic challenges that people with disabilities face it's important there is as much affordable housing as possible. The plan mentions building at least 183 affordable units but the county should strongly consider building a mere 17 more units so it's an even 200. It is also very important that future landlords are willing to accept Section 8 and other housing vouchers. These vouchers are a common way for people with disabilities to obtain housing that would otherwise be unaffordable. However, it can be very challenging to find landlords that will accept these vouchers. It would be good to see the county work with landlords to accept	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
			these vouchers. This can look like educating landlords on the importance of accepting them and clearing misconceptions of who uses them.	
Collin Thoma		C181-5	Given that the area is in an extremely high fire danger area it's vital that homes and buildings are built to be fire resistant and fuel loads are cleared from the area. The current road network needs to be studied to see how it will handle the increase in traffic during an evacuation. Due to the challenges from disasters improvements will need to be made like building another road to highway 12. The county will also need to take into account that people with disabilities may need extra assistance while evacuating. They may need a ride out of the area and may bring a mobility device, an oxygen tank or other medical equipment. Alerts and warnings will need to be sent out via landline phone and email as these could be their primary way communication. Police and fire personal may need to go door to door since people with a vision or sight disability may not hear or see the high/low sirens. In addition, some may more advanced warnings as it may take longer for them to pack and be ready to leave. For those with cognitive or learning disabilities they may assistance packing the correct supplies or extra explanation on evacuating. While doing outreach and education with residents on wildfire resiliency make sure the information is presented clearly for those with a cognitive disability. Any pictures or graphics will need to be described for those who with sight disability and in audio format for those who have hearing a disability. The fire station at the SDC is a great idea and it should also operate as an	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
			operations center. This will help improve response to both the SDC and greater Sonoma Valley.	
Collin Thoma		C181-6	It is important that resources like the Sonoma House or main building are kept to help pay respect and homage to past SDC residents and employees. The Sonoma House or main building should be converted into a museum on the history of the SDC. The cemetery should also be revitalized to pay respect for those who died at the center. Other buildings that are persevered should be turned into community space such as an event center instead of a hotel. The Flex Zone is a great concept and supportive services should be considered to occupy the space. It would also be good to see mixed use which is a good way to maximize affordable housing. If the water recreation area at Suttonfield Lake is created it will need to be designed be acesaaible. This will mean having a paved pathway to the to the water's edge. It is also important that the other open spaces are also accessible. If they have amenities such as play structures or work out machines will need to be able to accommodate all mobility levels. To help finance the project all state, federal, private funding are pursued especially for affordable housing. It would also be good to see at least some community buildings be built in the 1-5-year phase instead of the 5-10-year phase. The development should also take into consideration of where a school could be built if the demand arises. Thank you for taking time to review my comments on the future of the Sonoma Development Center and for previous comments and focus groups. The plan presents a great opportunity to make a vibrant community that is affordable and	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
			acesaaible. If the SDC is developed to be acesaaible it will be a great way to carry on its legacy.	
Deborah C. Nitasaka	26-Sep-22	C182-1	We are writing today following our review of the draft environmental impact report pertaining to the Sonoma Developmental Center's (SDC) future. As most following this planning process, including Sonoma County Planning Commissioner Greg Carr, have stated (repeatedly, loudly, emphatically) – we find that this report fails, either in part or in total, to account for several environmental impacts essential to any meaningful understanding of the ways in which the public's safety, true protections for the natural environment, and the many human needs are to be addressed. And so, with but a few scant weeks to pour through a 789 page report that bases its assessments, conclusions, and recommendations on the previous "Plan" - and so is itself deeply flawed and grossly inadequate, we will once more howl into the void. Others with more advanced professional qualifications have pinpointed the flaws in those sections of the report pertaining to the natural environment, historic preservation, public safety, and traffic. We will restrict our comments to concerns for the future housing uses of SDC's Core Campus - and to a planning process that appears to have now gone off the rails – disappearing into the abyss of railroaded transparency! The first of our issues concerns the so-called "SDC Specific Plan" and the "reasonable range of alternatives to the Proposed Plan" - as required by CEQA in an EIR. Is it just us? We find	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
			that the community's input is nowhere to be seen in either of these deeply deficient reports. To illustrate, we and others have proposed, as one reasonable alternative, using SDC's built footprint, referred to elsewhere as its "historical 180-acre built area," as a campus for those seeking training in the trades, in the applied sciences, public service occupations, and other professions of financial and social benefit to the students, their families, and the entire state.	

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	26-Sep-22	C182-2	We see no evidence that this invaluable, desperately needed (see any number of actual empirical studies) educational use was given a moment of consideration. Remarkably shortsighted given that use of SDC's Core Campus as a campus would come with fewer vehicle miles travelled, allocations for affordable housing, to name but a few of the benefits, in part because students, staff, and educators could be offered housing within the campus. Please see the attached letter sent to the Sonoma County Board of Supervisors on November 21, 2021 as it offers a deeply researched look at just such a use. Further, the Draft EIR ignores the county's dire need for affordable housing, calling instead for allocating 90% of the 1,000 proposed new houses as market rate homes. This in defiance of The Final Regional Housing Needs Allocation (RHNA) Plan , adopted in December 2021 which determined that Sonoma County's fair share of regional housing would be 3,881 units, with 1,632 allocated as housing affordable to very low- and low-income households. That would be about half the homes to be built, not 10% as this draft EIR calls for! Just a disgraceful display of the preference throughout the draft for meeting the needs of the wealthy over the rest of us. "SDC Core Campus: Consists primarily of residential buildings, with medical, educational, recreational, and administrative buildings interspersed. A cluster of utility and support buildings, and fire station sit at the western edge of the Core Campus. On the eastern portion of the site, historic agriculture uses…" Government Code Section 14670.10.5 (c) (4): The agreement shall require that housing be a priority in the planning process and that any housing proposal determined to be appropriate for the property shall include affordable housing. It is further the intent of the state that priority be given to projects that include housing that is deed restricted to provide housing for individuals with developmental disabilities.	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	26-Sep-22	C182-3	To this end, we propose developing cottage clusters throughout the campus designed to meet specific needs such as supportive housing for individuals with disabilities, older adults, agricultural workers, and young families in need of starter homes. As an enriching environment affording access to the educational, recreational, social, health, and support resources, all on this technical college campus, all bringing full circle the many necessities of life - all without segregating this campus from the rest of Glen Ellen - what could be better? It is outrageous to propose 100 of the 1,000 housing units might be deemed affordable, especially when communities such as Glen Ellen have been ravaged for Tourist Occupancy Taxes since Sonoma County's Vacation Rental Ordinance went into effect more than a decade ago. One hundred units doesn't begin to make up for the hundreds of homes converted into commercial tourist traps over these years. We need to actually, truly, add to our housing stock. By "add to" we mean in addition to recovering, by some means, those dwelling units sacrificed for profit, private and public. The proposed housing outline comes nowhere near to meeting the documented need for affordable housing in Sonoma County. Although state housing element law is cited in Chapter 3.1.2: Population and Housing, we believe that, beyond this scant mention, it ignores state law and the Sonoma County Housing Element. Certainly, it does not begin to touch on the county's requirement to provide for its burgeoning homeless population, a significant aging population unable to live on its paltry retirement income, or an agricultural community ignored in this process - as usual.	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	26-Sep-22	C182-4	Our second point also concerns process. While the people of Sonoma County, of the State of California have been encouraged to participate in a planning process sold to us as public, above board, and time constrained, we have just learned of another process (see attached 9/23/22 Index-Tribune article). This one private, ongoing, underhanded, free of transparency, a play for SDC by a real estate developer and his business partner - both with lengthy histories of questionable business ethics. This time, having sufficiently inserted themselves into the state system, carrying satchels of cash, of many millions of tax dollars, all offered to Sonoma County in exchange for a deal requiring NO Environmental Impact Report and benefitting only the few, the wealthiest schemers. “Public records reveal that two Sonoma County businessmen — Darius Anderson and Doug Bosco — played central roles in the backdoor negotiations for the easement sales” in a sham process meant to deflect the public’s attention away from the dealmaking between a little-known state agency headed by the same man working to bring coal through Sonoma County on the Sonoma-Marin Area Rail Transit district — SMART line (see two attached 2021 Bohemian articles) Former congressman Doug Bosco is the CEO of the private freight company Northwestern Pacific Railroad Company (NWP Co.). Along with his business partner, real estate developer (e.g., Treasure Island: Radioactive debris) and owner of the powerful Platinum Advisors political consulting firm, Darius Anderson, they leveraged their influence to lobby state and federal lawmakers for the right to transport coal, among other commodities on the SMART rail line. Although most of their plans failed to pan out, through a series of complex loans and contracts (according to The Bohemian’s 2021 report), a publicly chartered rail agency, North Coast Railroad Authority (NCRA), now owes NWP Co. millions of dollars. And today they continue running freight on the SMART rails.	This comment has been noted however it does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	26-Sep-22	C182-5	It should be noted that Anderson and Bosco are founding members of Sonoma Media Investments, which owns most of the print media in Sonoma County including the Press Democrat, Sonoma Index-Tribune, Sonoma County Gazette, Petaluma Argus-Courier, North Bay Business Journal, Sonoma Magazine, and La Prensa. So it's business as usual as the high rollers operate behind the scenes, leveraging millions of tax dollars in a play for possession of a community resource. Doug Bosco believes he and he alone can secure SDC, work around the usual requirements for an EIR, and buy off Sonoma County to create his next dream project. When Supervisor Gorin spoke at last week's (September 21) meeting of the North Sonoma Valley Municipal Advisory Council, there was no mention of the Bosco/Ocean Conservancy deal. Nor did County Planner Oh indicate that he was negotiating a deal with Doug Bosco when he addressed the Sonoma County Planning Commission at its September 15 meeting. The public is entitled to an explanation - NOW! This planning process must be halted until those who will pay (in oh so many ways) are fully informed of the facts. And now, one final point that cannot be ignored: The Sonoma Developmental Center, Eldridge, the neighborhoods south of SDC - WE ARE ONE! We are Glen Ellen. We will not stand for further planning hellbent on separating our neighborhoods by this or any other planning process!	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.
Deborah C. Nitasaka	26-Sep-22	C183-1	We have been asked to select from the three options laid out in the SDC Alternatives Report released just a few weeks ago (November 1, 2021). Each offering little realistically plausible beyond an audacious open door for upscale developers to bring in projects bound to fail if past is prologue (i.e., Rohnert Park's Sonoma Mountain Village]aka Hewlett-Packard] and Petaluma's telecom boom (and bust). Beyond some open space promises (with little detail), the rest in no way addresses the very real and urgent needs of Sonoma County residents. More tourist-serving accommodations? This valley has been decimated by the county's cash-cow (Transient Occupancy Tax), converting units built for, zoned for, subsidized for, intended for - residents to live in - now operating as disruptive commercial enterprises in residential neighborhoods. The costs	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
			to our communities are innumerable. It is clear we have been sold out by our civic leaders. Any further moves toward "tourist-trapping" our community will not go down well. Forget the hotel! Give us back our housing stock!	
Deborah C. Nitasaka	26-Sep-22	C183-2	Industrial parks? For which segment of our undereducated population? According to The Sonoma County Workforce Investment Board's draft Local Workforce Development Plan 2021 – 2024: Over the next five years, the following are the top five occupations that will be in-demand for Sonoma County: 1. Office and Administrative Support 2. Sales 3. Food Preparation and Serving 4. Transportations and Material Moving 5. Management Unless Sonoma County changes course, opting for a more enriching, visionary future, these will be the jobs of tomorrow. I see no reason to settle, to offer so little to our children, to our community. My vision is one calling for opportunity, advancement, growth, fulfillment in work and play.	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	26-Sep-22	C183-3	The people of Sonoma County have been told there must be a plan covering how anything we ask for will be paid for. Curiously, I see no such level of detail in this consultant's report. Why the dichotomy? Maybe it's time to get real, to try a bit more transparency, to actually explore feasible options that will bring to the county what residents so urgently need, with top of the list being decent affordable housing for agricultural workers, students, developmentally disabled, the unhoused, and others most sorely in need. This housing might well be thought of as that needed to replace the hundreds of homes lost to the vacation rental industry as well as to the fires of 2017 - 2020. Sonoma County may not have fulfilled its promise of a community-driven process, but the people of Glen Ellen and beyond are stepping up on their own. For my part, I am pushing past what some say is the line of possible to envision the day students live, learn, and work on SDC's campus. Imagine SDC as a place flourishing with innovation, preserving history, expanding its role to enrich the surrounding community with lifelong learning opportunities, special needs housing and education, visiting professor lecture series, and all while graduating people prepared with the skills essential for fulfilling, well-paying careers, ably set to meet and exceed the demands of today and the future.	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	26-Sep-22	C183-4	I am in full agreement with the thoughts and recommendations sent to you by the Sonoma Land Trust concerning the need to preserve the wildlife corridor. Therefore, the remainder of my comments will pertain to the built portion of the campus. To start, I have to say that the prospect of jamming together thousands of homes in the southern end of SDC is appalling. How does such a banal idea enrich the quality of life for Sonoma County residents? As a housing advocate clocking in more than 30 years, I endorse incorporating housing into SDC's future, especially special needs housing. To do so well will require far more thought than we see here. Questions remain as to how many homes can safely be added to the this part of the valley, how the units would be protected from further loss to Sonoma County's Vacation Rental Conversion Program or to any other misuse. As well, I need to see much more detail regarding the intended population. As others have said (and I concur), "The alternatives do not provide for adequate emergency egress in the event of wildfire, are not compatible with the rural character of the surrounding communities within the Sonoma Valley, and do not realistically address impacts on infrastructure, such as water recharge, inadequate roadways, sewage system capacity, etc."	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	26-Sep-22	C183-5	Too often Sonoma County officials have ignored what is needed for what is easiest, furthering the human toll. I've seen it all. The matter of public safety became alarmingly clear as a planning oversight when we learned, through the series of meetings held within a single week earlier this month (11/13/21, 11/16/21, 11/17/21), that the consultants did not meet with CalTrans when developing their traffic outline, yet calculated traffic flow by comparing apples and oranges. Able-bodied drivers (2,000-4,000 new local residents, those traveling into Glen Ellen for work, tourists, and others are likely not comparable to developmentally disabled people who have never driven. Their traffic pattern predictions would be laughable if they weren't also potentially deadly (as we have seen when residents attempting to escape the Paradise fire and who were incinerated while desperately fighting to escape the flames). A related shock, we also learned the consultants never met with local fire agencies. Simply appalling comes nowhere close to my outrage that Sonoma County is, once more, cashing in at the expense, at an ultimate cost of the very lives of the people who live and work here.	This comment is noted. Please see MR-6 on the adequacy of the transportation analysis.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	26-Sep-22	C183-6	• Yes, the pressures for change have arrived. Sonoma County's needs are: Development (commercial: housing imbalance) - We need to plan for a rebalancing; • Poverty escalation due to promotion of industrial sectors paying less than living wages (hospitality, tourism, and agriculture) must be addressed by accepting nothing less than living wage jobs. We need to prepare our young people for a brighter future; • Economic collapse following the housing bust; • Brain drain: SDS closure, the relocation of well-paying industries (telecommunications, Hewlett-Packard, etc.; • An insatiable hunger for revenue derived from new sources such as recreational drug production and sales, vacation rental conversion of thousands of Sonoma County homes; • A growing homeless population; • Escalating real estate prices - pricing most local residents out of the market; • Housing codes prejudicing construction of large homes over more modest sized units; • The impact of a collapsing infrastructure (fires, contaminated drinking water, unkept electrical systems); • The decline of our professional and degreed populace; • Climate change; • Questionable practices at the county level (planning, code enforcement, zoning, emergency services); • Student housing shortage: Santa Rosa Junior College opted to use bond revenue for the construction of an elaborate parking structure instead of desperately needed student housing - resulting in thousands of students now sleeping in their cars (some in that very parking structure [PD article about JC students living in their cars]); • Low to middle income and special needs housing loss due to VACATION RENTAL industry & lack of building; • Shortage of skilled tradespersons: Sonoma County lacks cutting-edge jobs training for a sorely-needed workforce - one able to meet national trades workforce shortage.	This comment has been noted however it does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	26-Sep-22	C183-7	What is the best possible use for SDC as one answer to the issues listed above? Let's start with the dilapidated SDC structures. Their condition is undoubtedly the result of the state's neglect. Therefore, it is incumbent upon Sonoma County to insist that the state acknowledge it is theirs to repair. Not only must the restoration be paid for by the state, we have recently learned that California has a revenue surplus to cover those costs. And those resources have attached to them some stringent guidelines as to how the reported surplus can be spent. Lucky for us infrastructure and colleges are among the options: "California is — once again — overflowing with money, and will likely have a $31 billion budget surplus next year, according to a Wednesday report from the independent Legislative Analyst's Office. And because the state is forbidden from spending more tax dollars per Californian than it did in 1978, once adjusted for inflation, it only has a few options for handling most of the cash windfall: slashing taxes; issuing tax rebates; funneling it to schools and community colleges; or earmarking it for certain purposes, such as infrastructure." (Hoeven, 11/18/21)	This comment has been noted however it does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	26-Sep-22	C183-8	As indicated above, Sonoma County's workforce predictions are not encouraging. They mirror a sad national trend wherein opting out of college are also coming up short on the skills needed to succeed in the workplace: Two-thirds of Americans over 25 don't have a bachelor's degree or higher. A Harvard study uncovers inconsistent efforts to give these workers skills for economic mobility and calls for improving the problem. Academic work on training programs has been somewhat static, says Rachel Lipson, director of the Harvard Project on Workforce. A paper from 30 years ago might not look much different from one published today. "There's been a lot of attention on K-12 quality and college access and completion, but a lot less on the types of educational and training pathways that sit in between high school and four-year college," she says. These pathways are critical to the future of economic mobility, and the Project on Workforce hopes to raise the research community's interest in them. "The plurality of the U.S. labor force does not have a four-year college degree," says Lipson. "We can't throw up our hands and say four-year colleges are the only answer." (Smith, 2021)	This comment has been noted however it does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	26-Sep-22	C183-9	Answers: Having outlined the need and some substantial financial avenues, I will now outline how to put SDC to work for the betterment of the people of Sonoma County. Instead of continuing to produce cooks and tourism graduates, we need to give our kids a better future, one promising living wage opportunities, not a serf's subsistence; one grounded in an understanding of California's history as essential to knowing how best to go forward! Some Educational & Housing Models As Best Fits For The SDC Campus: ▪ High Tech "Trade Tech College" - ▪ Satellite Junior College Campus: Vocational Tech! ▪ Berea College: I have learned that Berea is interested in expanding to develop this unique college model in every state: Every student attends tuition-free! Every student works on campus, putting to work the lessons learned in the classroom. Majors include education, agriculture, the trades, the arts, and much more. ▪ The University of Oregon, Phil and Penny Knight Campus for Accelerating Scientific Impact: a 160,000-square-foot campus built to accelerate groundbreaking scientific discovery and development in a collaborative multidisciplinary environment <https://inhabitat.com/leed-goldtargeted-knight-campus-advances-scientific-innovation/> ▪ Career Technical Education, (Sonoma County) also referred to as CTE, is a multi-year sequence of courses that integrates core academic knowledge with technical and occupational knowledge to provide students with a pathway to post-secondary education and careers. CTE programs deliver an enriched educational experience that promotes student interest and academic success while developing technical and career readiness skills necessary for the workplace of the future. Graduates of today's rigorous and relevant CTE programs are better prepared for high-wage, high-skill and high demand careers.	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
			▪ “State-supported technical college” - Clark Howard 9/13/18 show ▪ “Upskilling For Today & Tomorrow” - The Hill Event: Streamed Live 9/22/21 <https://youtu.be/ph9f1Z_P45c>	

Commenter	Date	Letter	Comment	Response
Deborah C. Nitasaka	26-Sep-22	C183-10	I would add that it is entirely feasible within these models to: ▪ Incorporate an affordable housing component, including special needs housing, into the campus plan; ▪ Offer on-site housing for students, staff, faculty which will reduce traffic impacts and provide additional incentives to prospective applicants; ▪ Training/Educational offerings might include an emphasis on high tech (environmental sciences, construction trades - including 3-D printing for housing production, modern firefighting and law enforcement courses, certificate programs in mental health, special education, & so much more); ▪ Traditional Trades (Carpenter, electrician, plumber, telecommunications engineer, auto mechanics, fire fighting, law enforcement - emphasizing community policing!, ecological land/resource management, nursery management [plant propagation, marketing, shipping], etc.), w/emphasis on high tech tools; ▪ LEED Certification program; ▪ Environmental Sciences: building in internships around campus grounds care (maintenance, repairs, upgrades, etc.) - Forestry, Firefighting technology, Alternative Energy Program; ▪ Sustainable Farming Program; ▪ Indigenous People's Program: History & Culture; ▪ Health/Medical: Psych techs, med techs; ▪ Arts & Crafts Program (including student work program, sale to the public of hand-made goods); ▪ Retail Management: (w/training to include time spent running on-campus market); ▪ Day school for students with developmental disabilities (plug in tech students for "on-the-job" psych tech training aspect); ▪ Carve-outs for Crisis Management Clinic for Developmentally Disabled in need of care beyond that available in their community settings; ▪ Permanent Supportive Housing: See as a model Sweetwater Spectrum, Fifth Street West, Sonoma - a "mini-community" for autistic adults (Kory Stradinger, Executive Director);	This comment has been noted however is pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
			▪ Community Center & History Museum: Oversight of cemetery, Sports/Playing Fields, Historic Preservation (Cemetery, buildings, overall site); ▪ Emphasis on: Economic and Racial Diversity.	

Commenter	Date	Letter	Comment	Response
Elizabeth Brand	Monday, September 26, 2022	C184-1	In reading about noise on page 323 in the DRAFT EIR, I am curious what mitigations planned to keep noise down in the future development that harm the wildlife? Our society is noisier and higher volume with humans pushing the limits on modified mufflers, house parties, and electronic music. We know these excessive noise levels affect humans in negative ways, and also stresses our native wildlife. What will be done to limit the stress due to noise on the critical habitats surrounding SDC, including the wildlife corridor? I have another Q. This time about light pollution. Our nocturnal species need dark skies to feed, procreate and navigate at night. What is the plan to limit lighting at the new development with special consideration to native wildlife? What will be the plan to educate future residents of the area on living in harmony with wildlife, esp. with respect to the above subject areas?	This comment is noted. Please see MR-7 on impacts to wildlife including noise and light pollution.
Joanna Felder	Monday, September 26, 2022	C185-1	I do not feel that the environmental report considered the wildlife corridor sufficiently. The stated goals of the project are at odds with the environmental report. There did not appear to be cognizance of current migratory pathways — where the animals are now using the land — and how that would be considered in such a dense residential project. The other issue that was not addressed is water. What aquifer does SDC draw from. What is the current state of that aquifer in terms of capacity, depth and anticipated longevity. With water being a state-wide concern, more consideration needs to be given to this issue. Long-term residents are suffering now and the Environmental Report short-shifted this critical issue. Obviously the number of proposed dwellings is out of scale with the size and character of Glen Ellen but perhaps that is beyond the scope of the Environmental Report. Hiring a San Francisco firm to assess such a fragile and rural landscape was a problem in itself. Their ideas of "walkable village environment" — very hip and very urban in its concept is ridiculous in the isolated setting of the SDC.	This comment is noted. Please see MR-5 on the adequacy of the Water Supply Assessment, and MR-7 on wildlife movement.

Commenter	Date	Letter	Comment	Response
Joseph & Deborah Votek	Monday, September 26, 2022	C186-1	We have been residents in Glen Ellen for 38 years recording rainfall. The rainfall average at our home on Sonoma Mountain Road is 45 inches. Last year we recorded 14.5 inches with the average steadily getting lower over the years. There are many cases of neighbors' residential well water levels also getting lower over the years. Where is the evidence that the development of the scale proposed for SDC will not further impact water availability for those of us who do not have municipal water available to them? The DEIR is inadequate while the so-called self-mitigated Specific Plan contains many general policies, goals and conditions of approval to address environmental impacts, the DEIR does not meet CEQA requirements. The DEIR clearly does not adequately analyze and prevent or reduce environmental impacts in most if not all of the areas studied as evidenced by too few requirements and many vague words such as “promote” or “encourage” or “if feasible.” The DEIR definitely needs to be amended and the Conditions of Approval strengthened and moved into a legally enforceable Mitigation and Monitoring Program.	This comment is noted. Please see MR-1 on the adequacy of a self-mitigating Specific Plan, and MR-9 on Mitigation Monitoring.
Linn Briner	Monday, September 26, 2022	C187-1	I have many concerns about where the planning for the future of the SCD is going. For example: to state that effectively doubling the size of Glen Ellen would increase commute or evacuation times by only 15 seconds is outlandish. What type of modeling did you use I wonder. I personally had to evacuate during the 2017 fires and part of my property was destroyed. I live just one row of houses from a property line for the SDC. The traffic was bumper to bumper on one of the only two roads out from town. The main topic of this letter, however, is water. Again, what type of modeling did you use? As you know, we’re experiencing climatic change and more erratic weather, and more droughts are predicted for our area. Putting the load of so many new people (2+ thousand) on the local, fragile water supply seems a ticket for disaster. Additionally, I am concerned about the safety of the creeks, streams and rivers on the SDC property. I do not think that a 50 foot setback is enough to protect the waterways and the wildlife associated with those same waterways. Demolition and building projects will release pollutants into the soil and water, as would the increased population. Right now, this area is a	This comment is noted. Please see MR-4 on wildfire evacuation, and MR-5 on the adequacy of the Water Supply Assessment.

Commenter	Date	Letter	Comment	Response
			delicate sanctuary for many other types of life as well. Please increase setbacks to 100 ft from all waterways.	
Tamara Boultbee	Monday, September 26, 2022	C188-1	The Glen Ellen Historical Society requests that the video and minutes of the September Landmarks Commission be reivewed for inclusion in documentation regarding the DEIR and the Draft Specific Plan via landmarkcommision@sonomacounty.org. Minutes nor video are not yet posted however the Commisssion's dismay and lack of background on these two documents should be documented.	Thank you for your comment. This comment is noted however it is not relevant to the adequacy of the DEIR, thus no further response is required.
Tamara Boultbee	Monday, September 26, 2022	C189-1	There are several areas that I wish to address today concerning the draft SDC EIR. The areas are: 1. Density 2. Traffic 3. Environmental 4. Consistency with Goals & policies of GP as well as Specific Plans	Thank you for your comment. This comment is noted however it is not relevant to the adequacy of the DEIR, thus no further response is required.
Tamara Boultbee	Monday, September 26, 2022	C189-2	Density: Proposed density is much too high for the location and creates inherent negative impacts on the existing population, environment and adjacent locales. High density, such as proposed (housing as well as commercial), increases the danger of wildfires, changes the world of wildlife and nature (a critical need to preserve), changes the cultural, visual and societal quality of life, presents a considerable impact (both now and in the future) on agriculture, and such density should be restricted to existing developed areas within major city boundaries, not in rural areas.	This comment has been noted however is pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.
Tamara Boultbee	Monday, September 26, 2022	C189-3	Traffic: Increased traffic would negatively impact roads, especially those designated to remain rural roads in the county General Plan as well as Specific/Area Plans due to large scale commuting, avoidance of congested major roadway, and other	This comment is noted. Please see MR-6 on the adequacy of the transportation analysis.

Commenter	Date	Letter	Comment	Response
			rationale. Also, would have a serious impact on emergency evacuations in this area as well as adjacent areas due to wildfires, earthquakes, emergency services, etc.	
Tamara Boultbee	Monday, September 26, 2022	C189-4	Environmental: Negatively impacts the rural environment/quality of life, scenic resources, wildlife corridors and existence, and is in conflict with the General Plan for areas that are to be maintained “rural.” Treats a rural area more as an urban area in proposed design. Ignores the personality of an area and the needs of existing occupancy/usage. It appears to desire to create a large area of relative high density in contrast to existing and long time usage as well as expressed future designations (GP). Additionally, the existing inadequate water usage and recycling as well as inadequate energy provisions are major obstacles - and costly. (Prior to building any major density growth the infrastructure needs, residential as well as commercial, must be in place prior to any new development or usage i.e. any new or adequately restructured roadways, improved and adequate water availability and reuse thereof. Also, alternative transportation needs such as buses, etc.should be in place.	This comment is noted. Impact 3.10-2, "Development under the Proposed Plan would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect." is less than significant because, as described on page 321 of the DEIR, the Proposed Plan is consistent with the General Plan’s goals for the Planning Area and includes provisions to update the General Plan and Zoning Ordinance consistent with State law in order to ensure consistency.
Tamara Boultbee	Monday, September 26, 2023	C189-5	Consistency with GP and Specific/Area Plans: These BOTH need to be thoroughly reviewed as the impacts of this proposal is far reaching - the negative impacts extend far beyond the confines of this project. Per the GP-to maintain the rural quality (visual as well as technical/environmental) with development to be in sync with established precedents and within established urban/rural locations. You have received, I am sure, numerous letters from a wide variety of persons and perspectives. Herewith are my suggestions (based upon my many years of being involved in voluntarily working with the county on the General Plan and more specifically a Specific/Area Plan). Maintain the general character of the area. Any development should be low profile, provide for a greater percentage of low-middle income housing within a set total allotment, keep any additional commercial to a minimum, no hotels, and the total number of new housing (including any bonuses) should be capped @ 450! And by all means, protect the open space, wildlife corridors, rural amenities and the character of the existing locale.	This comment is noted. Impact 3.10-2, "Development under the Proposed Plan would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect." is less than significant because, as described on page 321 of the DEIR, the Proposed Plan is consistent with the General Plan’s goals for the Planning Area and includes provisions to update the General Plan and Zoning Ordinance consistent with State law in order to ensure consistency.

Commenter	Date	Letter	Comment	Response
Teresa Murphy		C190-1	I have been a strong community advocate for the preservation and prudent management of the Eldridge Property formerly known as Sonoma Developmental Center since 2012. I STRESS that the urbanization of Eldridge is not portrayed accurately in the Draft EIR. The number of houses, population and vehicles are not realistic The Draft EIR does not stress the preservation of cultural integrity, history, conservation and housing in scale. The inadequacy of the term 'self-migrated" is repeated over and over. Specific plan appears to fall short of CEQA. Legally enforceable Mitigation and Monitoring should be included in the DEIR that currently states in many instances, "no mitigation needed.'	This comment is noted. Please see MR-1 on the adequacy of a self-mitigating Specific Plan.
Teresa Murphy		C190-2	I respectfully request the following; There should be a review of the Landmarks Commission meeting at which the Commissioners self-disclosed that they were uninformed due a less than seven day opportunity to review the documents. Permit Sonoma did not send the DEIR and DSP until Friday before Labor Day and the hearing was the next week. It appeared that the Commission would like more time to study the historic aspects of the property. Why was not the Landmarks Commission brought in two YEARS earlier for their expert opinion? Include a reference or rationale of why Sonoma County has not responded to a two-year-old application for Historical Landmark status for Eldridge. A CEQA level identification of potential impacts of known or potential historic sites and landscapes. Consider the historic sites as an entire cultural landscape. Do not individual buildings individually to be demolished. Require a future developer prepare a historic preservation plan, based on desired development and suitability of buildings for adaptive reuse, with the overarching objective of preserving a set of buildings that reflect the diversity of building types and the continuum of life at the former SDC.	This comment is noted. Please see Section 3.5.3 of the DEIR for an assessment of the impacts on historic resources. Please see page 4-26 of the Specific Plan for goals and policies regarding historic resources, including policy 4-22: "Require that the project sponsor prepare a historic preservation plan, based on desired development and suitability of buildings for adaptive reuse, with the over-arching objective of preserving a set of buildings that reflect the diversity of building types and the continuum of life at the former SDC. For instance, retain and reuse buildings that represent various architectural styles that are character-defining to the Historic District, including French Eclectic, Spanish Eclectic, and Tudor Revival, as well as character-defining materials such as tile roofs, stucco and brick cladding, and wood windows."

Commenter	Date	Letter	Comment	Response
Teresa Murphy		C190-3	Explain how the demolition of buildings reduces the eligibility of the property for the National Register of Historic Places. The property application has been submitted by SHPO and the GEHS has been asked for additional and expanded information on the property, specifically the east side of Arnold Drive. According to the Draft not all buildings, structures, and landscape elements within the historic district boundary are considered contributing resources because some of them are outside the 1889- 1949 period of significance and others do not have sufficient historical integrity. Due to the expansion of the historic district boundary as requested by SHPO, the number of contributing resources grew from 46, as identified in JRP's May 2017 report, to 94 buildings and structures. Where is any reference to Wallace, Roberts and Todd or Page and Turnbull or JRP and their findings regarding historical preservation of building and landscapes? Why is there no mention of historic preservation in the initial bullet points? The statement of Balance with Historic Resource Conservation is acceptable however it is qualified with 'where feasible.' What is the definition of the phrase 'where feasible?'	This comment has been noted however is pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.
Teresa Murphy		C190-4	Did the consultants confer with CALFIRE developed recommendations for fire prevention in older buildings and evacuation plans for the Valley? CALFIRE identified the oldest fire suppression buildings in the State dating to 1931-2. The Eldridge Fire Department was built in 1932 yet it is not considered significant and one to be potentially removed. Then the plan calls the area Fire House Commons. Why will the area be named for a building to be remove as 'insignificant? The Historic Core according to Dyett and Bhatia appears to consist of two buildings: The Sonoma House and the Professional Education Building. The buildings adjacent to them (Oak Lodge, Hatch and McDougall) are important representatives of early 20th century institutional care. This section is nearly contiguous with the cemetery and Jack London HISTORICAL State Park. Has there been any rationale to create a historic area within the property historic district and how the Department of Parks and Recreation could be expanded to include this historic area? What is the definition of a 'flex' area?	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-1	This letter contains my comments on the Draft Environmental Impact Report (DEIR) for the SDC Specific Plan and on the Draft Specific Plan (proposed plan) itself. Thank you for considering and responding to these comments and sharing them with the planning team. I agree with and support the comments submitted by the Sonoma Land Trust (SLT). Also, I agree with and support the comments identified in the North Sonoma Valley MAC comment letter. In addition to the issues identified in those two letters, I have submitted comments to the County Landmarks Commission and the County Planning Commission – the comments in both these letters (attached at the end) are hereby incorporated by reference and should be addressed in the Final EIR.	This comment has been noted however it does not relate to the adequacy of the DEIR therefore no further response is required.
Vicki Hill	26-Sep-22	C191-2	Overall, as a 30 plus year land use planner and CEQA specialist, I am disappointed with the failed process to prepare a plan that represents at least a modest amount of responsible land use planning, mindfulness of site constraints, and community input. Sonoma Valley residents, including the community surrounding SDC, supports housing, especially affordable housing. However, there is no support for the high-density scale reflected in the proposed plan, which would double the size of the existing semi-rural community. At even half the proposed size, the project would represent the largest development in Sonoma Valley in decades. The plan reads as if it belongs in an existing urban area in a city and does not reflect the rural character and special qualities of the site and surrounding area that are valued by residents and visitors. The proposed plan does not reflect a "community-driven" process - it fails to incorporate a moderate scale that was requested by the vast majority of public comments over the past two years. The plan also lacks many mitigating policies that were requested multiple times.	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.
Vicki Hill	26-Sep-22	C191-3	The DEIR is fundamentally flawed, as outlined in my comments below. Overall, the DEIR reflects a bias towards the proposed dense development and tends to dismiss the proposed plan's environmental disadvantages when comparing it to other reduced-scale alternatives. Many comments from wildfire experts have already been submitted and I share their concerns, having had to evacuate twice from my home. Revisions to both the EIR and the Specific Plan are necessary to address these	This comment has been noted however it pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
			potentially significant impact issues and to develop a more balanced plan that will reduce significant impacts.	
Vicki Hill	26-Sep-22	C191-4	GENERAL EIR COMMENTS – Please respond to each of these concerns 1. Deferral of analysis – In many topical areas, the DEIR states that sufficient details are not available to conduct the environmental analysis and that the analysis will occur when individual projects are proposed. However, many of the projects will not be subject to CEQA due to exemptions provided once the Specific Plan is completed. Therefore, this deferral is not adequate. 2. Minimization of impacts - The DEIR assumes plan policies will mitigate impacts, but the feasibility of these policies is unknown (such as increasing transit and building a road connection to Highway 12) and many policies are unenforceable. So, the DEIR grossly underestimates the impacts. The DEIR is clearly result-driven. 3. Skewed Alternatives Comparison - The DEIR identifies the Historic Preservation Alternative as environmentally superior, but then dismisses advantages of this smaller alternative and incorrectly claims that impacts of the proposed plan and the Historic Preservation Alternative are "comparable." Some mitigating components (e.g., widening creek corridors) were arbitrarily excluded from the Historic Preservation Alternative, making it look worse than it is. For a fair unbiased analysis, the alternatives must be evaluated in an "apples to apples" comparison to the proposed plan, using the same or similar assumptions about project components that offer mitigation.	This comment is noted. Please see MR-3 on the level of detail of analysis and programmatic nature of the EIR. Please see MR-1 on the adequacy of a self-mitigating Specific Plan. Please see MR-8 on the adequacy of the Historic Preservation Alternative in addressing the project objectives.
Vicki Hill	26-Sep-22	C191-5	4. Environmentally Superior Alternative Should Be Selected: Given the sensitivity of the site, the onsite wildlife corridor, surrounding open space, rural location, wildfire risks, and guiding principles, both a reduction in the number of homes and substantial reduction in commercial development size should be the preferred plan. A reduced-size alternative is the only way to mitigate the many significant impacts of the proposed high intensity project. Design guidelines will not mitigate the impacts. The market study did not identify a high	This comment is noted. Please see MR-8 on the adequacy of the Historic Preservation Alternative in addressing the project objectives.

Commenter	Date	Letter	Comment	Response
			demand for non-residential development. The Historic Preservation Alternative, while not ideal, is the only alternative that presents a level of land use development at a scale compatible with the site, surrounding rural lands, and overall Sonoma Valley character. There has been an overwhelming number of public comments requesting a smaller alternative.	
Vicki Hill	26-Sep-22	C191-6	5. Comparison to Previous SDC Use: The continued argument that the SDC property should be able to accommodate thousands of residents and workers because it used to house and employ thousands of residents and workers is not valid. Nor is it valid to compare existing building square footage to proposed square footage, in an attempt to justify the proposed plan and minimize impacts, as it is the proposed use (not necessarily footprint) of the buildings that drives most of the impacts. The reason this comparison is invalid is as follows: a. As an institution, SDC tread very lightly on the environment and adjacent community. At its most populous, most of the residents of SDC did not leave the property. They did not drive cars, they didn't go offsite to schools, doctors, restaurants, etc. b. Vehicle trips were primarily limited to employees who worked three shifts so that traffic was spread out, rather than concentrated at peak hours. c. Because of the limited outdoor activities and absence of constant vehicle traffic onsite, people and cars did not interfere with wildlife movement; the campus was open, peaceful, and not occupied with uses that generated a substantial amount of traffic (e.g., hotel, restaurants, etc.). d. There were no retail uses drawing visitors and vehicles to the site. It should also be noted that employment and resident numbers at SDC reached a peak during a time over 50 years ago when there was very little cumulative growth in Sonoma Valley and both Arnold Drive and Highway 12 were still well-functioning roadways.	The comment is noted. As described in pages 579-584 of the DEIR, the Proposed Plan is consistent with the overarching regional need for both market rate and affordable housing in the Sonoma Valley and throughout the Bay Area, as well as with historic residential and employment uses of the site: SDC has facilities that housed up to 3,700 clients, and SDC was one of the largest employers in the County and the largest in Sonoma Valley. While there is no direct perfect comparison for new residents at the SDC site, the numbers are provided to give contextual reference to the fact that the site has been previously developed and has served as a home to a substantial population of residents and employees previously. Ultimately the DEIR's environmental impact analysis considers the existing conditions of the site.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-7	6. Lack of supporting evidence – Throughout the DEIR, conclusions and assumptions are made without providing supporting information, thus providing no rationale or transparency. 7. Project Scale is Source of Significant Impacts and Failure to meet project objectives: The proposed plan's size and scale contradicts the County's transit-oriented growth and land use policies; and is inconsistent with its own guiding principles, failing to balance development with resource and historic protection. Another SDC Specific Plan guiding principle directs the plan to balance redevelopment with existing land uses and calls for looking at how uses fit the character and values of the site and surrounding area, as well as benefit local communities and residents. It does not appear that the proposed project abides by this principle. Regardless of whether the housing is low, medium, or high density, it's the total amount of housing and commercial development that is particularly important in evaluating the project. The community will not benefit from clogged roadways and increased fire risks and evacuation delays. Because of its size, the project will have significant impacts in both transportation and historic resources, but no mitigation is offered in the way of downscaling the size to reduce these impacts. There is no way that the site can provide all the goods and services needed for this large population. To try to provide that undermines the function of the surrounding open space and destroys the semi-rural character of the existing community on both sides of the site.	This comment is noted. Please see MR-3 on the level of detail of analysis and programmatic nature of the EIR. Please see MR-1 on the adequacy of a self-mitigating Specific Plan. Please see MR-9 on project phasing and Mitigation Monitoring.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-8	8. Missing Project Phasing and Performance Standards – a. The proposed Specific Plan is missing mandatory phasing requirements that would help mitigate impacts. The phasing components of the proposed Specific Plan are advisory only and not enforceable. There is no guarantee that the needed housing will be developed before the hotel or other commercial uses. There is nothing stopping the future landowner from building the hotel first, which would be contrary to the project objectives. b. Affordable housing should be prioritized in a mandatory phasing plan. c. The project description needs to identify a project phasing plan to address all the demolition and remediation that will need to occur, as well as site preparation, infrastructure repairs, etc. This plan needs to be fully evaluated in terms of impacts on traffic and roadways, wildlife and open space resources, and surrounding land uses (noise, emissions, glare), etc. d. Project phasing should be tied to performance standards. There are no performance standards to gauge or monitor project impacts. Since many of the future impacts are unknown and feasibility of some policies is unknown, performance standards are needed to ensure that future development can be modified if policies or mitigation measures are not effective. For example, biological surveys should be required to monitor how well wildlife adapts to demolition, construction, and new land uses. If it becomes clear that the wildlife corridor is being adversely impacted, additional measures and design features could be implemented to reduce impacts before proceeding with additional development phases. VMT and roadway congestion thresholds should also be established and traffic impacts mitigated to the maximum extent feasible before continuing with buildout. Performance standards could be developed for each environmental resource area.	This comment is noted. Please see MR-9 on project phasing and Mitigation Monitoring.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-9	Flawed Market Demand Study – The market demand study prepared in 2020 for the SDEC Background Report and the Alternatives Report that preceded the DEIR was updated via a short memo (July 14, 2021), with assumptions that were never reviewed by the public or peers. The update was to attempt to justify larger housing numbers, using a straight-line projection over the next 20 years. This updated study was then used as the basis for including and defending the proposed 1000 homes in the proposed Specific Plan. However, there is no justification for the projections methodology, which is over-simplified. There is no evidence that housing demand in Sonoma Valley will increase at the rate presented in the updated market study. This "update" to the market study cannot be used as a basis for the housing in the proposed plan.	This comment is noted. Please see MR-3 on the level of detail of analysis and programmatic nature of the EIR.
Vicki Hill	26-Sep-22	C191-10	DETAILED DEIR COMMENTS DEIR EXECUTIVE SUMMARY Page 3, "…does not mandate that the State will accept the outcome of the County-driven process…" – This statement implies that somehow the State has jurisdiction over the approval of the Specific Plan. It does not have any Specific Plan approval authority and this misleading wording should be stricken. The County planning process does not require approval from the State. Whoever buys the property from the state will be bound by the Specific Plan. This type of wording has been used by the County as a thinly veiled threat to the community that if we don't accept the County's plan, the state will enact a far worse redevelopment. Page 3, "The Planning Area includes all SDC property, encompassing approximately 945 acres –which includes a developed Core Campus covering approximately 180 acres, the 755 acres of contiguous open space, and the 11-acre non-contiguous Camp Via grounds within Jack London State Historic Park." Is this planning area equivalent to the study area for the EIR? The study area should go beyond the site itself and must be clearly defined for each impact topic.	This comment is noted. As noted in the DEIR on page 529, "While this EIR cannot pre-judge the State's actions, the EIR tries to frame these in light of the State Legislature's established land use objectives for the site, per Govt. Code Section 14670.10.5. Furthermore, the State has already released a developer request for proposal for development of the site pointing to the Proposed Plan underway, and can enter into long-term ground leases with private developers—cited as a mechanism for the site in the Government Code for SDC redevelopment—so that the State retains planning control over the campus unfettered by local regulations to achieve these land use objectives, should the County be unwilling to plan and zone for these uses." While the RFP released by the State may indicate the State's preference for sale of the property, the Government code, which specifies a lease as a method of disposition, maintains the right of the State to enter into a ground lease rather than a sale of the property. The DEIR defines the Planning Area it considers in the Project Description, while Chapter 3 defines the specific thresholds considered under CEQA guidelines.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-11	Page 7, Buildout: “Buildout projections of this EIR do not include the total amount of potential development that could be accommodated by the Proposed Plan; rather, the buildout outlines the most likely development that would occur by 2040, including additional bonus housing units that would result from provision of affordable housing as mandated by the Proposed Plan.” Basing the DEIR analysis on this assumption of the “most likely development” is insufficient and is not supported by any evidence that this level of development is the most likely scenario. The DEIR underestimates the overall impacts because it does not evaluate the reasonable worse case buildout scenario. The DEIR must evaluate a reasonable worse case of development to ensure that all potential impacts are identified. Page 7, Buildout: “The Proposed Plan is anticipated to result in a total buildout of approximately 2,400 residents, 1,000 housing units, and 940 jobs.” This does not clarify whether this is the total maximum buildout or the “likely development” referenced in the previous paragraph. Looking at the minimums/maximum table in Chapter 4 of the plan shows that over 1200 units could be built and that doesn’t even include bonus densities. Page 7, Areas of Controversy: “Many members of the public expressed opposition to new housing development in the area…” This appears to be another attempt to paint the community as NIMBYS. This statement is not true, which I can say after listening to hours of public testimony and reading countless comment letters. This statement must be modified to note that people support housing, especially affordable housing, but are opposed to the large number of houses, especially the large number of market rate housing, based on the fact that the site is outside of the urban growth boundary and not along a transit corridor.	This comment has been noted. As noted in the Specific Plan under Table 4-2, "3. While the base housing unit range for each district is represented as a range, the total base number of units built across all districts should equal the total shown in the table". While the Specific Plan limits development at the site to a maximum of 740 units, the DEIR analyzes the impacts of 1,000 units to account for the addition of density bonuses by a future project sponsor. While the final number of units, including the density bonus units, cannot be known at this time, the addition of 240 density bonus units to the EIR's analysis represents a good faith effort to accurately analyze the maximum buildout in the DEIR.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-12	Page 11 acknowledges that "the market demand for non-residential uses (with the exception of a hotel) is limited and higher employment levels will reduce financial feasibility." Yet, the DEIR still analyzes a proposed plan with more than 900 jobs, which detracts from financial feasibility and substantially contributes to significant impacts. What is the basis for this high amount of commercial development? Page 11, Reduced Alternative – The text states that this alternative would be less economically viable – what does that mean? Is it viable or not? There is no provision in the state legislation or in the project objectives to maximize economic viability. Yes, the plan must be feasible but it does not need to maximize financial gains.	While the project objectives do not specify that economic viability be maximized, California Government Code Section 14670.10.5 states that in light of the statewide affordable housing crisis, the SDC Specific Plan should prioritize housing, especially affordable housing and housing for individuals with developmental disabilities. The legislation also acknowledges the importance of the significant open space areas of the SDC site and requires permanent protection of the SDC site's open space and natural resources, along with protection of the Eldridge Cemetery located on the property. Other required components of the planning process include involvement of the community in order to reduce uncertainty, increase land values, expedite marketing, and maximize interest of potential purchasers, and ensuring economic feasibility. Given that the Proposed Project is already facing a finacial feasibility gap and the Reduced Development Alternative would further widen that gap, the Reduced Development Alternative does not meet the project objectives - in particular financial feasibility and prioritization of housing - as successfully as the Proposed Project.
Vicki Hill	26-Sep-22	C191-13	Page 12, Historic Preservation Alternative – There is no basis given for only a partial reduction in jobs - why not reduce the jobs proportionately? With 600 jobs, it would be heavier on commercial development than housing, when in fact the State has prioritized housing, not commercial development.	Commenter would like to see change to one of the alternatives analyzed This comment is noted.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-14	Page 14, Environmentally Superior Alternative (also in Section 4.5): "Overall, the Historic Preservation Alternative is the environmentally superior alternative, although significant impacts of the Proposed Plan and the two alternatives are largely comparable, and the Historic Preservation Alternative would be less superior in some environmental features such as energy use, biological resources, and wildfire risks. Additionally, this alternative would not support key project objectives related to increased housing supply, varied housing opportunities, community vibrancy, and long-term fiscal stability to the same degree as the Proposed Plan." This statement is incorrect and misleading for several reasons. • To say that the proposed plan's impacts are "largely comparable" to the impacts of other alternatives is seriously flawed. The types of impacts may be the same, but the magnitude of impacts is much less under the Historic Preservation Alternative, with the substantial reduction in buildout. This needs to be acknowledged and corrected throughout the EIR. The Historic Preservation Alternative, in addition to reducing historic resources impacts, would substantially reduce impacts in the issue areas of traffic, biological resources, land use, noise, visual, air quality, Greenhouse Gas emissions, and public services. Traffic impacts may still be significant, but they would be much less severe in the Historic Preservation Alternative. • It is reasonable to assume that impacts across the board would be reduced with a smaller development.	This comment is noted. Please see MR-8 on the relative cost and feasibility of the Historic Preservation Alternative.
Vicki Hill	26-Sep-22	C191-15	• The way the Historic Preservation Alternative is crafted, it excludes components that allow a fair comparison between it and the proposed plan. For example, widened creek corridor setbacks are included in the proposed plan but arbitrarily excluded from the Historic Preservation Alternative, resulting in a conclusion that this alternative would cause greater biological impacts. Corridor setbacks could be easily incorporated into the Historic Preservation Alternative in most locations. The connection to Hwy 12 is also excluded from this alternative, thus making the traffic impacts greater. This alternative (or the proposed plan) must be modified to include the same impact-reducing features such as creek corridor setbacks, roadway connections, etc. to at least provide a fully transparent, apples to apples comparison. If properly	This comment is noted. Please see MR-8 on the relative cost and feasibility of the Historic Preservation Alternative. Please see MR-6 regarding the impact of the Highway 12 connector. Commenter offers several suggestions to change the Historic Preservation Alternative to improve the biological resouces and wildlfire impacts of the alterantive; this comment is noted. It is also noted that impacts in these topics are not significant impacts of the Project or this alternative, and the Drat EIR calls the Historic Preservation Alterantive as environmentally superior.

Commenter	Date	Letter	Comment	Response
			compared, the impacts in biological resources and wildfire risks would be reduced compared to the proposed plan. ••	As noted on page 524 of the DEIR, 'Section 15126.6 of the CEQA Guidelinesstates that: An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, andevaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range ofpotentially feasible alternatives that will foster informed decision making and public participation. Case law suggests that the discussion of alternatives need not be exhaustive. CEQA Section 15126.6(f) states that the alternatives in an EIR should be governed by a "rule of reason."'
			The Historic Preservation Alternative would support multiple key project objectives, including significantly increasing housing supply with the largest housing project ever in the Sonoma Valley; contributing to community vibrancy and long-term fiscal stability; AND reducing both traffic and historic resources impacts, as well as other impacts. The DEIR provides no supporting information to substantiate the claim that the Historic Preservation Alternative would not support key project objectives. There is no basis for the claim that the Historic Preservation Alternative would not achieve long-term fiscal stability similar to the proposed plan.	Commenter's assertion that the Historic Preservation Alternative would reduce historic resources impacts of the Project is correct, and this is noted in the Draft EIR. Regarding traffic impacts, the Draft EIR notes that impacts of the Historic Preservation Alterantives would not be substantially different than that of the Project. The Draft notes on page 569, "The Historic Preservation Alternative is projected to result in approximately 50 percent fewer daily vehicle trips than the Proposed Plan, indicating that the total VMT generated may also be roughly 50 percent lower. As discussed in the Historic Preservation Alternative, this reduction in the total VMT generated by development in the Plan area would be substantial though would not necessarily translate to less residential VMT per capita, which is the efficiency metric for which a significant VMT impact was identified." The Proposed Project is superior to the Historic Preservation Alterntive in terms of two of the three key objectives laid out for SDC by the State: (1) The Project provides more than twice the number

Commenter	Date	Letter	Comment	Response
				of housing units compared to teh Historic Preservation Alternative, significantly advancing State objectives for the site, and (2) The Proposed Project is also close to financially feasible with a gap of approximtely $95,000 per market rate housing unit, without consideration of strategies such as tax credits and infrastructure financing districts laid out in Chapter 7 of the Draft Specific Plan. The Historic Preservation Alternative has a financing gap of $495,000 per market rate unit, making it financilly infeasible, couner to a key state objective, and also would also result in much more expensive rather than workforce or affordable housing. Furthermore, it is noted that State legislation does not mention historic preservation as an objective for the SDC site.
Vicki Hill	26-Sep-22	C191-16	EIR MAIN BODY Page 41, Section 1.1.1, Purpose: One of the purposes of the DEIR is stated as: "To recommend a set of measures to mitigate any significant adverse impacts." Yet, there is no mitigation included in the DEIR. Even in the two significant impact areas, no additional mitigation is recommended although there is feasible mitigation. For example, the proposed hotel size could be reduced, or the overall development size could be reduced to minimize environmental impacts.	This comment is noted. Please see MR-1 on the adequacy of a self-mitigating Specific Plan.
Vicki Hill	26-Sep-22	C191-17	Page 43, Scope of EIR: "…nor does it assess project-specific impacts of potential future projects under the Proposed Plan, all of which are required to comply with CEQA and/or the National Environmental Policy Act (NEPA) as applicable." This statement contradicts statements elsewhere that indicate that most, if not all, future development will be exempt from CEQA due to streamlining provisions. Please clarify which individual projects will be subject to environmental review. Even if project-specific impact assessment is not possible at this stage, it is feasible to assess the types and magnitude of impacts of buildout and to identify appropriate types of mitigation measures. This has not been done in the DEIR.	This comment is noted. Please see MR-9 on deferred CEQA analysis. Appendix A of the Specific Plan outlines additional (additional to the County's already existing) Standard Conditions of Approval, regardless of whether any future CEQA document for a project is prepared or not. Thus, identification of future environmental studies or conditions to implement Specific Plan policies at a project level is not deferred. To the extent a future development project would be subject to discretionary review, it would also be subject to CEQA.

Commenter	Date	Letter	Comment	Response
			Page 47: “Subsequent to certification of the Final EIR, the Board of Supervisors may approve the Proposed Plan.” Isn’t it possible for them to approve one of the alternatives, as well? Please clarify.	As noted on Page 42 of the DEIR, "In accordance with CEQA requirements, this EIR also identifies and evaluates alternatives to the Proposed Plan, including the No Project Alternative, should the Board of Supervisors not adopt the Specific Plan." This EIR is an informational document to assist the Board of Supervisors with its decision-making, and does not circumscribe or limit its actions in any way.
Vicki Hill	26-Sep-22	C191-18	Page 51, “In addition, the Proposed Plan includes amendments to the County’s General Plan and Zoning Code.” The DEIR is incomplete in that these proposed amendments, particularly the zoning code amendments, are not included in the plan or DEIR project description. Page 51, Location: The description of the project location is erroneous in claiming that it is between Glen Ellen and Eldridge, as if it will not disrupt these two communities. Why does the County insist on continuing to ignore the neighborhood south of SDC and call it Eldridge? It is part of Glen Ellen and the SDC site is in the middle of Glen Ellen, dividing it. Furthermore, there’s nothing in the text noting that this location is OUTSIDE of an urban growth area, which is an important land use policy consistency issue.	This comment is noted. The DEIR uses the census designated place name Eldridge for the area that falls within its boundaries as defined by the census. It is not within the scope of the EIR to address community names and boundaries.
Vicki Hill	26-Sep-22	C191-19	Page 53, Planning Area: Sonoma Valley Regional Park is not located to the south of the SDC site. Page 53, Section 2.1.2.1, Land Use: “…designed in a relatively compact footprint within the expansive grounds to maximize the benefits of the tranquility and peacefulness of the site.” These tranquil features are at the core of the existing land use pattern and must be considered in assessing the proposed plan’s consistency with County land use policies, the proposed plan objectives, and Glen Ellen Design Guidelines. Page 55, Section 2.1.2.3, Environmental Resources and Natural Setting: This section fails to discuss the critical wildlife corridor that covers the entire property.	This comment is noted. Please see MR-7 on adequacy of impacts on wildlife movement. The following text edit has been made: DEIR p. 53: "Sonoma Valley Regional Park is directly to the north; ~~portions of Sonoma Valley Regional Park,~~ Martin Street~~,~~ and Mill Creek to the south;" This is a minor correction made to clarify and does not affect the findings of the DEIR.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-20	Page 57, Water: The text states that the water system components "have the capacity to provide drinking water, irrigation, and fire suppression to a resident population in the neighborhood of 6,600 people." Please cite the source of this statement and provide documentation to support it. Also, if the water system is going to be restored to service this number of people, this growth-inducing impact needs to be evaluated in the DEIR. Page 58: "…WTP is in relatively good condition." This conclusion is not supported by any analysis. Assessments in earlier reports indicated problems with the system. Page 61: "SDC was the valley's largest employer until it closed." Please provide documentation to support this statement. Employment at SDC dropped off dramatically in the past 10 years before closing, as the client population was reduced.	This comment is noted. Please see MR-5 on the adequacy of the Water Supply Assessment. The following text edit has been made: DEIR p. 61: "~~SDC was also the valley's largest employer until its closure~~ For a significant part of the 20th century SDC was Sonoma Valley's largest employer, with ties to adjacent communities of Glen Ellen and Eldridge." This is a minor correction made to clarify and does not affect the findings of the DEIR.
Vicki Hill	26-Sep-22	C191-21	Page 68, Section 2.4.3: "It also aims to improve multi-modal access from the SDC to Highway 12 (State Route 12 or SR 12) by exploring the feasibility of constructing an additional east-west emergency access connection from the site." This makes the connection to Hwy 12 sound very tentative and, therefore, the road connection cannot be assumed in the DEIR analysis. It is not known whether this roadway is feasible or could be permitted by CalTrans.	This comment is noted. Please see MR-6 for more details on the transportation analysis and Highway 12 connection. Please see MR-9 on Mitigation Monitoring.
			Page 71: "8 to 30 units per gross acre and a maximum FAR of 2.0" – This is a very broad range – what was assumed for the EIR analysis? Page 72: Institutional Use: FAR of 2.0 – There is no discussion of the acreage provided for this category so the project description is incomplete. Page 72, Buffer areas: Who will be responsible for maintaining these buffer areas and ensuring they are fire resistant and appropriate for wildlife use?	This comment is noted. Please see new Table 4-4 for assumed buildout in the SP updates. Please see policy 2-1 in the SP regarding management of the buffer open space.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-22	Page 73, Hotel: 120 rooms is entirely out of scale for this rural location, outside of an urban growth area and within a high fire risk area. This use will substantially increase VMT, hamper wildfire evacuation, and generate the need for other goods and services demanded by clientele at such a high-end hotel. The community has been very vocal about not turning SDC into a tourist destination. How does this fit in with a primarily residential area and lower income residential population? Furthermore, there is nothing in the state legislation calling for a large-scale hotel. This use was not adequately analyzed in the DEIR. Page 73, Section 2.4.4.1, Core Campus Districts: There is no documentation or analysis of how these districts fit in with the surrounding land uses on neighboring lands. It is not clear how these districts comply with the fundamental objective of the project: "Balance Redevelopment with Existing Land Uses. Use recognized principles of land use planning and sustainability to gauge how well proposed land uses protect public trust resources and fit the character and values of the site and surrounding area, as well as benefit local communities and residents." What benefits are provided to the surrounding and neighboring Sonoma Valley communities?	The commenter questions several features of the Specific Plan and these comments are noted. Please see MR-3 on the level of detail of analysis in the Draft EIR.
Vicki Hill	26-Sep-22	C191-23	Page 77, Build Out: "While the project buildout projection reflects a reasonably foreseeable maximum amount of development for the Planning Area through 2040, it is not intended as a development prediction or cap that would restrict development in any of the five subareas." This statement contradicts other statements about buildout assumptions. Doesn't the plan need to have a development cap? The DEIR needs to identify the maximum buildout for each land use and then analyze that maximum development scenario. Table 4-2, DEIR assumptions regarding buildout: Table 4-2 in the Specific Plan lists the minimum and maximum number of housing units for each district. The maximum totals 1210 and the table footnote states that this number does not include additional county and state density bonuses. Density bonuses are likely to occur and are reasonably foreseeable. Therefore, the EIR substantially underestimates the full project impacts by more than 200 units or 20 percent of the project.	This comment has been noted. As noted in the Specific Plan under Table 4-2, "3. While the base housing unit range for each district is represented as a range, the total base number of units built across all districts should equal the total shown in the table". While the Specific Plan limits development at the site to a maximum of 740 units, the DEIR analyzes the impacts of 1,000 units to account for the addition of density bonuses by a future project sponsor. While the final number of units, including the density bonus units, cannot be known at this time, the addition of 240 density bonus units to the EIR's analysis represents a good faith effort to accurately analyze the maximum buildout in the DEIR.

Commenter	Date	Letter	Comment	Response
			Arnold Drive Overlay: Figure 5.3-1 in the Specific Plan shows maximum building heights of 45 feet in the historic core, right up to Arnold Drive. This height contradicts the proposed policies for Arnold Drive and conflicts with multiple requests to maintain the open feel of Arnold. This is a significant visual impact.	The figure should be read in conjunction with Plan policies. Please note that Goal 5-K of the Draft Specific Plan has been revised to read as follows:"5-K Arnold Drive Overlay: Along Arnold Drive, development should maintain the existing mature vegetation and trees, current building setbacks, and cottages on the western edge. Maintain a variety of building types and scales and views into the ballfield and other portions of the SDC site." Policy 4-27 of the Drat Specific Plan states, "Preserve and reuse houses along Arnold Drive within the core campus, reconstructing as necessary. Require that the developer hire a preservation architect to undertake a conditions assessment and reconstruction plan prior to demolishing and reconstructing houses on Arnold Drive that are in poor condition. Reconstruction should adhere to the Secretary of the Interior's Standards for Reconstruction." Streestcape improvements (figure 5.1-1 through 5.1-3) call for and depict Arnold Drive to be " Tree-lined bicycle- and pedestrian-ori-ented parkway. Narrowed roadway, raised bike lanes, improved sidewalks, infill street trees" With these policies, visual impacts to Arnold Drive are considered to be less than significant.
Vicki Hill	26-Sep-22	C191-24	Page 81, "This EIR serves as the environmental document for all discretionary actions associated with development under the Proposed Plan." This statement implies that all development will be exempt from CEQA and contradicts the statement noted on page 43. Please clarify these contradicting statements and document what projects will and will not be subject to subsequent CEQA. The road connection, for one, will not be exempt.	This sentence is deleted. As noted previously on this page (page 81 of the Draft EIR), "This EIR is intended to review potential environmental impacts associated with the adoption and implementation of the Proposed Plan and determine corresponding mitigation measures, as necessary. This EIR is a program-level EIR and does not evaluate the project-specific impacts of individual developments or projects that may be allowed under the Proposed Plan." The following text edit has been made: DEIR p. 81: "~~This EIR serves as the environmental document for all discretionary actions associated with development under the Proposed Plan.~~ This

Commenter	Date	Letter	Comment	Response
				EIR is also intended to assist other responsible agencies in making approvals that may result from the Proposed Plan. Federal, State, regional, and local government agencies that may have jurisdiction over development proposals in the Planning Area include:" This is a minor correction made to clarify and does not affect the findings of the DEIR.
			Is the site in a designated “transit-priority area”? Section 3.1 Aesthetics Section 3.1.2, Environmental Setting: The description fails to discuss the existing scenic landscapes created by the former SDC. Broad lawns and vistas to both the east and west mountain ranges exist within the campus and along Arnold Drive and these scenic vistas need to be acknowledged. The campus was intentionally designed to provide open spaces and extensive landscaping between buildings to establish a calming, tranquil environment for the clients. Please include this information in the setting and include an assessment of these visual features in the impact analysis.	Scenic resources in the Planning Area are discussed in Section 3.1.2.1 of the DEIR. As noted on page 91 of the DEIR, "There are several specific character-defining features that contribute to the SSHHD. Such features include the Core Campus, west of Arnold Drive, which creates the feeling of a traditional campus enclave with components that include a mix of buildings typical of different eras of institutional development, unified by clear east-west and north-south “axes,” lawns, and ornamental trees and landscape." The impacts to these scenic resources on the campus are discussed on page 103 of the DEIR: "Given that construction will be clustered only in the previously developed Core Campus and that new development will keep with the overall scale and development height variation of the current SDC campus, adverse effects on the scenic vistas of SR 12 on theeastern edge of the Planning Area and the scenic landscape unit on the western edge ofthe Planning Area would be less than significant. Further, as described under Impact 3.1-2, adherence withexistingand proposed policies and standards would ensure that construction of an SR 12 connector under the Proposed Plan would minimize adverse effects on a scenic vista to a less-than-significant level."

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-25	Page 103: "Given that construction will be clustered only in the previously developed Core Campus and that new development will keep with the overall scale and development height variation of the current SDC campus, adverse effects on the scenic vistas of SR 12 on the eastern edge of the Planning Area and the scenic landscape unit on the western edge of the Planning Area would be less than significant." There is no guarantee that new development will be required to comply with the advisory goal of keeping with the overall scale and development height of the current SDC campus so compliance cannot be assumed. This conclusion fails to acknowledge the increased density and overall increased number of buildings at higher heights than existing, not in keeping with surrounding land uses. The proposed plan will not maintain the large internal open space expanses. This impact analysis also fails to address the impacts on scenic vistas of Sonoma Mountain and the Mayacamas along Arnold Drive.	This comment is noted. Please see MR-9 on Mitigation Monitoring.
Vicki Hill	26-Sep-22	C191-26	Page 104: "With adherence to existing and proposed policies and standards, development of an SR 12 connector under the Proposed Plan would ensure that damage to scenic resources along SR 12 would be less than significant." But many of the proposed policies are not mandatory and therefore cannot be assumed in the analysis. Page 104, impact 3.1.3: The analysis states that the site is nonurbanized but fails to acknowledge the significant impact that will occur as a result of the proposed urban development plan – it represents a significant change in visual character. Instead, the analysis attempts to justify the project because it will create a new vibrant community. How does creating a "vibrant" community protect rural scenic qualities? The proposed plan's urban features are in direct conflict with rural scenic resources, both onsite and on surrounding properties, especially since SDC is in the middle of the rural village of Glen Ellen. Page 104, impact 3.1.3: The analysis fails to address the fact that the introduction of new modern, urban architectural features will significantly impact existing historic visual character of the campus and surrounding land uses. There is no discussion of impacts on surrounding land uses. What policies will ensure that architecture blends in with surrounding land use character? Consistency with Glen Ellen Development and Design	This comment is noted. Please see MR-9 on Mitigation Monitoring.

Commenter	Date	Letter	Comment	Response
			Guidelines: There is no mention of these existing guidelines that address Glen Ellen. How does the proposed redevelopment conform to these existing guidelines?	
Vicki Hill	26-Sep-22	C191-27	Section 3.3 Air Quality Page 167, Construction: The analysis fails to mention or address demolition impacts, which will be substantial. Page 167, Construction: Even though this EIR is programmatic, the deferral of construction impact analysis is not acceptable. There is substantial information available to develop reasonable demolition and construction scenarios. The aggregate dust and toxic air contaminants released from demolition activities must be analyzed because the amount of demolition will be enormous. Page 169: “Furthermore, because the SDC facility has been closed since 2018, there has been no change in the amount of development or types of land uses in the Planning Area between 2019 and 2022 – meaning that the 2019 baseline year conditions are comparable with existing conditions as of the release of the NOP for this EIR.” Please define both the Planning Area and study area for the air quality analysis. Is the Planning Area the same as the study area? The study area for air quality should include the surrounding community. Please provide evidence to support the conclusion that there has been no change in development. As a local resident, I can verify that conditions have indeed changed since 2019. In 2019, Glen Ellen had just lost 180 homes. These homes are still being rebuilt, as of 2022 and many empty lots are waiting to be rebuilt. There continues to be demolition, site-grading, and construction.	This comment is noted. As noted on page 167 of the DEIR, "Impacts of the Proposed Plan on air quality and criteria pollutant emissions from operations were quantified (where applicable) and assessed using standard and accepted software tools, techniques, and emission factors. Construction emissions as well as impacts related to a new connector road to Highway 12 were assessed qualitatively based on the availability of data for this plan-level document". The baseline used for impact analysis in the DEIR is from 2019 conditions which is pursuant to CEQA requirements from the NOP release. The Planning Area is the SDC site area as defined in the Project Description.

Commenter	Date	Letter	Comment	Response
			Relevant Proposed Policies: There are no mitigating policies for reduction/avoidance of demolition impacts on air quality or GHG emissions.	
Vicki Hill	26-Sep-22	C191-28	Page 183, VMT: It is incomprehensible that VMT would increase by less than 1000 as a result of the proposed plan, with so much new development and the introduction of thousands of new residents. The SDC site's location outside of an urban area will necessitate vehicle use for daily goods and services. Because the VMT is grossly underestimated, the air quality and greenhouse gas analysis both underestimate impacts and must be revised. Impact 3.3-1: The DEIR impact analysis relies on proposed plan policies to reduce air quality impacts and conform to the 2017 Clean Air Plan. Some of these policies are enforceable, and the feasibility of several policies has not been determined. For example, relying on multi-modal transportation to reduce VMT is unrealistic given the site's rural location and lack of existing or planned frequent transit service. There are no schools within walking distance, nor are there doctors' offices, hospitals, farm jobs, or winery jobs. People will be required to drive on a daily basis, most likely to Santa Rosa, Sonoma, or Napa. Also, there is no discussion of the massive amounts of demolition and associated emissions that will occur to develop a plan of this size.	This comment is noted. Please see Section 3.14 on transportation impacts. Please see MR-6 for further insight into transportation impacts.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-29	Impact 3.3-2: The DEIR claims that construction impacts cannot be assessed at this time. How will these impacts be assessed if future projects are exempt from CEQA? Page 200, Impact Summary: "Future development would be subject to individual review; new sources would be evaluated through the BAAQMD permit process and/or the CEQA process to identify and mitigate any significant exposures." This deferral of analysis and mitigation measures is not acceptable, especially since future projects may be exempt from CEQA and many uses will be allowed by right. The DEIR should at least require a buffer between new development at SDC and existing residential uses adjacent to the southern boundary, as mitigation for future potential impacts. Missing Analysis: The DEIR fails to analyze the numerous types of land uses permitted under the proposed plan that will involve toxic emissions, such as fertilizer plants and laundry facilities.	Please see MR-9 on mitigation monitoring and the deferal or exemption from CEQA analysis. Please see Section 3.10 for impacts associated with Land Use and Planning.
Vicki Hill	26-Sep-22	C191-30	Section 3.4 Biological Resources Missing Species: The wildlife species list is missing Bald Eagle, observed multiple times at the Lake Suttonfield reservoir. Missing Analysis: Impacts on wildlife movement through the campus are not discussed in the EIR. The campus itself is part of the wildlife corridor. Proposed development will result in far more activity within the campus than ever existed, even during SDC's peak operation. There will be significant impacts on wildlife movement from the introduction of thousands of people and vehicles. Furthermore, there is no overall prohibition or restrictions on fencing within the campus so wildlife will likely be blocked from movement through the campus. The proposed fencing policies refer to the open space and campus interface areas, not the campus itself.	This comment is noted. Missing species: Under CEQA, impacts to sensitive species are typically assessed if they have a moderate to high potential to occur and would potentially be affected by the proposed action. For many bird species, significant impacts would typically be associated with the potential for nesting activities to be adversely affected. While bald eagles have been observed flying over the site and in the vicinity of Suttonfield Lake, there was determined to be a low potential for bald eagles to nest on the site because the water bodies on the site and in the vicinity of the site are not large enough to support a nest. Golden eagles have a higher potential to be able to nest, due to a lower requirement for proximity to major bodies of water for nesting. Therefore, the DEIR included analysis of potential impacts to golden eagles and did not include bald eagles for analysis. Additionally, COA BIO-4 would require nesting raptor surveys to occur prior to any construction in the nesting season, which would further ensure no significant impacts occur to sensitive raptor species, including bald eagles. Missing Analysis: The Specific Plan would preserve the entirety of the approximately 755

Commenter	Date	Letter	Comment	Response
				acres outside the Core Campus as open space, including improved open space within the Core Campus through 30-50 acres of buffer open space (including riparian, wildlife corridor, and Arnold Drive buffers). The Specific Plan would also expand the Sonoma Valley Wildlife Corridor at the pinch point close to Suttonfield Lake by removing existing buildings in the northeastern portion of the Planning Area and providing that land for wildlife movement. Additionally, the Specific Plan includes policies designed specifically to minimize the impacts to wildlife at the interface of the built and natural environment during future operation (proposed policies 2-6 through 2-26). Such measures include implementing "dark skies" standards for all public realm lighting, restricting development in the wildlife corridor and creek corridor to limited trails/paths and informational signage, prohibiting domestic animals in designated areas, adhering to residential nighttime noise standards, and requiring all fencing within the open space to be wildlife permeable. The requirement for wildlife permeable fencing throughout the Core Campus would be overly perscriptive, as some areas such as the proposed dog park or gardens may be intentially designed to limit the ability of wildlife to enter.
Vicki Hill	26-Sep-22	C191-31	Section 3.5 Cultural Resources Page 295: "Furthermore, at the time when rehabilitation projects for these two individual historic resources or new work immediately adjacent to the historic resources are proposed, the project-level CEQA document would need to identify potential impacts to historic resources." This conclusion is flawed in that it attempts to defer necessary impact analysis. Again, many future projects will be exempt from CEQA so there will be no way to analyze potential impacts and develop appropriate mitigation measures.	The comment is noted. Policy 4-20 has been amended to require identification of impacts on the historic resources at the time development is proposed. This will be reflected in the County's development checklist, per Policy 4-13

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-32	Section 3.10 Land Use Analysis Page 321, Land Use Impact Analysis: The DEIR states that the proposed policies will be incorporated into the zoning codes that will be concurrently adopted by the Board. Where are the proposed amendments to the Zoning Code? Don't they have to be specified in an official proposed zoning code amendment and analyzed in this DEIR in order to proceed with adoption? Page 317, Impact 3.10-1: The DEIR claims that there is no impact associated with physically dividing an established community. This conclusion is in error. There is no discussion of the fact that the proposed dense development, which is in effect a new city, is in the middle of the existing semi-rural village of Glen Ellen. There have been many references to the proposed development as a self-contained "closed community" - this indicates that it will indeed cut off the two parts of Glen Ellen. The massive size and scale of the proposed plan will certainly divide Glen Ellen. There is no attempt to integrate the land uses on the site with neighborhoods to the north and south because the large amount of proposed commercial development is basically inconsistent with the nearby residential and semi-rural village uses. Instead, the proposed plan will create gridlock on Arnold Drive, preventing local residents from passing from one side of the village to the other side. The previous low-intensity institutional use did not create a barrier or divide the community.	The comment is noted. Please see MR-6 regarding the use of VMT rather than LOS for CEQA analysis. The Proposed Plan would still adhere to objectives CT-4.1 and CT-4.2 of the Sonoma County General Plan which pertain to vehicle level of service (LOS) standards. While most of the intersections are projected to meet the County's LOS D standard under future conditions with buildout of the SDC Specific Plan, modifications would be necessary to achieve acceptable operation at Arnold Drive/Harney Street and SR 12/New SDC Connector Road.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-33	Impact 3.10-2, General Plan Policy Consistency Analysis The Sonoma County General Plan (GP) contains many policies aimed at preventing urban sprawl and encouraging development within or adjacent to urban growth areas. The high-density development proposed for SDC is neither within nor adjacent, or even near, urban growth boundaries. Furthermore, all the land around it is within a community separator. As such, the proposed plan's size and scale is in direct conflict with County General Plan policies and therefore, the plan's project description is inconsistent with the General Plan. These existing policies still apply to the SDC site and will not be replaced by the Specific Plan. As noted on Draft EIR page 312, under CEQA, if a proposed project conflicts with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, then a significant land use impact would occur. The DEIR analysis of consistency with existing policies, contained on pages 319 to 321, does not address individual policies and fails to address the many significant impacts associated with policy conflicts. Furthermore, by failing to identify impacts, it fails to recommend mitigation measures (such as downscaling, reducing overall density and bulk, etc.) to reduce these major conflicts. This DEIR land use section includes conclusions without providing any analysis or evidence to support the claims that the proposed plan is consistent with the General Plan policies. Instead, it ignores the relevant policies and concludes that the project is consistent and no mitigation is required. The analysis of this land use impact must be revised to address each applicable General Plan policy and any other existing relevant policy.	This comment is noted. As described on page 321 of the DEIR, the Proposed Plan is consistent with the General Plan's goals for the Planning Area and includes provisions to update the General Plan and Zoning Ordinance consistent with State law in order to ensure consistency.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-34	Page 321, DEIR states: “Further, the Proposed Plan retains the overall land use framework of the General Plan with some targeted changes to promote economic development and appropriate residential and commercial infill development in the Core Campus. The Proposed Plan’s land use designations (see Figure 3.10-3) are generally consistent with those in the General Plan, although they differ in some instances. In these limited exceptions, the Proposed Plan’s designations differ from the General Plan in order to more accurately reflect either the existing zoning or current use on the property. While the Proposed Plan does include some targeted changes to land use designations, these changes are generally consistent with the General Plan vision of supporting transit-oriented residential and commercial development, encouraging new retail opportunities, and preserving open space.” This paragraph is full of inaccuracies and misleading statements. Placing high density development in a semi-rural area does NOT retain the overall land use framework of the General Plan in Sonoma Valley. It is not an infill site in an urban area. The Proposed Plan’s high density land use designations are not consistent with General Plan designations outside urban growth areas. The statement that the Proposed Plan’s designations differ from the General Plan in order to more accurately reflect existing zoning or current use on the SDC site is completely erroneous. The site is zoned Public Facility and the current use is vacant. The prior use was an institution, not a high-density urban residential and commercial community. This is not a transit-oriented development site (not along a major travel corridor in an urban area, with existing frequent transit service) and is inconsistent with General Plan policies regarding transit-oriented development.	The comment is noted. Please see Impact 3.10-2 on page 319 of the DEIR for an analysis on conflicts with any land use plan, policy or regulation. Given that the Proposed Plan is consistent with the General Plan’s goals for the Planning Area and includes provisions to update the General Plan and Zoning Ordinance consistent with State law in order to ensure consistency as discussed above, there would be less than significant impact from implementation of the Proposed Plan related to conflicts with local plans and regulations. In addition, as noted under Impact 3.1-3 on page 105 of the DEIR, new development under the Proposed Plan will occur primarily within the previously developed Core Campus area, excluding the SR 12 connector which will reuse the existing street network and avoid damage to scenic resources to the greatest extent feasible. Therefore, the proposed development would not differ substantially or detract from the existing visual quality and public views of the site by keeping with the overall scale and development height variation at the current SDC campus and by preserving the site’s open space framework outside the Core Campus.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-35	The following policy conflicts would occur, as a result of the proposed plan. These policies need to be addressed in the DEIR. It is likely that there are other relevant policies not listed below that need to be analyzed as well. OPEN SPACE/AESTHETIC POLICIES Goal OSRC-1: Preserve the visual identities of communities by maintaining open space areas between cities and communities. Objective OSRC-1.1: Preserve important open space areas in the Community Separators shown on Figures OSRC-5a through OSRC-5i of the Open Space and Resource Conservation Element. Objective OSRC-1.2: Retain a rural character and promote low intensities of development in Community Separators. Avoid their inclusion in City Urban Growth Boundaries or Spheres of Influence. Avoid their inclusion within Urban Service Areas for unincorporated communities. Objective OSRC-1.4: Preserve existing specimen trees and tree stands within Community Separators. Goal OSRC-2: Retain the largely open, scenic character of important Scenic Landscape Units. Objective OSRC-2.1: Retain a rural, scenic character in Scenic Landscape Units with very low intensities of development. Avoid their inclusion within spheres of influence for public service providers. Goal OSRC-3: Identify and preserve roadside landscapes that have a high visual quality as they contribute to the living environment of local residents and to the County's tourism economy. Objective OSRC-3.1: Designate the Scenic Corridors on Figures OSRC-5a through OSRC-5i along roadways that cross highly scenic areas, provide visual links to major recreation areas, give access to historic areas, or serve as scenic entranceways to cities. Objective OSRC-3.2: Provide guidelines so future land uses, development and roadway construction are compatible with the preservation of scenic values along designated Scenic Corridors. Goal OSRC-4: Preserve and maintain views of the nighttime skies and visual character of urban, rural and natural areas, while allowing for nighttime lighting levels appropriate to the use and location.	The comment is noted. See response to Comment C191-34.

Commenter	Date	Letter	Comment	Response
			COMMENT: The above General Plan policies point out the importance of maintaining rural landscapes and land uses and protecting the very qualities that make Sonoma Valley attractive to residents and visitors. The intensity and density of uses in the proposed Specific Plan are contrary to these policies. Implementation of the proposed plan will not preserve the scenic values of the Arnold Drive and Highway 12 scenic corridors. The visual identity of Glen Ellen and Sonoma Valley will be permanently altered.	
Vicki Hill	26-Sep-22	C191-36	COMMENT: Arnold Drive is a designated scenic corridor. It serves as a scenic component of the village of Glen Ellen; it provides expansive views of both the Mayacamas and Sonoma Mountain; it instills a sense of calm and peacefulness with its beautiful large mature treescape. The proposed land uses, development and new roadway construction will NOT be compatible with the preservation of scenic values along this scenic corridor. The policies in the proposed plan do not protect these scenic values, as the plan allows tall out of scale buildings adjacent to Arnold, inconsistent with existing land	The comment is noted. See response to Comment C191-34.

Commenter	Date	Letter	Comment	Response
			uses on the site and nearby developed properties. Figure 5.3-1 (Specific Plan) shows maximum building heights of 45 feet in the historic core, right up to Arnold Drive. The policies intended to protect qualities are “should” statements rather than shall statements. Therefore, the proposed plan is inconsistent with General Plan policies intended to mitigate an environmental effect. This is a significant impact.	
Vicki Hill	26-Sep-22	C191-37	LAND USE POLICIES Goal LU-3: Locate future growth within the cities and unincorporated Urban Service Areas in a compact manner using vacant "infill" parcels and lands next to existing development at the edge of these areas. Objective LU-3.3: Encourage "infill" development within the expansion areas of the cities and unincorporated communities. COMMENT: This is NOT an infill project. Infill development is within urban areas, as in “urban infill.” This site is not an edge to urban areas – it is within the semi-rural unincorporated low-density village of Glen Ellen, some distance away from urban goods and services (e.g., doctors, schools, etc.). Nor is the site an “expansion” area – it was a low-intensity institution that had very little impact on the surrounding community. The proposed plan will destroy the existing rural, scenic character of this area with massive removal of trees, highly dense construction, and urban development features. It is inconsistent with these existing General Plan land use policies.	The comment is noted. See response to Comment C191-34.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-38	Sonoma County Code: The DEIR summarizes relevant sections of the County Code: "Article 82 of Chapter 26 of the Sonoma County Code details general design review standards. The intent of Article 82 is not to stifle individual initiative, but to set forth the minimums necessary to achieve a healthful community whose property values are protected from unplanned developments. General development standards favor preserving natural topography, landmark sites and trees, views and vistas of the landscape, harmony with site characteristics and nearby buildings, and local architectural motifs. Article 82 also details general development standards that pertain to light and glare. Requirements include that the number, location, size, design, lighting, materials, and use of colors in signs are compatible with the architectural style of the structure they identify and harmonize with their surroundings. The color, size, height, lighting and landscaping of appurtenant signs and structures shall be elevated for compatibility with local architectural motif and the maintenance of view and vistas of natural landscapes, recognized historic landmarks, urban parks, or landscaping. Article 64 of Chapter 26 of the Sonoma County Code outlines the purpose and development criteria for the Scenic Resources Combining District which applies to the Planning Area. The purpose of this district is to preserve the visual character and scenic resources of lands in the county and to implement the provisions of Sections 2.1, 2.2 and 2.3 of the General Plan Open Space Element. Article 64 provides specific provisions that impact development for scenic landscape units and scenic corridors within the county. Such requirements include that structures should be sited below ridgelines, be screened by vegetation, and that development should be clustered. Further, Article 64 outlines requirements regarding Community Separators which also apply to the Planning Area. Except for most of the Core Campus area, the SDC site is located within a local voter-approved Community Separator overlay that preserves lands with very low densities between communities. The Community Separators help to achieve the County's General Plan Land Use Element goal to maintain natural character and low intensities of development in open spaces between cities and communities. The Historic Combining District (HD) also applies to the	The comment is noted. See response to Comment C191-34.

Commenter	Date	Letter	Comment	Response
			Planning Area. As stated in Article 68 of Chapter 64 of the Sonoma County Code, the purpose of the HD is to protect those structures, sites and areas that are remainders of past eras, events and persons important in local, state or national history, or which provide significant examples of architectural styles of the past, or which are unique and irreplaceable assets to the county and its communities. Alterations to existing structures and construction of new structures within historic districts shall be consistent with the historic district design guidelines adopted by the board of supervisors. COMMENT: It appears that the proposed plan conflicts with numerous provisions of the County Code, as it will not preserve existing character and will introduce high-density development directly adjacent to designated community separator lands. Also, the proposed removal of many historic structures will violate the intent of County Code provisions.	

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-39	TRANSPORTATION POLICIES COMMENT: The County General Plan establishes Level of Service (LOS) standards for roadway operations. Although CEQA no longer requires LOS analysis, the LOS standards still apply to the proposed Specific Plan. The proposed Specific Plan is in direct conflict with these existing LOS standards. This policy conflict must be evaluated and disclosed in the DEIR. Section 3.14 Transportation Flawed Analysis: The transportation analysis is deficient because of the lack of transparency, missing supporting documents, underestimation of impacts, and missing analysis. The assumptions used in the transportation impact analysis must be transparent and based on existing conditions and traffic patterns. Policies to encourage onsite jobs are not enough to reduce the impact. People will still need to drive to schools, doctors, grocery stores, etc. and commercial uses onsite and a hotel will draw visitors and generate many additional vehicle trips. It cannot be assumed that providing a jobs/housing balance will substantially reduce VMT. Vehicle Trip Generation: VMT is underestimated likely because of unrealistic assumptions about transit and vehicle use. The DEIR's proposed plan trip generation estimate was developed using the SCTM19 travel demand forecasting model maintained by the Sonoma County Transportation Authority (SCTA). However, the trip generation factors used in the analysis were not included in the DEIR. Consequently, it is impossible to evaluate the reasonableness of either those factors or the resulting trip generation estimates. This information is critical to understand and independently review the DEIR conclusions. Underestimation of impacts: The transportation analysis must evaluate a reasonable worse-case scenario, meaning it should be assumed that the large amount of proposed commercial space could accommodate regional businesses that generate a high volume of vehicle trips (e.g., Amazon distribution center or large retail facility). These types of facilities are being proposed in other parts of Sonoma County.	The comment is noted. Please see MR-6 regarding the use of VMT rather than LOS for CEQA analysis. The Proposed Plan would still adhere to objectives CT-4.1 and CT-4.2 of the Sonoma County General Plan which pertain to vehicle level of service (LOS) standards. While most of the intersections are projected to meet the County's LOS D standard under future conditions with buildout of the SDC Specific Plan, modifications would be necessary to achieve acceptable operation at Arnold Drive/Harney Street and SR 12/New SDC Connector Road.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-40	Missing baseline and impact analysis: One glaring omission in the transportation analysis is that there is NO MENTION of Warm Springs Rd., which connects to Bennett Valley Road (also not addressed) and is a major commuter route between SDC (as well as Sonoma and Napa) and Santa Rosa. People and trucks use this route to bypass the congestion on Highway 12 because it's faster. The VMT on this rural, winding, two-laned roadway will dramatically increase, yet there is no analysis. As a 30-year resident on Warm Springs Road, I can speak from experience regarding Glen Ellen traffic patterns. Arnold Drive is used as an alternative to Highway 12 for commuting between Santa Rosa and Napa, Vallejo, and San Francisco. The commuting route includes Bennett Valley Road, Warm Springs Road and Arnold Drive. It has gotten to the point of being dangerous to pull out onto Warm Springs Road from private driveways between Arnold Drive and Bennett Valley Road. The narrow two-lane winding country Warm Springs and Bennett Valley roads provide poor line of sight, and commuting vehicles drive at excessive speeds. There is no bicycle lane or even a roadway shoulder, yet it is a very popular bicycle route to avoid Highway 12 between Glen Ellen and Kenwood – literally hundreds of bicyclists use the road on some days. With the increase in traffic from the Specific Plan buildout, this hazardous roadway situation will be significantly exacerbated, yet it was not studied. Other commuters coming from Santa Rosa use Highway 12 to Arnold Drive to bypass congestion in Boyes Hot Springs on Hwy 12. The intersections of Arnold Drive/Highway 12 and Arnold Drive/Warm Springs Road must be added to the analysis. Traffic in Sonoma Valley has dramatically increased during the past 20 years, as evidenced by congestion on Highway 12 and Arnold Drive. All studies should be conducted using current traffic counts. Traffic counts conducted in 2018 for the referenced study "Sonoma Valley Capacity Threshold Study, Draft Report" are not reflective of current conditions. This was a time period after the fires and many residents were dislocated to other parts of the valley due to their homes being lost.	The transportation analysis focuses on the assessment of VMT, which unlike LOS, is not analyzed in CEQA transportation analyses on particular roadway segments or intersections. VMT is a measure of the amount of automobile travel occurring in a region, as measured in miles. Consistent with State requirements, the VMT effects of the Proposed Specific Plan's land uses and Highway 12 road connection were assessed using performance metrics including VMT per capita, VMT per employee, total VMT per service population, and total regional VMT. VMT is a measure of distance and does not directly affect bicyclists, though increased use of bicycling as a travel mode does reduce automobile VMT. With respect to broader bicycling conditions on Warm Springs Road and Bennett Valley Road, the 2010 Sonoma County Bicycle and Pedestrian Master Plan identifies a proposed Class II (bike lanes) facility along the length of Warm Springs Road, a proposed Class III (bike route) facility on Bennett Valley Road between Warm Springs Road and Grange Road, and a proposed Class II (bike lanes) facility on Bennett Valley Road between Grange Road and the City of Santa Rosa. With respect to bicycle commuting to and from Santa Rosa, the Bike Plan identifies the future Central Sonoma Valley Trail along the Highway 12 corridor, to which the proposed Specific Plan would include connections. The Central Sonoma Valley Trail bicycling route is anticipated to be the primary regional connection for commute and recreational travel, and will establish a much more comfortable route for bicyclists than Warm Springs and Bennett Valley Roads since it would be off-street, flatter, and straighter. Regarding the dates of traffic counts, transportation VMT analyses do not rely upon such data. Note that the analysis completed in the standalone traffic study completed for the Specific Plan did analyze LOS, and relied upon intersection traffic volume data obtained in April

Commenter	Date	Letter	Comment	Response
				2022 and supplemented by several segment counts obtained in the fall of 2021. The trip distribution estimates produced by the SCTM19 travel demand model were used in assessing the non-CEQA LOS analysis and included three percent of trips oriented to and from Warm Springs Road. Again, this information is used outside of the DEIR since LOS is no longer a topic area addressed in CEQA.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-41	Missing Analysis – Traffic Safety on Arnold Drive: Because VMT is substantially underestimated and there is no LOS analysis (that is required by General Plan policies), there is no consideration of the traffic safety implications for Arnold Drive both north and south of the SDC site. Arnold Drive bisects the central village of Glen Ellen where commercial business and private driveways join the street and pedestrians cross back and forth between businesses. This semi-rural village will very likely experience gridlock with the addition of thousands of vehicles on a daily basis. There will be substantially increased safety risks for cars trying to turn onto Arnold Drive and for pedestrians using this segment of Arnold Drive. In effect, the increased traffic on Arnold Drive will divide the existing village of Glen Ellen. South of the SDC site, vehicles exiting the multitude of private driveways (including the several hundred apartments just south of SDC) will have an extremely difficult time trying to turn onto Arnold Drive. The existing hazardous condition will be significantly exacerbated with the addition of project-related traffic. Page 409, Highway 12 Connection: The DEIR refers to Caltrans comments regarding the proposed Hwy 12 connection, “noting that the new connector should not be designed to increase vehicular throughput, since doing so could result in induced auto travel and prior Caltrans studies have indicated that Highway 12 and Arnold Drive already have sufficient capacity to accommodate growth.” What previous studies? When? Did those previous studies anticipate the size of redevelopment at SDC? How will the new connector NOT increase vehicular throughput? By its very nature, it will increase vehicle throughput to Hwy 12. Highway 12 Connection: The impact analysis assumes that the possible road connection to Hwy 12 will be implemented despite the absence of any feasibility study. The Specific Plan makes the proposed road seem tentative, which it is since it will have to undergo a lengthy CalTrans review process. It should not be assumed in the transportation impact analysis.	As discussed informationally on pages 441-442 of the DEIR, traffic volumes on Arnold Drive through Glen Ellen are projected to be very similar with the proposed Specific Plan as without it. Accordingly, the commenter's assertions that added traffic will create adverse safety conditions in the community of Glen Ellen are unsupported. The commenter's concerns about traffic delays encountered by residents to the south of the SDC campus is noted, though does not constitute an adverse safety effect of the project, and as previously described effects related to traffic congestion are no longer considered to be environmental impacts in CEQA. The commenter questions statements made by Caltrans in their response to the project's NOP regarding Highway 12 and Arnold Drive; while these statements are not part of the DEIR transportation analysis, the study that Caltrans was referring to is the "Transportation Concept Report State Route SR 12 (West)," Caltrans, 2014. The proposed Highway 12 connector road would increase throughput; this was assessed from a VMT perspective on pages 434-435 of the DEIR, with a resulting significant impact. The roadway is a component of the proposed Specific Plan and was analyzed accordingly at a programmatic level. The Specific Plan and DEIR clearly state that the precise alignment and configuration of the connector road have yet to be determined and will be subject to further CEQA review.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-42	Page 409-410: "…though a feasibility analysis of the viability of future transit service increases is beyond the scope of a programmatic CEQA assessment." The proposed Specific Plan identifies numerous policies regarding provision of transit services. How can we know if these policies are feasible and will reduce/avoid impacts if no feasibility analysis is conducted now? Infeasible mitigation policies cannot be assumed to reduce impacts. Page 410: Where is the following referenced traffic study available for review: Focused Traffic Operation Analysis for the SDC Specific Plan, W-Trans, August 2022? This report is necessary in order to conduct an independent review of the traffic numbers. Page 417: "The segment of Arnold Drive between Harney Street within the Planning Area and Glen Ellen carried a daily volume of approximately 5,400 vehicles per day in 2021." Please clarify where in "Glen Ellen" the traffic volumes on Arnold Drive were counted. Is the northern terminus of this segment at Hwy 12 or where? Page 417, incomplete sentence: "To the south of the Proposed Plan area between Harney Street and Madrone Road, daily volumes in 2021 were approximately 6,200 vehicles, as compared to approximately 7,100" – when?	As a programmatic EIR for a plan that is anticipated to come to fruition over a long-range planning period, completion of a feasibility study assessing the viability of transit service at all points in time is not currently possible. As noted by the commenter, the Specific Plan includes several policies emphasizing the need to provide effective transit service to the area; these policies are intended to guide decisionmakers and funding decisions regarding transit, including the potential extension of the Route 32 "Sonoma Shuttle" (which already operates nearby) to the Planning area and continued subsidization of fares on that route. The DEIR acknowledges the uncertainties in guaranteeing that transportation demand management (TDM) strategies to reduce VMT including those related to transit will be viable at all times, and as a result, identifies a significant and unavoidable VMT impact. The traffic study report is available on the project website. https://static1.squarespace.com/static/5e44526401cadd5712640ee4/t/6317b5c9700b2b4827735924/1662498250512/Focused+Traffic+Operations+Analysis+for+the+SDC+Specific+Plan_unsecured.pdf. The 5,400 vehicles per day Arnold Drive volume questioned by the commenter was obtained using "big data" sources provided by Streetlight Data, and reflects average weekday volumes just south of Glen Ellen near the Hill Road intersection. The 7,100 volume questioned by the commenter reflects average daily volumes on the segment south of SDC in 2019.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-43	Page 425: “Areas that have a diverse land use mix and ample facilities for non-automobile modes of travel, including transit, tend to generate lower VMT than auto-oriented suburban areas.” The SDC site is an example of an “auto-oriented” location. It is not located on a transit corridor and will generate higher VMT than a site closer to an urban area. Page 427, Historical traffic volumes: How is this discussion of historic traffic volumes relevant? The method to estimate old volumes is not accurate; also, this was 7 years ago, before regional growth occurred. “…estimated to have generated approximately 3,800 vehicle trips per day in 2015 when it was fully operational.” It wasn’t fully operational in 2015 – the clients had dramatically decreased. Table 3.14.3 Traffic Volumes: How can it be that the proposed plan results in lower traffic volumes than No Project? This makes no sense and is not valid. The assumptions for the No Project Alternative need to be revised to reflect a truly No Project scenario. Proposed Project Scenario – The traffic analysis assumes construction of the Hwy 12 connection but there are no details on this connection and no project-specific CEQA analysis of the connection to satisfy CalTrans approval requirements. Therefore, this connection cannot be reasonably assumed. As requested by Planning Commissioner Carr, please redo the analysis without the Hwy 12 connection and then compare it to the Historic Preservation and other alternatives.	The commenter's statement that the campus is auto-oriented is noted. The VMT analysis was completed in the SCTA's regional travel demand model and accounts for numerous factors beyond the site's location; the analysis does indicate that residential VMT per capita would be above the applicable threshold and would be a significant impact. The discussion of historical traffic volumes is provided solely for informational purposes as this was a topic of interest to many in the community, but this information is not relied upon in the CEQA transportation analysis. Regarding reductions in traffic volumes, Table 3.14-3 does have typographical errors; these did not affect the conclustions of the transportation analysis. For an explanation and corrected values please see responses to comment B11-246-250. Please see Master Response 6 for more information regarding the analysis of the Highway 12 connector road and its influences on the VMT analysis. Regarding the need to obtain Caltrans approval for the new roadway connection, the County will need to obtain an encroachment permit and satisfy Caltrans review processes and documentation requirements; such processes are routine and are not considered to be an indicator that the new connection would be infeasible.
Vicki Hill	26-Sep-22	C191-44	Page 432, Transportation Methodology: “The model’s 2040 cumulative year includes growth that is consistent with adopted general plans within the County and with regional projections contained in Plan Bay Area 2040.” There is no way to determine if the multiple Sonoma Valley projects that are reasonably foreseeable are included in these growth forecasts. Page 440: “For informational purposes, it is estimated that the Sonoma Developmental Center historically generated approximately 3,800 daily vehicle trips, suggesting that the Proposed Plan would generate approximately 13 percent more vehicular traffic than historical uses.” This type of statement skews the analysis and attempts to minimize the impacts of the proposed plan, by comparing trips to historical levels that are not relevant to current conditions. This type of bias should be	The effects of other foreseeable individual development projects in Sonoma Valley would not measurably influence the number of miles that future residents and employees within the proposed Specific Plan area drive on an average day. While other projects would be expected to increase background traffic volumes, they would not individually or collectively result in substantial changes to existing or cumulative travel patterns with respect to the number of daily miles that residents or employees typically drive. With respect to information about historical transportation patterns, as noted previously, this information was included because it is of interest to

Commenter	Date	Letter	Comment	Response
			removed from the DEIR. Internal Circulation Impacts: The DEIR claims that there would be little or no traffic impacts resulting from internal vehicle trips at the SDC site. However, if Arnold Drive is considered part of the “internal” roadway system, this conclusion is invalid. Arnold Drive, as a major connector roadway and essential part of the internal roadway system will be adversely impacted by the large increase in vehicle use.	some in the community, but is not relied upon in the analysis. The commenter's concerns about traffic impacts on Arnold Drive within the site are noted; based on an assessment of the projected volumes and in consideration of potentially high levels of pedestrians and bicyclists, adverse impacts are not anticipated. The Specific Plan includes several policies emphasizing Arnold Drive as a "complete street" within campus and measures to enhance circulation safety. If the commenter's concerns are related more to traffic congestion, such issues are no longer addressed in CEQA as previously noted.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-45	Specific Plan Policy 3-27, “Provide no free parking within campus.” The EIR did not analyze the impacts of this policy. This policy must be removed from the specific plan. There will be impacts on neighboring narrow streets and restrictions on vehicular access. Furthermore, where do people park their extra cars, given that only 1 space per unit is required? Impacts on recreation users – people who can’t afford to pay for parking. Also, visitors to the site? Nowhere in Sonoma Valley are there parking meters. Specific Plan Policy 3-30: “Allow adjacent on-street parking spaces to apply towards minimum parking requirements.” How would this work if there is no free parking on campus? Back-in diagonal parking – this technique doesn’t work in semi-rural areas where there are large trucks, trailers, etc. This parking configuration will have adverse impacts on roadway operations and safety. Policy 3-43, “Work with Sonoma Regional Parks Department to ensure that there is adequate off-street parking for parks users on both the east and west sides of Arnold Drive, including through the use of shared parking areas, and eliminate existing on-street parking along Arnold Drive north of the Core Campus.” This area is not part of the campus, is it? It is in the county road right of way and is an extremely popular trail access and should NOT be deleted. People with disabilities use this parking area to access the paved pathway because it is the closest area to park to pavement. Removal of this parking area will have adverse impacts on recreation access. This policy should be removed from the plan.	The intent of Specific Plan Policy 3-27 was to foster alternative mode use through charging for off-street parking in the core campus. Policy 3-27 has been amended to read, "Price off-street parking within the Core Campus to encourage alternative mode use." Parking conditions are not considered to be an environmental impact under CEQA. The presence of priced parking near an area with free parking can cause motorists to search for spaces on those free streets (commonly known as “spillover”). However, there is a limited distance motorists are willing to walk from their vehicles. In the case of SDC, on-street parking pricing would only be considered in non-residential areas, primarily in the “core campus”. The core campus is located roughly one-third mile from the nearest residential uses in Eldridge and almost two-thirds mile to Glen Ellen, walking distances that would be too lengthy and inconvenient for most motorists. Thus, the potential for spillover parking is minimal. The presence of free parking often leads to many motorists seeking spaces in the same highly-desired locations, resulting in vehicles circling the area. This can have the unintended effect of marginally increasing VMT and creating potential safety issues as drivers spend a greater amount of time searching for parking spaces. In regards to off-street spaces provided for new land uses, the one space per unit is a minimum requirement designed to allow developers to build less parking if the market they are catering to has fewer cars - it does not prevent developers from providing more than one space per unit. The goal is to not require the provision of more parking than what is anticipated to be used (which historically has occurred in many City Codes). On-street spaces abutting land uses are often the most sought-after by motorists and allow them to park in

Commenter	Date	Letter	Comment	Response
				those spaces in-lieu of off-street spaces; not including those spaces towards the minimum requirement would effectively lead to an over-supply of off-street parking. Motorists who frequently use on-street parking (e.g. patrons and visitors) will use on-street parking if it is priced appropriately (i.e. low enough such that most spaces are occupied). In terms of back-in diagonal parking, it is sized to accommodate all vehicles, similar to front-in diagonal parking and can fit large trucks. It has been shown to be generally safer than front-in diagonal spaces with fewer collisions occuring with passing bicyclists and vehicles. Vehicles with trailers are longer than all standard diagonal on-street parking spaces regardless of front-in or back-in configuration. In regards to Policy 3-43, Figure 3.1-1 shows that Arnold Drive is to be converted into a complete street, which could involve the removal of on-street parking if desired. Specific Plan Policies 2-1 and 2-4 have been amended to clarify that designated parking areas for trail users be addressed by the owner/operator.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-46	Specific Plan Components Causing Impacts There are numerous proposed Specific Plan policies and components of the proposed site plan that will have direct impacts that have been underestimated. As mitigation, revisions must be made to certain plan features. Here are some examples. Page 4-6, Specific Plan: "Employment uses are clustered in the northwest, creating a job center" – this is one of the most sensitive places for wildlife movement. Structures, employees, and vehicles will have significant impacts on the wildlife corridor in this area. Revisions to the plan are needed to avoid this impact. Specific Plan Figure 4.1-3 (FAR) doesn't show 2.0, which is what much of the campus will be allowed. Permitting 2.0 FAR reflects a strictly urban plan. There is no consideration of the site's special landscape features or of its semi-rural location, or the people living in adjacent neighborhoods. The FAR should be reduced in highly visible scenic areas along Arnold Drive and in areas where wildlife movement is important. Specific Plan Page 4-7, Plan Impacts: Provide an "active jobs center for the broader Sonoma Valley" – this will generate thousands of extra vehicle trips that are unnecessary to meet the project objectives. The state legislation does not mandate a job center nor is it appropriate in this semi-rural location, not on a transit corridor. This land use is inconsistent with county city-centered growth policies and should be identified as such in the DEIR land use policy consistency analysis. Page 4-10, Specific Plan: Creek buffer is only 50 feet – is this adequate for protection of wildlife movement?	The commenter offers several comments relating to the Specific Plan. These comments are noted. Impacts of the various Plan features referenced in the Draft EIR.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-47	Specific Plan Permitted Uses Table 4-3 and Potential Impacts: • Laundry plant, fertilizer plant, etc. - These uses would result in use of highly toxic chemicals, in close proximity to homes. This impact has not been analyzed. • Timberland Conversions – Impact 3.2-3 states that: "Further, the proposed plan does not contemplate allowing any timber harvesting activities in the area." However, Table 4-3 of the Specific Plan allows Timber Conversions as a permitted use in both the Preserved Open Space lands and in the Flex zone. This is a significant impact that has not been identified. Impact 3.2-3 must be modified to note this impact. • Tasting rooms would be permitted by right in flex zone - Please remove this from the list of permitted uses. Glen Ellen and Sonoma have been overrun by tasting rooms and they do not benefit residents. • Resort permitted by right in Hotel Overlay zone and the flex zone - Elsewhere, a hotel is referenced, which is different from a resort. Neither a resort nor hotel should be allowed by right, potentially circumventing public review and CEQA. • Both a conference center AND a 120 -room hotel are listed as permitted uses. This combination of uses is not discussed or analyzed in the DEIR. What was assumed for VMT of these two combined uses? Why are both a conference center and a hotel allowed – this was never discussed with the community?	This comment is noted. Please see the amended Table 4-3 in the Specific Plan.
Vicki Hill	26-Sep-22	C191-48	Specific Plan Policy 4-3, "Require completion of at least 10,000 square feet of retail and eating and drinking establishments and of at least 200 housing units west of Arnold Drive before beginning construction of any housing east of Arnold Drive." This policy could hamper housing development. If the County truly wants to promote housing, why is there a condition limiting housing until at least 10,000 square feet of commercial is developed? This provision seems contrary to the purpose.	This is a comment on the Specific Plan rather than the EIR and is noted.

Commenter	Date	Letter	Comment	Response
			Policy 5-K Arnold Drive Overlay: “Along Arnold Drive, development should maintain the feel and scale of the buildings and landscape along Arnold Drive, including with a variety of building types and scales, a continuous landscape setback, activity, and views into the SDC site.” This goal and its implementing policies must be modified to say “shall” and include provisions to protect views of Sonoma Mtn. and Mayacamas from Arnold Drive. Otherwise, there will be a potentially significant impact on both historic resources and visual resources (scenic views and scenic view corridor). There is no mention of protecting these views or the existing beautiful mature trees that line Arnold Drive. Also, existing setbacks and lower building heights must be maintained along Arnold Drive. Current proposed policies don’t provide those protections that the community has requested, repeatedly. Policy 5-52 “Vary building heights and types along Arnold Drive to avoid a monolithic appearance and to foster an interesting streetscape, and the existing setbacks along Arnold Drive should be maintained.” This policy needs to be strengthened by replacing “should” with “shall.”	This comment is noted. The figure should be read in conjunction with Plan policies. Please note that Goal 5-K of the Draft Specific Plan has been revised to read as follows:"5-K Arnold Drive Overlay: Along Arnold Drive, development should maintain the existing mature vegetation and trees, current building setbacks, and cottages on the western edge. Maintain a variety of building types and scales and views into the ballfield and other portions of the SDC site." Policy 4-27 of the Drat Specific Plan states, "Preserve and reuse houses along Arnold Drive within the core campus, reconstructing as necessary. Require that the developer hire a preservation architect to undertake a conditions assessment and reconstruction plan prior to demolishing and reconstructing houses on Arnold Drive that are in poor condition. Reconstruction should adhere to the Secretary of the Interior’s Standards for Reconstruction." Streestcape improvements (figure 5.1-1 through 5.1-3) call for and depict Arnold Drive to be " Tree-lined bicycle- and pedestrian-ori-ented parkway. Narrowed roadway, raised bike lanes, improved sidewalks, infill street trees" With these policies, visual impacts to Arnold Drive are considered to be less than significant.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-49	Chapter 4 Alternatives Page 529, No Project Assumptions: “While this EIR cannot pre-judge the State’s actions, the EIR tries to frame these in light of the State Legislature’s established land use objectives for the site, per Govt. Code Section 14670.10.5. Furthermore, the State has already released a developer request for proposal for development of the site pointing to the Proposed Plan underway, and can enter into long-term ground leases with private developers—cited as a mechanism for the site in the Government Code for SDC redevelopment—so that the State retains planning control over the campus unfettered by local regulations to achieve these land use objectives, should the County be unwilling to plan and zone for these uses.” Under the No Project alternative, it cannot be assumed that the state will take control of the site and that the county will have no land use authority. If the state proceeds with sale of the property, any private developer would be subject to county land use controls. The RFP issued by the State clearly states that the property is being offered for sale. There is nothing in the RFP referencing the possibility for a long-term ground lease with private developers. Furthermore, there is no documentation of how the EIR preparers derived the housing and job numbers for the No Project scenario. The State legislation does not specify that jobs are a high priority. Historic Preservation Alternative: It appears that the Historic Preservation Alternative arbitrarily excludes some elements in order to make it look less environmentally superior. For example, the road connection to Highway 12 (for emergency response) is not included. As a result, the Draft EIR claims that the Historic Preservation Alternative has greater evacuation impacts than the proposed plan. All things being equally compared, the proposed project will have substantially greater impacts on evacuation times.	This comment is noted. Please see MR-2 on the RFP timeline and MR-8 on the Historic Preservation Alternative. As noted in the DEIR on page 529, "While this EIR cannot pre-judge the State’s actions, the EIR tries to frame these in light of the State Legislature’s established land use objectives for the site, per Govt. Code Section 14670.10.5. Furthermore, the State has already released a developer request for proposal for development of the site pointing to the Proposed Plan underway, and can enter into long-term ground leases with private developers—cited as a mechanism for the site in the Government Code for SDC redevelopment—so that the State retains planning control over the campus unfettered by local regulations to achieve these land use objectives, should the County be unwilling to plan and zone for these uses." While the RFP released by the State may indicate the State's preference for sale of the property, the Government code, which specifies a lease as a method of disposition, maintains the right of the State to enter into a ground lease rather than a sale of the property.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-50	Page 533: “Thus, it is anticipated that some new development would occur under the Historic Preservation Alternative, and this alternative would prioritize market rate housing units over affordable housing units in order to generate adequate financial returns, undermining the State mandate and project objectives to promote affordable housing.” There is no documentation of this conclusion – please provide evidence to support this statement that market rate housing would be prioritized over affordable units. In fact, compared to current and projected construction costs for new buildings, adaptive reuse is an effective way to reduce costs. The alternative could still promote affordable housing, which may be more viable with lower adaptive reuse costs. Furthermore, there are financing mechanisms to fund affordable housing and policies can be included in the Specific Plan to promote more affordable housing.	This comment is noted. Please see MR-8 on the Historic Preservation Alternative.
Vicki Hill	26-Sep-22	C191-51	Page 570, Environmentally Superior Alternative: “Overall, the Historic Preservation Alternative is the environmentally superior alternative…” The text goes on to dismiss this alternative and minimize its environmental benefits. To say that the proposed plan’s impacts are “largely comparable” to the impacts of other alternatives is inaccurate and misleading. The types of impacts may be the same, but the magnitude of impacts is much less with a reduced size alternative. The Historic Preservation Alternative, in addition to reducing historic resources impacts, would substantially reduce impacts in the issue areas of traffic, biological resources, land use, visual, air quality, climate change, and public services, if properly compared to the proposed plan. Even if reuse of existing buildings may be more expensive than new construction, it would offset the significant greenhouse gas emissions and site disruption that will result from demolition and new construction. The reuse analysis conducted by the planning team did not factor in the costs of mitigating greenhouse gas impacts, which will be substantial. Therefore, the Historic Preservation Alternative provides significant advantages over the proposed Specific Plan.	This comment is noted. Please see MR-8 on the Historic Preservation Alternative.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-52, C191-53	Growth-Inducing and Cumulative Impacts Section 5.1.1.2 Jobs/Housing Growth: It is completely inaccurate to say that the proposed job growth of 940 jobs outside of an urban growth boundary, within the rural village of Glen Ellen is a “modest” number. The number of jobs cannot be compared to the county-wide number. Compared to jobs in Sonoma Valley, the addition of 940 jobs is significant and is growth-inducing. Commercial businesses are struggling to find employees for existing retail services so it is not clear how the EIR can claim that there is a shortage of jobs. Furthermore, the market study conducted for the Specific Plan determined that non-residential development did not generate overall revenues and was not a contributing factor for financial feasibility. As quoted in the SDC Alternatives Report (November 2021), "Commercial and industrial uses may support building construction costs but are unlikely to have a significantly positive impact on overall development feasibility.” While there is a large demand for affordable housing in Sonoma Valley, creating over 700 market-rate homes is a significant growth-inducing impact because there is no evidence to demonstrate the existing or projected demand for this high number of market-rate homes. These housing units will not serve the existing Sonoma Valley population – they will attract people from outside the valley and outside of Sonoma County. Page 568, Historic Preservation Alternative, Growth Inducement: “The Historic Preservation Alternative would result in 600 jobs, which is much lower than both the historical employment level of 1,365 employees at SDC prior to its closure, as well as jobs to fully balance the projected population and would thus not induce growth. Additionally, as with the Proposed Plan, all development will occur in already developed areas. The Historic Preservation Alternative would not induce substantial unplanned population growth in the Planning Area and the impact would be less than significant and comparable to the Proposed Plan. However, this Alternative would accommodate a lower proportion of the projected regional growth within the SDC campus, and lead to greater development pressures elsewhere in the region.” This is not a growth-inducing impact, yet the table shows it as	Commenter's disagreement with Draft EIR conclusions is noted. Commenter also makes regional policy suggestions that are planning rather than CEQA related and are noted. Commenter asserts that becaue the Historic Preservation accomodates less growth, it is less growth-inducing. The assertion that housing at SDC will not serve existing Sonoma County population and will attract people from "outside the vally and outside of Sonoma County" and is therefore growth inducing is incorrect. Since 2016, "natural" population increase (births minus deaths) has accounted for the majority of population growth of the Sonoma/Napa region (See report from Center for the Continuing Study of the Californai Economy https://www.ccsce.com/PDF/Numbers-Jan2021_Population-Estimates-Implications.pdf) Accodrding to the report, for Sonoma/Napa counties, "Net out-migration has been increasing since 2015 and is probably attributable to the region’s high and rising housing costs and low levels of building relative to demand." California Government Code Section 14670.10.5 makes a direct connection bewtween California's "acute housing crisis" and the need for housing, especially affordable housing, at SDC. CEQA Guidelines require that an EIR “[d]iscuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly” (CEQA Guidelines Section 15126.2(e)).Plan Bay Area 2050 aniticpates just 2% each of household and job growth in the Bay Area to be in Sonoma County. However, that regionally-small percentage still translates to 32,000 new households (or about 34,000 new housing units) and 30,000 new jobs. The Draft SDC Specific Plan will accomodate a small share--less than three percent of projected Sonoma County housing needs and exactly three percent of projected job needs--rather than induce

Commenter	Date	Letter	Comment	Response
			having a greater impact than the Proposed Plan, which is absurd. There is no basis provided for this conclusion and no evidence of regional growth projections that show this demand in Sonoma Valley. It cannot be justified that this site should accommodate a disproportionate amount of the Countywide projected growth. There is no large-scale “projected growth” for this rural area because it is outside the urban growth boundary. Growth should be placed in urban growth areas, consistent with city and county policies to avoid leapfrog development and urban sprawl.	growth. Becuase the Histotic Preservation Alterantive would accomodate lesser growth, it will result in need for additioal housing elsewhere in Sonoma County. Therefore the Draft EIR correctly concludes that this alternative would be more growth inducing.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-54	TRANSPORTATION POLICIES The County General Plan establishes Level of Service (LOS) standards for roadway operations. Although CEQA no longer requires LOS analysis, the LOS standards still apply to the proposed Specific Plan. The proposed Specific Plan is in direct conflict with these existing LOS standards. This policy conflict must be evaluated and disclosed in the DEIR. DEIR Section 7.2: Section 7.2 of the plan references additional project review but does not address any future CEQA review. MISSING SPECIFIC PLAN POLICIES THAT WOULD HELP MITIGATE IMPACTS Despite the large number of policies in the proposed plan, there are numerous critical policy omissions. Here are suggested policy additions and modifications. These policies should be incorporated into the EIR as mitigation measures. • Prohibit Big Box Developments – this type of development would significantly impact the site and surrounding area and draw large numbers of vehicles. • Prohibit exclusionary fencing within the campus, in order to allow wildlife movement throughout the campus. • Establish MANDATORY project phasing programs to ensure that housing development is prioritized over hotel and commercial development. • Require design features to incorporate permeability. • Establish performance standards to guide project phasing. • Establish mandatory policies to minimize demolition impacts associated with noise, air toxics, dust, etc. This should include project phasing.	This comment is noted. Please see MR-6 on the adequacy of the transportation analysis. Please see MR-9 on Mitigation Monitoring and performance standards.
Vicki Hill	26-Sep-22	C191-55	I am a land use planner and CEQA specialist in Sonoma County and have many concerns regarding the proposed large-scale SDC Specific Plan and the adequacy of the SDC Specific Plan Draft EIR. I am still reviewing the Plan and EIR and will submit detailed comments by the comment due date. However, I wanted to bring to your attention a few of the many issues that need to be addressed. Overall, the DEIR reflects a bias towards the proposed dense development and tends to dismiss the proposed plan's environmental disadvantages when comparing it to other reduced-scale alternatives. Substantial revisions are necessary to the EIR and Specific Plan to make the EIR adequate, under CEQA, and to create a plan that represents sound land use planning.	This comment has been noted however is pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-56	Specific Plan Scale The planning process has failed to result in a plan that even remotely resembles a community-supported alternative. The promised community-driven process has not occurred. Despite widespread, valid public concerns about the proposed high-density plan and the Board of Supervisors direction to evaluate a plan with 450 to 800 residential units, the proposed Specific Plan still includes an extreme amount of development (1000 plus homes, 410,000 square feet of commercial), which is totally out of scale for this location outside of an urban growth boundary and in the middle of the semi-rural village of Glen Ellen. There is no project comparable to this size in the entire Sonoma Valley. This urban sprawl development, including a 120-room hotel and potential conference center, will, in effect, create a new city, in direct conflict with good land use planning principles and County growth policies. Yes, we need and want housing, but there must be a balanced approach that factors in site constraints, impacts, surrounding land uses, historic resource values, and limited transportation network. This balanced approach is even reflected in the plan's guiding principles (see DEIR page 5-6) but the plan fails to conform to these principles. Project objectives to "balance redevelopment with existing land uses" and "balance development with historic resource conservation" have been ignored. The Draft EIR identifies significant, unavoidable impacts on historic resources and traffic from the proposed Specific Plan due to its size. There is no mitigation identified for destroying so many historic buildings and converting the site to a new urban development. These issues could be addressed with a smaller alternative.	This comment has been noted however is pertains to the Specific Plan and does not relate to the adequacy of the DEIR therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-57	Environmentally Superior Alternative DEIR page 570 states: "Overall, the Historic Preservation Alternative is the environmentally superior alternative…" The text goes on to dismiss this alternative and minimize its environmental benefits. To say that the proposed plan's impacts are "largely comparable" to the impacts of smaller alternatives is false and misleading. The types of impacts may be the same, but the magnitude of impacts on traffic, climate change, historic resources, noise, biological resources, public services and land use would be much less with a reduced-scale alternative. The Historic Preservation Alternative is feasible and its size and scale should be pursued as the preferred plan. Some modifications to this alternative could be incorporated to further reduce impacts, such as even more adaptive reuse and more compact development design. It appears that some impact-reducing elements included in the proposed plan were arbitrarily excluded from this alternative (e.g., the road connection to Highway 12 for emergency access), thus making this alternative appear less environmentally advantageous. Also, there is no reason to conclude that this alternative couldn't achieve affordable housing goals. Compared to current and projected high construction costs for new development, adaptive reuse can be an effective strategy to reduce overall project costs and impacts.	This comment is noted. Please see MR-8 on the Historic Preservation Alternative.
Vicki Hill	26-Sep-22	C191-58	Deferral of Analysis The Draft EIR defers analysis of impacts on some resources to a future time when individual projects are proposed. However, most if not all future projects will be exempt from CEQA under permit streamlining legislation so there will be no means to limit full buildout or implement much-needed future mitigation measures. Specific Plan Phasing SDC Planning Advisory Team (PAT) members and public comments stressed the importance of project phasing to reduce impacts on the environment and on the community. There is only one requirement for phasing (Policy 4-3, which requires completion of at least 10,000 square feet of retail businesses and at least 200 housing units west of Arnold Drive before beginning construction of any housing east of Arnold Drive) and this policy does not reduce any environmental impacts. The Specific Plan itself has a section on "Recommended Phasing"	This comment is noted. Please see MR-9 on project phasing and Mitigation Monitoring and deferred CEQA analysis.

Commenter	Date	Letter	Comment	Response
			but these provisions are advisory and not mandatory. The EIR must identify phasing as mitigation to help further reduce traffic and other impacts.	
Vicki Hill	26-Sep-22	C191-59	Need for Performance Standards Project phasing should be based on performance standards adopted for each environmental issue area. In this way, impacts can be monitored and additional mitigation measures developed, as needed. For example, there is no certainty that massive demolition and construction activities, as well as the introduction of a large mobile population to the site, will not dramatically affect the surrounding open space resources. Before proceeding with full buildout, it should be proven that the site can actually accommodate the projected buildout. 26 Specific Plan Policy Language and Enforceability Many of the policies in the proposed plan are intended to reduce/avoid impacts but the wording is such that it is not mandatory and many policies are not carried forward to Appendix A, Standard Conditions of Approval. Thus, these policies cannot be relied on to be implemented and fully mitigate impacts. Any policy that does not have a strong “shall” statement is not enforceable.	This comment is noted however it pertains to the Specific Plan and is not relevant to the adequacy of the DEIR, therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-60	Jobs/Housing Growth (DEIR Section 5.1.1.2) It is completely inaccurate to say that the proposed job growth of 940 jobs outside of an urban growth boundary is a “modest” number. The number of jobs cannot be compared to the county-wide number – this methodology purposefully minimizes the impact. Compared to the rest of Sonoma Valley, which is a distinct planning region, the addition of 940 jobs is significant and is growth-inducing. Also, there is no documentation of the need for these jobs in Sonoma Valley. The market study conducted as part of the Specific Plan alternatives report (November 2021, see sdcspecificplan.com/documents) determined that non-residential development did not generate overall revenues and did not contribute to financial feasibility. The alternatives report states: "Commercial and industrial uses may support building construction costs but are unlikely to have a significantly positive impact on overall development feasibility.” Also, the EIR (page 11) states: “…the market demand for non-residential uses (with the exception of a hotel) is limited and higher employment levels will reduce financial feasibility.” While there is a large demand for affordable housing in Sonoma Valley, creating over 700 market-rate homes is definitely a significant growth-inducing impact because there is no existing demand for this high number. These housing units will not serve the existing Sonoma Valley population – they will attract people from outside the valley and outside of Sonoma County.	Thank you for your comment. This comment is noted however it pertains to the Specific Plan and is not relevant to the adequacy of the DEIR, therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-61	Comparison to Previous Institutional Use The EIR analysis, including the growth-inducing section as well as other sections, attempts to justify the large-scale plan by erroneously comparing the proposed plan population and employee growth to the previous institutional use and number of clients/employees. This comparison is invalid and should not be used as a basis for over-developing the site due to the fact that: •As an institution, SDC tread very lightly on the environment and adjacent community. At itsmost populous, most of the residents of SDC did not leave the property. They did not drive cars,they didn't go offsite to schools, doctors, restaurants, etc. •Vehicle trips were primarily limited to employees divided into three shifts so that traffic wasspread out, rather than concentrated at peak hours. There were no retail commercial uses or ahotel to generate trips. •Because of the limited outdoor activities and absence of constant vehicle traffic onsite, peopleand cars did not interfere with wildlife movement; the campus was open, peaceful, and notoccupied with uses that generated a substantial amount of traffic (e.g., hotel, restaurants, etc.). •Employment and resident numbers at SDC reached a peak during a time over 50 years ago whenthere was very little cumulative growth in Sonoma Valley and both Arnold Drive and Highway 12were still well-functioning roadways. Nor is it valid to compare existing building square footage to proposed square footage in an attempt to minimize impacts, as it is the proposed use of the buildings that drives most of the impacts.	The comment is noted. As described in pages 579-584 of the DEIR, the Proposed Plan is consistent with the overarching regional need for both market rate and affordable housing in the Sonoma Valley and throughout the Bay Area, as well as with historic residential and employment uses of the site: SDC has facilities that housed up to 3,700 clients, and SDC was one of the largest employers in the County and the largest in Sonoma Valley. While there is no direct perfect comparison for new residents at the SDC site, the numbers are provided to give contextual reference to the fact that the site has been previously developed and has served as a home to a substantial population of residents and employees previously. Ultimately, the DEIR's environmental impact analysis considers the existing conditions of the site.
Vicki Hill	26-Sep-22	C191-62	EIR Traffic Assumptions There is no guarantee that people who live onsite will work there. That cannot be assumed for purposes of analyzing traffic impacts. Also, it cannot be assumed that the roadway connection to Highway 12 will be developed. Therefore, the traffic impacts are substantially underestimated in the EIR.	This comment is noted. Please see MR-6 on the adequacy of the transportation analysis.
Vicki Hill	26-Sep-22	C191-63	Wildlife Corridor Impacts Despite many scoping comments, impacts on wildlife movement through the campus are not addressed in the EIR. The campus itself is part of the wildlife corridor and must be acknowledged as such. Furthermore, there is no overall prohibition or restrictions on fencing within the campus (only	This comment is noted. Please see MR-7 on wildlife movement.

Commenter	Date	Letter	Comment	Response
			prohibition on wooden fences) so wildlife will likely be blocked from movement through the campus. There will be significant impacts on wildlife movement from the introduction of thousands of people and vehicles, as well as fences.	
Vicki Hill	26-Sep-22	C191-64	No Project Alternative Definition Under the No Project alternative, it cannot be assumed that the state will take control of the site and that the county will have no land use authority. If the state proceeds with sale of the property, any private developer would be subject to county land use controls. The RFP issued by the State clearly states that the property is being offered for sale. The RFP contains no reference to the possibility for a long-term ground lease with private developers. Therefore, this is not a reasonable assumption.	This comment is noted. Please see MR-2 on the RFP timeline. As noted in the DEIR on page 529, "While this EIR cannot pre-judge the State's actions, the EIR tries to frame these in light of the State Legislature's established land use objectives for the site, per Govt. Code Section 14670.10.5. Furthermore, the State has already released a developer request for proposal for development of the site pointing to the Proposed Plan underway, and can enter into long-term ground leases with private developers—cited as a mechanism for the site in the Government Code for SDC redevelopment—so that the State retains planning control over the campus unfettered by local regulations to achieve these land use objectives, should the County be unwilling to plan and zone for these uses." While the RFP released by the State may indicate the State's preference for sale of the property, the Government code, which specifies a lease as a method of disposition, maintains the right of the State to enter into a ground lease rather than a sale of the property.
Vicki Hill	26-Sep-22	C191-65	Financial Feasibility Despite making references to financial considerations, there is no definition or accurate assessment of the financial feasibility of the proposed plan or alternatives. While financial feasibility is required, there is no mandate to maximize revenues at the cost of other resources and values, or at the cost of reasonable land use planning. Thank you for considering my comments. Please feel free to contact me if you have any questions or need clarification on any of these comments.	Thank you for your comment. This comment is noted however it pertains to the Specific Plan and is not relevant to the adequacy of the DEIR, therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-66	I am unable to attend the Landmark Commission hearing regarding the SDC Specific Plan and Draft EIR but have the following comments. As a land use planner and CEQA specialist, I have serious concerns about the proposed Specific Plan and it's impacts on historic resources (and many other environmental impacts). These impacts could be substantially reduced by a smaller alternative, as identified in the Draft EIR. 1.A redevelopment plan of this scale (over 1000 homes and 900 jobs) on the historic SDC campuswill destroy multiple significant historic structures and the historic setting and values of thesite. Although the Draft EIR assumes 1000 homes, Specific Plan Table 4-2 identifies maximumbuildout numbers, which total 1210 residential units. This total does not include densitybonuses that will likely be granted to the future developer. It will not be possible to preservethe historic character of the site with a project of this size.	This comment has been noted. As noted in the Specific Plan under Table 4-2, "3. While the base housing unit range for each district is represented as a range, the total base number of units built across all districts should equal the total shown in the table". While the Specific Plan limits development at the site to a maximum of 740 units, the DEIR analyzes the impacts of 1,000 units to account for the addition of density bonuses by a future project sponsor. While the final number of units, including the density bonus units, cannot be known at this time, the addition of 240 density bonus units to the EIR's analysis represents a good faith effort to accurately analyze the maximum buildout in the DEIR.
Vicki Hill	26-Sep-22	C191-67	The proposed plan is inconsistent with one of the fundamental project objectives, which calls forbalancing development with historic resource conservation. The high-density plan does notprovide a balance and would not maintain the historic integrity of the site. The SDC site hasbeen determined eligible for listing as a Historic District under the National Register of HistoricPlaces. 3.The Draft EIR identifies significant, unavoidable impacts on historic resources from theproposed Specific Plan. There is no mitigation identified for destroying so many historicbuildings and converting the site to a new urban city-like development, as called for in theproposed plan. 4.The Draft EIR identifies the Historic Preservation Alternative as the environmentally superioralternative. Because of its reduced size, impacts on historic resources would be less thansignificant under the Historic Preservation Alternative. This alternative would also be consistentwith the project objectives. Furthermore, this alternative has other environmental advantages,some of which have been dismissed in the Draft EIR.	This comment has been noted. Please see MR-8 regarding the Historic Preservation Alternative's adherence to the project objectives.

Commenter	Date	Letter	Comment	Response
Vicki Hill	26-Sep-22	C191-68	While financial feasibility is required, there is no mandate to maximize revenues at the cost ofhistoric resources. The Historic Preservation Alternative is feasible and its size and scale shouldbe selected as the preferred plan. Some modifications to this alternative could be incorporatedto further reduce impacts, such as even more adaptive reuse and more compact developmentdesign. It appears that some impact-reducing elements of the proposed plan were arbitrarilyexcluded from this alternative (e.g., the road connection to Highway 12 for emergency access).Also, there is no reason to conclude that this alternative couldn't achieve affordable housinggoals. Compared to current and projected high construction costs for new development,adaptive reuse can be an effective strategy to reduce overall project costs and impacts.	This comment is noted. Please see MR-8 on the relative cost and feasibility of the Historic Preservation Alternative.
Vicki Hill	26-Sep-22	C191-69	6. The Draft EIR defers analysis of impacts on individually significant historic resources to a future time when individual projects are proposed. However, many future projects will not be subject to CEQA and therefore the analysis cannot be deferred – it must take place as part of the Specific Plan EIR and mitigation measures must be identified.	As described on in Section 3.5.3.3 of the DEIR, the Specific Plan includes Goals, Policies and Standard Conditions of Approval developed to prevent any significant adverse impacts to the two individually significant historic buildings on the SDC campus. Additionally, while some projects on the campus may not be subject to further CEQA review, as noted on page 295 of the DEIR, "at the time when rehabilitation projects for these two individual historic resources or new work immediately adjacent to the historic resources are proposed, the project-level CEQA document would need to identify potential impacts to historic resources. The CEQA Guidelines require a project that will have potentially adverse impacts on historical resources to conform to the Secretary of the Interior's Standards for the Treatment of Historic Properties. Therefore, the impact of implementation of the Proposed Plan on individually significant historical resources would be less than significant with implementation of the proposed policies and actions referenced above and existing State regulations."

Commenter	Date	Letter	Comment	Response
Planning Commission Hearing	Thursday, September 15, 2022	C192-1	I appreciate this opportunity to speak. I'm going to speak mostly about the EIR as it relates to the historical alternative. On page 561, it states the Historical Alternative assumes a preference for more large lot, single-family homes in order to maximize financial feasibility. My question is, based on what analysis or precedent? I'd like to point out the Community's Alternative Plan that we submitted last Friday to the DGS does not rely on large lot single-family homes but contains a mix of all types of housing in a village community setting. And for those of you, just to make it clear, the Community Plan was developed by the people of Glen Ellen and the surrounding Sonoma Valley. It was submitted to the DGS, as I said, last Friday. It came about due to extreme frustration with the County's planning process, where, while there were many community meetings and opportunity for input, they were generally largely ignored and both the MAC and the -- one of the PATs has filed complaints about that. So the community got together to develop a plan on its own. Some key issues of it are that it maintains local community control over the land for now and actually for the next hundred years. It's a truly community-developed plan, and I'd like to point out, this is a really democratic government action. It was done by the people for the benefit of the people, so thank you very much. I appreciate the opportunity.	Thank you for your comment. This comment has been noted. Please see MR-8 on the Historic Preservation Alternative's adequacy at meeting project objectives.

Commenter	Date	Letter	Comment	Response
Planning Commission Hearing	Thursday, September 15, 2022	C192-2	I serve as Chair of North Sonoma Valley Municipal Advisory Council, or the MAC for short, and we're in the process of drafting a response to the draft EIR, and this will represent extensive community input over several years, which is also summarized in a letter to the supervisors in January. Whatever number of units is approved, we request the Specific Plan be revised to incorporate a multiphased approach, and it includes a robust Mitigation Monitoring Program. No one knows how this is going to turn out, and there needs to be room to maneuver in our rapidly changing landscape. It appears that the DEIR fails to disclose the full extent of impacts that will result from this large-scale development outside an urban growth area. The Specific Plan represents one of the largest, if not the largest, development in the history of Sonoma Valley and is in conflict with County General Plan policies calling for city center growth. Our many concerns about this project are detailed in our letter. I'd like to highlight that the DEIR itself states that the Historic Preservation Alternative is environmentally superior. That alternative calls for a cap of 450 housing units. The same number that has been endorsed by the MAC. Scale is the most obvious mitigation for this project. A smaller project means a smaller impact. One specific concern I'd like to mention, the DEIR states that the Core Campus is not included in any fire severity zones. The map used in the DEIR doesn't show such zones in the local responsibility area where the Core Campus is. That map was drawn by the state fire marshal and doesn't include that data for the LRA. In fact, the state's draft map shows moderate and high fire severity zones within the Core Campus. Please re-examine this data, and also please add a third scenario for the possibility of a wildfire coming down from Sonoma Mountain. Thank you.	Thank you for your comment. This comment is noted. Please see MR-8 regarding the Historic Preservation Alternative's alignment with project objectives. Please see response B3-25 regarding the LRA and response B3-23 regarding the possibility of a fire originating from the west.

Commenter	Date	Letter	Comment	Response
Planning Commission Hearing	Thursday, September 15, 2022	C192-3	Okay. Thanks. I serve as Chair of North Sonoma Valley Municipal Advisory Council, or the MAC for short, and we're in the process of drafting a response to the draft EIR, and this will represent extensive community input over several years, which is also summarized in a letter to the supervisors in January. Whatever number of units is approved, we request the Specific Plan be revised to incorporate a multiphased approach, and it includes a robust Mitigation Monitoring Program. No one knows how this is going to turn out, and there needs to be room to maneuver in our rapidly changing landscape. It appears that the DEIR fails to disclose the full extent of impacts that will result from this large-scale development outside an urban growth area. The Specific Plan represents one of the largest, if not the largest, development in the history of Sonoma Valley and is in conflict with County General Plan policies calling for city center growth. Our many concerns about this project are detailed in our letter. I'd like to highlight that the DEIR itself states that the Historic Preservation Alternative is environmentally superior. That alternative calls for a cap of 450 housing units. The same number that has been endorsed by the MAC. Scale is the most obvious mitigation for this project. A smaller project means a smaller impact. One specific concern I'd like to mention, the DEIR states that the Core Campus is not included in any fire severity zones. The map used in the DEIR doesn't show such zones in the local responsibility area where the Core Campus is. That map was drawn by the state fire marshal and doesn't include that data for the LRA. In fact, the state's draft map shows moderate and high fire severity zones within the Core Campus. Please re-examine this data, and also please add a third scenario for the possibility of a wildfire coming down from Sonoma Mountain. Thank you.	Thank you for your comment. This comment has been noted. Please see MR-8 on the Historic Preservation Alternative's adequacy at meeting project objectives.

Commenter	Date	Letter	Comment	Response
Planning Commission Hearing	Thursday, September 15, 2022	C192-4	Josette Brose-Eichar, Boyes Hot Springs. I would like to thank Commissioner Carr for his realistic assessment and questions that he had up-front. I'm going to focus on just a few things since time is short. The hotel is one of the biggest problems. Vehicle miles traveled are not dealt with properly. It is pushed off to the future. Not only is gas travel not dealt with realistically, but the reality's that these will be low-paying jobs and employees will be traveling from outside the Sonoma Valley. Really, hotels should not be in the Specific Plan to begin with. Then we have the connector road to Highway 12. Nowhere is it addressed the impact this road will have on the wildlife corridor. It will be a complete disruption in how animals move today. Plus, it will be virtually useless during what we now -- what we now have: Unpredictable wildfires. Assumptions made in the draft EIR are not reality. Water. I see no analysis of what water we have today from our various water districts and no acknowledgment of climate change and a decreasing supply of groundwater. No specifics are offered on water recycling. Should that not be in the EIR? And why is the most ecologically sound plan not being considered? As an EIR is an environmental impact report, not -- why not go for the least environmental impact? And last, why are there no real numbers, aka, economic feasibility to explain pushing these housing units, which will most likely be unneeded market rate homes. The EIR uses outdated thinking and conclusions as if this was a new subdivision in Walnut Creek and not a massive development in the middle of a rural area. The impacts are not defined and push to the future when they will not be dealt with adequately. Thank you so much.	Thank you for your comment, This comment is noted. Please see MR-7 on the impacts of the Highway 12 connector on the wildlife corridor.

Commenter	Date	Letter	Comment	Response
Planning Commission Hearing	Thursday, September 15, 2022	C192-5	Hi. My name is Sonya Karabel, and I'm with UNITE HERE Local 2, which is the hotel workers union for Sonoma County. I am commenting not really on the EIR but on the Draft Specific Plan, but since it seems that there's not going to be any future opportunity to comment on the Draft Specific Plan, I wanted to get that in now. And I just wanted to raise the -- you know, the Sonoma County, especially Sonoma Valley, has a really, really big problem with inequality and with development that furthers that inequality, and in order for this development to be something that actually moves that forward and helps to address those problems, there should be community benefits at the Sonoma Developmental Center, making sure that there's strong affordable housing, that there's -- that the jobs that are provided are good jobs, including, you know, if there are hotel jobs, that there's environmental protections, that there's wildlife -- wildlife corridors and that there -- that disability justice is integrated into the Plan. And that the best way to do that, you know, for -- to ensure those community benefits is to put that into whatever the ultimate development agreement that happens is and actually get whoever that developer is to make legally binding commitments to community priorities, and so that's something that we want to see be integrated into the Specific Plan and -- and ensuring that, you know, when we do know more about what this development actually -- you know, what a developer is proposing, that that developer, you know, commits to doing something that really benefits the entire -- the entire community and the residents. So thank you.	Thank you for your comment. This comment is noted however it pertains to the Specific Plan and is not relevant to the adequacy of the DEIR, therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Planning Commission Hearing	Thursday, September 15, 2022	C192-6	Hi there. I think what I want to address is both the Specific Plan and the EIR. I may be one of the few people in here now who actually had a loved one at the SDC site in the Northern STAR Unit. That is my son, who, since the closure of the SDC STAR Unit has endured horrible abuse in the community, which has been verified heartily by Community Care Licensing, and he's currently being warehoused in his third stay at Northern STAR now in Vacaville, as a result of the close of the SDC. So I want to make really clear, you are aware that state legislation mandates that priority needs to be given to the housing needs of individuals with developmental disability when planning. There's not nearly enough talk about that mandate, which you are legally mandated to do. Along with many other families and advocacy organizations, I'm asking you to prioritize this population. Specifically we're asking for five enhanced behavioral support homes on the site, which would also be very good from an EIR perspective. This issue is really of utmost importance, as this population is falling through the cracks with the closure of Sonoma Developmental Center, and they are being subjected to ongoing harm due to the closure. So I'm asking everyone to honor the legacy of SDC, and I'm asking everyone involved in the process to carefully consider your legal obligations and to uphold your legal mandate to prioritize this population. Thank you.	Thank you for your comment. This comment is noted however it pertains to the Specific Plan and is not relevant to the adequacy of the DEIR, therefore no further response is required.
Planning Commission Hearing	Thursday, September 15, 2022	C192-7	Thank you very much for the opportunity to speak today. My name is Bryce Jones. I live in Sonoma County for the past eight years and wanted to speak to the impacts of this project. Granted, a thousand units sounds like a lot of housing, but it's a drop in the bucket for what we need in terms of housing in Sonoma County. This project, as I can tell, preserves a huge amount of wilderness and open space, provides access to recreational opportunities, which is going to be great for multiple age groups, and as far as I can tell, you know, this project has been thoroughly discussed in the public. I've participated in some of the other comment sessions and would really like to applaud Permit Sonoma's Staff's work on this project. This is an incredibly attractive place to live from -- from my point of view, from somebody with a six-year-old daughter, you know, it seems like a great place to go for a walk. It's nice density so you can walk to different businesses that will potentially be there. There's a mixture of homes, and I	Thank you for your comment. This comment is noted however it is not relevant to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
			think Staff has really done a phenomenal job, along with the consultants, on crafting something that takes into concern, you know, the -- the wild environment, but as well the needs of creating housing opportunities for people and families in the county, and I would definitely like to recommend the planning commissioners support the project. And I really, you know, just think it's great. Thank you very much.	
Planning Commission Hearing	Thursday, September 15, 2022	C192-8	Thank you. Steve Birdlebough with The Transportation and Land Use Coalition, and I -- I think that the Plan that was drawn up was based on information that was years old. The negotiations with the state assume that, because there were more than 4,000 people on this site years ago, that you could have a development here that would involve a lot more driving than was involved in the previous occupancy. And the Air Resources Board is moving in the direction of reducing vehicle miles traveled. Sonoma County has a goal of reaching carbon neutrality by 2030. The state is looking at 2045. Our own goal would involve a six percent per year reduction in vehicle miles traveled. The state plan calls for about a one percent per year reduction. Both of those are very important to -- to honor, and I think this project just doesn't meet that goal. Highway 12 is pretty much at capacity now. Adding another 1,000 housing units in this particular location is not a good idea. Caltrans has told us that they don't want to have an additional road from this area over to Highway 12, so there's a lot that really hasn't been looked at and needs to be looked at in this situation. Thank you.	Thank you for your comment. This comment has been noted. Please see MR-6 on the adequacy of the transportation analysis.

Commenter	Date	Letter	Comment	Response
Planning Commission Hearing	Thursday, September 15, 2022	C192-9	Good afternoon. My name is Teri Shore, environmentalist. I live in Sonoma Valley. First, I would support Greg Carr's comments about the Planning Commissioners to follow his lead. And regarding the planning, with all due respect to the urban planners, if this plan for the historic campus was in an existing city or town, I would probably support it, but unfortunately, it's in the middle of an ag and rural -- agricultural valley, and it really constitutes sprawl as proposed. I believe that the CEQA is inadequate, and the self-mitigating plan does not fully mitigate the environmental impacts by a long shot. I'll be providing more detailed comments, as will other folks, but I just wanted to focus on the open space at this time. And I'm very concerned that the Specific Plan in the EIR give few details about the preserved open space and how it will be protected and their re-introduction or introduction of commercial agriculture. Under the land use plan, I don't think any of these items were anticipated and preserved open space, which are in Table 4.3 of the Specific Plan, which includes wine tasting rooms, wholesale nurseries, timber conversions, indoor crop cultivation, farm stands, farm retail sales, animal keeping, agricultural processing, agricultural crop production and cultivation. None of those are appropriate for preserved open space, and none of those were studied in the EIR, so that is one major failure, and we need to clarify the open space unprotected from commercial agriculture. Thank you very much.	Thank you for your comment. This comment is noted. Please see MR-1 on the adequacy of a self-mitigating Specific Plan.
Planning Commission Hearing	Thursday, September 15, 2022	C192-10	Hi, I'm Tracy Salcedo, and I live in Glen Ellen -- am I? Yeah. Okay. And I just have a couple of comments. I'll be making other comments in a letter, but I'm talking right now from -- I'm multitasking from the library at Dunbar Elementary School in Glen Ellen, and it occurs to me that one of the things I haven't seen in either the EIR or the Specific Plan is discussion about the schoolkids that will be part of the new community that is being planned. If you add about a thousand homes at 2.5 people per home, assuming that the half person is a child and not someone who's been lopped off at the hips, that means that up to 500 of the new residents of SDC will be school-aged. Since there's no school planned for the property, that means all those kids will need transportation buses and/or private vehicles	Thank you for your comment. This comment is noted. As described on page 394 of the DEIR, one of the significance criteria assessed is the "Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: a) Fire protection, b) Police protection, c) Schools, d) Parks, e)Other public facilities" As noted on page

Commenter	Date	Letter	Comment	Response
			to get to or from school. While vehicle miles traveled will be minimized by use of electric vehicles, that doesn't offset the traffic impacts that will be felt Valley-wide. So I would like to see the DEIR analyze replacing possibly the hotel with a school property, so that kids could maybe walk to school, and/or replacing the proposed conference center or, you know, something that would really benefit the community that way.	402 of the DEIR, "Using the SVUSD's student yield factors for K-6, 7-8, and 9-12 grade student populations per household for single-family housing, apartments, and affordable housing units,implementation of the Proposed Plan would result in a total of approximately 448 new students within the Planning Area.", an increase in student population that woulc fall well within the existing capacity of local area schools and would not require an expansion or construction of school facilities, as noted on page 403. Therefore the impact to school facilities would be less than significant.
Planning Commission Hearing	Thursday, September 15, 2022	C192-11	And just a final comment about cumulative impacts, which is kind of what I was talking about, and the analysis of fire danger. I'd to see the report analyze the cumulative impacts of shunting all of the proposed people onto Highway 12 in the event of wildfire blowing out of the Mayacamas and onto Arnold Drive, in the event of wildfire blowing off of Sonoma Mountain. And the reason is basically because you're taking so many more people and you're throwing them onto either one of those two-lane highways, and no matter which direction they go, they're going to end up in a bottleneck, either in Sonoma or heading into Santa Rosa. So those are my comments. Thank you.	Thank you for your comment. This comment is noted. Please see MR-4 regarding the wildfire evacuation analysis. Please see response to comment B3-27 on wildfire risk.
Planning Commission Hearing	Thursday, September 15, 2022	C192-12	Good afternoon, Commissioners. I'm Meg Beeler, the Chair of Sonoma Mountain Preservation. Like many in the audience, SMP believes that the DEIR needs significant modifications. We'd like it to be used as a tool for systematic implementation as required by the state. We'd like your help with this. The proposed new road from Arnold Drive to Highway 12 is one example. The road will create substantive adverse effects on the wildlife corridor, on the open space and on the protected wetlands that support documented endangered species. The road will be in the direct path of the 2017 fires, yet sending residents fleeing into Diablo winds is not even mentioned in the DEIR. Quote, "best practices" in the DEIR did not address the cumulative effects of such a road. The approach of quote, "We'll do needed studies later," unquote, gives developers no clear direction up front and does not guarantee wetlands and species protection or mitigation policy. Riparian zone	Thank you for your comment. This comment is noted. As noted on page 252 of the DEIR, Policy 2-25 requires inclusion of protective buffers of at least 50 feet along Sonoma and Mill creeks, as measured from the top-of-bank, to protect the sensitive communities. Section 7-14.5 of the Sonoma County Code establishes stream setbacks for structures requiring a building permit, with minimum setbacks equal to the greatest of 1) two and one-half times the height of the stream bank plus 30 feet, 2) 30 feet outward from the top of the stream bank, or 3) any distance established in the general plan and/or zoning code. Future development would be subject to these setbacks' requirements. If riparian habitat and other sensitive natural communities are present and disturbance is

Commenter	Date	Letter	Comment	Response
			protection is another. The DEI -- DEIR ignores studies that say that creek setbacks should be up to 325 feet. Instead, it proposes only a 50-foot setback next to Sonoma Creek and none next to Mill Creek. Adding 2400 people around these creeks, without addressing the cumulative effects of the environmental degradation is not best practice. It is unacceptable. The community's offered many specific suggestions for best practices and mitigation. It's 3500 pages, as you've noticed, yet these have largely remained unaddressed or ignored. We're counting on you to offer better direction to Permit Sonoma. Thank you.	required, federal and State regulations would require measures to reduce, avoid, or compensate for impacts to these resources. The requirements of these regulations are implemented through the permit process as indicated in Conditions of Approval Measure BIO-14. In addition, Conditions of Approval Measure BIO-1 requires conducting specific project biological resource assessments prior to commencement of any project. With implementation of Measure BIO-1 and Conditions of Approval Measure BIO-14, impact of future development under the Proposed Plan on riparian habitat or sensitive natural communities would be less than significant. See also response to comment B8-5 and B8-9 regarding riparian area policy amendments. Please see MR-6 on the impact of the Highway 12 connector.
Planning Commission Hearing	Thursday, September 15, 2022	C192-13	Hi. Good morning. Good afternoon. I'm Bonnie Brown, chair of the SDC Campus Project. We have a proposal out for two years for adaptively reusing some of the residential buildings on the east side of the build -- of the campus for single-resident occupancy for the disabled and people of lower income. They are good -- they are in good condition, as by all reports should have been done. They have some toxics that need to be removed. According to the Plan, Specific Plan, and you can see all the maps and in the DEIR, all of the buildings on the east side of Arnold Drive are planned to be demolished and all new construction. And one of the really big impacts of that, which has never been addressed, is the -- there are only two unavoidable impacts that have been designated in the DEIR and one that needs to be included, and we have asked for it to be quantified, is greenhouse gas emissions when you tear down that many buildings and then source all of the new materials for all new construction. And it has -- I haven't found it anywhere in the DEIR when we asked for that to be addressed.	Thank you for your comment. This comment is noted. Please see MR-8 on the Historic Preservation Alternative.

Commenter	Date	Letter	Comment	Response
Planning Commission Hearing	Thursday, September 15, 2022	C192-14	Also, involving the connector road through the open space, that would go right through the wetlands, in the middle of the great east side of the open space. It would be right where the groundwater recharge would be happening, wildlife, and then the road runoff. And actually the state agencies have said there would be a lot of greenhouse emissions. We have Madrone Road three blocks south of the entrance to SDC campus, and it is a wide road of three lanes most of the way. If people try to take that as an access during wildfires, they wouldn't be able to get onto Arnold Drive or Highway 12. They'd be totally impacted. There's not a use for this road, and it's really a bad idea. I hope you'll speak to that. Thank you.	Thank you for your comment. This comment is noted. Please see MR-6 on the impact of the Highway 12 connector.
Planning Commission Hearing	Thursday, September 15, 2022	C192-15	Thank you. I'm Sharon Church. I'm a resident of Glen Ellen, and I have submitted some written comments already, but I would like to say, I appreciate Greg Carr's concern about the inadequate time on the schedule. It really feels like this horrendous plan is being shoved down our throats and that people haven't been listening and just, you know, minimally including a few little points here and there because we're going to ramrod through the maximum. Well, economically feasible doesn't mean eco -- doesn't mean maximum building for maximum profit, ignore everything else, and that's exactly what seems to be happening here. So please, please, take the time, listen to the comments. Let's make some adjustments. The community wants to have something there that will work and we can be proud of, that provides the legacy of care and housing for the developmentally disabled: Affordable housing. We don't need hotels, conference centers, expensive homes. Let's get real here about what we do need and recognize where you're building it: In the path of severe fires. Knowing loosies [phonetic] were the affordable housing when that does come to -- to pass, because if you really believe in affordable housing, you're not going to just say, "Hey, developer, you can pay me off with a few bucks and we've done our job." That just doesn't work anywhere. So at any rate, the community's participated. We really want to feel like we're being heard, and we'd like to partner in this, but so far it doesn't feel like that's what's been happening. Thank you.	Thank you for your comment. This comment is noted however it pertains to the Specific Plan and is not relevant to the adequacy of the DEIR, therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Planning Commission Hearing	Thursday, September 15, 2022	C192-16	Yeah. First, I want to mention that I represent EcoRing, which is a nonprofit that promotes ecotourism and green travel. I want to endorse what Commissioner Carr said. I think that he's spot on. One of my big concerns is that I feel that the excessive development here will actually harm tourism; that it will diminish the attractiveness of the site and will increase the traffic to where people will not want to visit. And there's a great deal of economic activity that accrues from the tourism in the area, so it's -- it's a problem in that regard, and I think it needs to be addressed. I'm very concerned, too, about the cavalier attitude towards VMT and the greenhouse gas generation that it represents. VMTs have to go down, and this is going in the wrong direction. And the EIR that they're presenting suggests that it's not mitigatable. Well, that's because the plan they chose isn't mitigatable. They need to revise the Plan, and it can be mitigated in one way by reducing the amount of development. At any rate, so also I'm concerned about the fact that there's not a consideration for bicycle transport to Sonoma and to -- and to Santa Rosa from Eldridge, so there doesn't seem to be alternative transportation available. Thank you.	Thank you for your comment. This comment is noted however it is not relevant to the adequacy of the DEIR, thus no further response is required.
Planning Commission Hearing	Thursday, September 15, 2022	C192-17	Hi. This is Bob Holloway. I'm a resident of the nearby Agua Caliente neighborhood, and I want to thank you for the opportunity to comment here. I'd like to submit my strong support for the Historic Preservation Alternative that's outlined in the draft EIR. As you know, the County's preferred alternative, which is the Specific Plan, it does provide some very thoughtful preservation guidelines in the form of its goals and policies in the Cultural, Historic, and Tribal Cultural Resource, Chapter 3.5.33, but a loss of 28 percent of the contributing historic resources, combined with this new dense infill construction of, like, 30-foot to 40-foot high additional infill building and the alteration and reconstruction of the remaining contributing structures within this national and state register eligible historic district is simply too great a loss of the historic fabric to retain the district's historic feeling and character. This would cause a property to lose its eligibility for listing in the national and the California registers and as a California historic landmark. These impacts are described in the draft DEIR as significant because they cause a substantial adverse change to the historic district as defined by the -- the	Thank you for your comment. This comment is noted. Please see MR-8 on the adequacy of the Historic Preservation Alternative in satisfying project objectives.

Commenter	Date	Letter	Comment	Response
			district sense of place, and it would not honor the legacy of the developmental center's former uses and Staff. The historic story can best be told as -- with as much of the original character as possible, even with repurposed original buildings. So 1,000 units of housing is way too impactful, and I'd urge you to look at the Historic Preservation Alternative outlined in the DEIR as the preferred alternative. Thank you.	
Planning Commission Hearing	Thursday, September 15, 2022	C192-18	Hi there. I'll keep these brief to squeeze more people in. But I'm 33 years old and have lived in Sonoma Valley for about ten years now and just want to offer a perspective from my generation, a generation that's come of age during wildfires and heatwaves and COVID and what seems like ceaseless development. As I consider my future in this county, you know, in light of a housing affordability and climate crisis, the SDC planning process has been a revealing, if not frustrating, microcosm of the gulf between what this county says it values and what its actions suggest. I've attended many of these public comments and followed the evolution of this project closely and in community of people who live in the area, and I think it's obvious to anyone who's paying half -- halfway decent attention to this plan means to me the DEIR is friendly for developers and not the community. If the latter was actually granted the respect and attention it deserves, these units would prioritize affordable housing and minimize environmental impact entirely and really meet the moment of a world that's rapidly changing every day and hurdling us into an unlivable planet. And this plan obviously doesn't do that. I urge the Commission to listen to the overwhelming community consensus and echo the sentiment, as well of Commissioner Carr to allow more time for this process to be intelligently and democratically completed, and thank you everyone for their time.	Thank you for your comment. This comment is noted. Please see MR-2 on the need to extend the planning process timeline.

Commenter	Date	Letter	Comment	Response
Planning Commission Hearing	Thursday, September 15, 2022	C192-19	Hello, this is Claire Amkraut. I'm a resident of Boyes Springs, and my comment is related to page 561, where it says open space is available within the Core Campus. It would be less than in the Proposed Plan due to lower densities in existing building in the location of buildings within areas reclaimed as open space in the Proposed Plan, and I'm talking here specifically about the Historic Alternative. What analysis is this based on? And I want to point out that the community's alternative, which was presented to DGS on September 9th, has more open space than the Proposed Plan and the buildings do not interfere with open space. I also want to point out that the lower number of housing units in the Community's Plan presents many options for mitigation of the issues that are pointed out in the EIR. Continuing on, on page 562, Paragraph 2, it refers to the lower financial feasibility of the Historical Alternative, and what evidence do you base this on? The Community's Plan shows more financial feasibility based on a compact, smaller scale layout rather than the sprawling layout in the Preferred Plan. I also am going to close by saying that I support Commissioner Carr's comments and also Bob Holloway, who is another supporter of the county looking at the Historic Alternative. Thank you for the opportunity to comment.	Thank you for your comment. This comment is noted. Please see MR-8 on the adequacy of the Historic Preservation Alternative in satisfying project objectives.
Planning Commission Hearing	Thursday, September 15, 2022	C192-20	Good afternoon, Commissioners. My name is John McCaull. I'm the Land Acquisition Director for Sonoma Land Trust. With more than four decades of experience in Sonoma Valley, the Land Trust is working to ensure that the irreplaceable wildlife corridor values of the SDC Campus and adjacent open space remain viable options for wildlife movement and health. Since we started working on SDC more than ten years ago, our conservations goals have remained the same, get the 750-plus open space acres of SDC transferred into park ownership and ensure the permeability of the SDC Campus for wildlife movement. We're also on record as supporting significant affordable housing development at SDC that is compatible with the property's natural values and resource constraints.	Thank you for your comment. This comment is noted however it pertains to the Specific Plan and is not relevant to the adequacy of the DEIR, therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Planning Commission Hearing	Thursday, September 15, 2022	C192-21	I want to just -- we're going to submit detailed comments on the Specific Plan and EIR. I want to use the biological analysis today as an example of the problems with the concept of a self-mitigating EIR. The draft EIR's analysis and discussion of potential biological impacts is extremely limited and is insufficient to determine whether the Plan's potential impacts will be significant. The EIR fails to discuss how proposed new roads and significant increases in traffic and human activity on the site may affect wildlife movement or cause other significant impacts, and as one speaker mentioned, the EIR will permit uses in the preserved open space that conflict with open space preservation goals. The problem is that the lack of analysis of biological impacts and other impacts prevents the EIR from identifying significance levels. You can't identify impacts. You can't develop mitigation measures. So we have a lot more to say on this, but I just want to flag that this self-mitigating EIR framework is really where we need to start to understand the problems moving forward. Thank you very much.	Thank you for your comment. This comment is noted. Please see MR-1 on the adequacy of a self-mitigating Specific Plan.
Planning Commission Hearing	Thursday, September 15, 2022	C192-22	Thank you for the opportunity to talk to you today. First of all, I want to state my -- well, first of all, my name is Jim Price. I live in the Springs. I've been here since 2008, and a homeowner. My -- I want to state strong support, first of all, for the Glen Ellen Historical Society and their work in presenting a -- the -- what I would be calling the Hundred Year Proposal, and my comments are -- are based on, you know, the support for the Historical Alternative, which, when you look at how the -- the Permit Sonoma has characterized the historical alternative, it appears to be written as a put-down to the downgrade and the HAN boost the Preferred Plan with comments pared -- prepared by the same authors as proposed by the Plan. It's not appropriate in an ERA process for, you know, the -- you know, for the people who are -- who are offering a Preferred Plan to be stating their biases within the context of the EIR, which appears to be the case here. Specifically on page 562, Paragraph 2, the lower potential for well-designed active gathering places, what is that based on? What is the empirical data on which that analysis is based on? The Community Plan, which has been proposed by the -- on behalf of the community by the Glen Ellen Historical Society, provides more open space for activity gathering. On page 562,	Thank you for your comment. This comment is noted. Please see MR-8 on the adequacy of the Historic Preservation Alternative in satisfying project objectives.

Commenter	Date	Letter	Comment	Response
			Paragraph 2, quote, the area available for habitat and movement would be lower than the Proposed Plan. Based on what analysis? What is the empirical data in which the -- the authors are basing that on? The Community Plan shows increase in open space for wildlife habitat and movement over the Preferred Plan. Thank you for the opportunity to comment.	
Planning Commission Hearing	Thursday, September 15, 2022	C192-23	Thank you. As I mentioned, my concern is that we're not paying attention to democratic participation of the public, first, but more importantly, we have a rogue Planning Department that apparently is running the Board of Supervisors and apparently is in negotiation with the state in ways that none of the public is participating in, and I think we need to take another look and an analysis of our whole planning condition and what is going on here in terms of allowing public comments to be heard but not acted on. It's clear that we need to now reconsider everything, and of course, that's one of the things is we might consider how did the Planning Department choose this planning consultant, and why is it that the planning consultant and the planning department are so far away from what the public has been telling them for the last five or ten years? Something is way out of whack here, and I don't know quite who to go to other than, you know, a grand jury or a law case or take it to the public through some kind of a -- it says here in the planning laws that we can actually bring things like this, the changes in the planning -- the General Plan and changes in zoning can actually be put up to a public vote. So I'm not quite sure what our -- our mechanisms of change of this kind of a disastrous proposal can be, but I don't want anymore excuses from the Planning Department about how they've tried	Thank you for your comment. This comment is noted however it pertains to the Specific Plan and is not relevant to the adequacy of the DEIR, therefore no further response is required.

Commenter	Date	Letter	Comment	Response
			to talk to the public and listen to the public and that this represents the public's interest, because that's not true, as many of the other facts and fictions that they put into their plans are not true, so I'm very concerned that we have some kind of evaluation of the planning process that's gone on, because it's low confidence.	
Planning Commission Hearing	Thursday, September 15, 2022	C192-24	Hello, I'm Gina Cuclis, and I'm glad I got to follow Larry Davis, because Larry is expressing what I, and I know a lot of people, feel about the frustration, feeling like the community has not been heard and listened to. I live in Boyes Hot Springs. I've lived in Sonoma Valley 36 years. It's where I raised my twin daughters, who are now 29. And the next thing I want to address is what was said earlier at Staff about middle-income housing. I happened to express that issue before. I've been to so many of these meetings in the last few years, I can't remember where and how many times I've said it, but this plan, the discussion in the EIR, doesn't address -- properly address middle-income housing. My experience over the 36 years in Sonoma Valley, and that includes being on the City of Sonoma's Planning Commission many years ago, private developers, they don't come to Sonoma Valley to build middle-income housing. We say 25 -- the Plan says 25 percent affordable, which, by the way, is way too low percentage, but the other 750, the develop -- a private developer is going to want to build as expensive housing as you can get, and that's McMansions. So this is not meeting a community need. And I just also want to the say thank you for Greg Carr. You can tell who the one Sonoma Valley resident is on the Planning Commission, and what he had to say about the planning process in moving forward is excellent, so thank you.	Thank you for your comment. This comment is noted however it pertains to the Specific Plan and is not relevant to the adequacy of the DEIR, therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Planning Commission Hearing	Thursday, September 15, 2022	C192-25	Hi, my name is Deborah Nitasaka. Can you hear me? DEPUTY DIRECTOR ORR: Yes, we can. DEBORAH NITASAKA: I submitted a letter last November, and it seems to have been filed in the "Who Cares" bin as none of my thinking is reflected in anything coming out of Permit Sonoma, so I will revise that letter to reflect how the draft EIR's impact on it speaks to that. I've lived in Glen Ellen for 30 years. I'm an affordable housing advocate. I'm going to read a statement here. "SDC's built campus includes construction areas, a fire department, police and horticulture carve-outs, all areas that should be reinstated, this time as classrooms." I see no earnest attempt by the County to locate such a resource, but they are out there. My dream for a technical or trades campus would provide desperately needed professional training for California's young adults wanting to work with their hands and minds. Building trades, applied science programs, are just some of the ways in which this wonderful campus might educate people for the jobs of today and tomorrow, while also providing the means to maintain the special place to serve the special needs of those with special needs, the essential needs of those with special needs. This model would include surrounding cottage neighborhoods, housing requiring minimal traveled miles, as it would be largely for students, staff and educators, along with special needs housing designed to accommodate the developmentally disabled, those with other disabilities and physical challenges, etc. All affordable housing, all with appropriate supportive services to be coordinate and provided, where possible, by students and staff, to be developed on the outskirts of the main campus. Thank you. DEPUTY DIRECTOR ORR: Thank you, Deborah.	Thank you for your comment. This comment is noted however it pertains to the Specific Plan and is not relevant to the adequacy of the DEIR, therefore no further response is required.

Commenter	Date	Letter	Comment	Response
Planning Commission Hearing	Thursday, September 15, 2022	C192-26	My name is Kathy Pons. I'm looking at the goals of this project and -- and I'm finding it hard to find anything that is -- is regarding the legacy of care. I think that -- that because SDC was a hospital for developmental -- developmentally disabled people, that it just kind of follows that maybe some of that should be carried on and some of the buildings could be actually utilized for that. I think there needs to be -- I -- I support the historical alternative because of the opportunity to be able to reuse some of those buildings for that kind of housing, for housing with dis -- with -- for people with disabilities in particular. I think it's -- it should carry a higher priority than being economically feasible, which sounds like -- I mean, there's a common sense there, but -- but what -- if the developers are going to give priority to have to do what they want, just because it -- it's more economically feasible for them, I think we need to rethink that and have some discrepancy or some other perks for them if needed and get what the community is asking for in that area. So I support Commissioner Carr's comments on the time schedule, and I hope that that will, you know, go forward and soon. Thank you.	Thank you for your comment. This comment is noted however it pertains to the Specific Plan and is not relevant to the adequacy of the DEIR, therefore no further response is required.
Planning Commission Hearing	Thursday, September 15, 2022	C192-27	Jim B., speaking as an Oakmont resident. This is more a visceral comment. I've enjoyed everything that everyone has said so far about the development. And I think -- I support Commissioner Carr as well, and I hope the other commissioners listen carefully to what he was saying. But I'll just -- this is just feelings, and I remember both being in line on Pythian for the Glass Fire to get out that direction, and then also the Oakmont Drive for the earlier Nuns Fire trying to get out. Both of them were very frightening situations for all of us here in Oakmont. And I heard someone say that the state of California has no intention of changing Highway 12. Well, that's great that you have a plan for leaving Elnoka and going out to Highway 12. What happens after you get out to Highway 12, though? It was frightening. I think the commissioners actually have people's lives in their hands right now in the decisions that they're making, and I support the person who brought up perhaps having a grand jury look at this and moving it out of these people's hands. Thank you.	Thank you for your comment. This comment is noted however it is not relevant to the adequacy of the DEIR, thus no further response is required.

Commenter	Date	Letter	Comment	Response
Planning Commission Hearing	Thursday, September 15, 2022	C192-28	Oh, great. Thank you. Thank you for the opportunity. Yeah, Larry Hanson, and I'm President of the Board of Forest Unlimited. We've been working to protect forest and forest watersheds in Sonoma County for over 25 years, and so I have a keen interest in the open space and the protection of the watersheds, protection of the forest and the woodlands there, for the watershed value for climate change mitigation and for wild -- wildfire, wildlife habitat I should say, and the wildlife corridors. However, the protection for this has not really been spelled out, and, therefore, is inadequate. In addition to that, the setbacks for the riparian zones do not actually protect the riparian areas, and are, therefore, inadequate in the Plan. The development plan should be based on the most ecological plan in this day and age that we are faced with, with wildfires and drought impacts and climate change, etc., and I don't think that's happening -- that's not the Proposed Plan. Housing should be city centered and not in a rural -- not rural centered, and there is insufficient analysis of the ingress and egress for wildfire impacts. And the alternative analysis is inadequate and needs realistic additions to it. I tried to cover as many -- as much as I can. The great comments that I've heard from everybody, I agree with. And Commissioner Carr we agree with. Thank you.	Thank you for your comment. This comment is noted however it pertains to the Specific Plan and is not relevant to the adequacy of the DEIR, therefore no further response is required.
Planning Commission Hearing	Thursday, September 15, 2022	C192-29	The process has failed to produce a reasonable plan. We all agree we need housing, but trying to force a high-density development into a site outside of an urban growth area makes no sense. The site is not in a transit corridor, nor is it next to an urban area. The state legislation does not mandate maximizing economic return, especially at the total expense of responsible land use planning. And how can it possibly be claimed that it will be a self-contained community? As a land use planner, I wholeheartedly agree with Commissioners Carr and Koenigshofer and their concerns. I urge you to stop the train to avoid a train wreck. Don't wait for the final EIR to implement changes. Stop now, downsize the Plan, listen to the public, incorporate much needed phasing requirements and performance standards and then finalize the EIR. It's the only rational way. The EIR assumes plan policies will mitigate impacts, but the feasibility of these policies is unknown, such as increasing transit. And many policies are unenforceable, so the EIR grossly	Thank you for your comment. This comment is noted. Please see MR-8 on the adequacy of the Historic Preservation Alternative in satisfying project objectives.

Commenter	Date	Letter	Comment	Response
			underestimates the impacts. It's clearly biased towards the Proposed Plan. The EIR identifies the Historic Preservation Alternative as being environmentally superior but then dismisses its advantages and incorrectly claims that the impacts of the Plan and alternatives are comparable. Some mitigating components, such as widening creek corridors, were arbitrarily excluded from the Historic Preservation Alternative, making it look worse than it is. The Proposed Plan contradicts the County Transit Growth and Land Use Policies and is inconsistent with its own guiding principles to truly balance uses and resources. I urge you to stop and take a look, and if you want to look at history, look at the Eldridge For All website. It has a lot of history about community input. Thank you.	
Planning Commission Hearing	Thursday, September 15, 2022	C192-30	Norman Gilroy. Thank you. It seems to me we're sitting here listening to the same debate that happened in San Jose and Silicon Valley 30 years ago. You know the results of that. They lost it piece by piece. And we are in the beginning of doing that, in fact maybe we're in the middle of doing that, in Sonoma County. We need to think carefully about our future. It's not for nothing that the community proposal is called the Hundred Year Plan. We need to be thinking in those terms, and I believe that we are not in this plan. I'm concerned that the language of the Plan, and in particular the language of the Historic Alternative, are biased to -- to the proposed -- to essentially put a hit on the Proposed Plan or at least support the Proposed Plan, I'm sorry. It talks about the Historical Alternative being less superior in environmental features, energy use, etc. lacking community vibrancy, etc., etc., all of which are unsupported claims. All of which, by the way, in the community's proposal, have been covered and are actually just the opposite. How do we get that kind of information into the process and take the bias out of the way the -- the analysis has been made? Overall the Historic Preservation Alternative is the environmentally superior alternative and reading from the Plan. We agree and we urge	Thank you for your comment. This comment is noted. Please see MR-8 on the adequacy of the Historic Preservation Alternative in satisfying project objectives.

Commenter	Date	Letter	Comment	Response
			the Planning Commission to adopt it as the preferred alternative under the EIR. I thank you for the opportunity to -- to testify. I support the comments of Commissioners Carr and Koenigshofer. I think they're right on. I think we should do something about that now. Thank you.	
Planning Commission Hearing	Thursday, September 15, 2022	C192-31	Thank you for this opportunity to speak, and I think my comments were made a few speakers back, so I won't take too long on this, but I just wanted to say that I think it's very clear that increasing the supply of affordable and workforce housing is broadly supported by the Sonoma Valley community. I live just south of the SDC site, very easy walking distance, and I personally really want to see a vibrant community there, but not at any cost to the environment and the health and safety of Sonoma Valley residents. And I think our general understanding was that the DEIR should really help the community better understand the scale of the environmental impacts of the Specific Plan, how they would be mitigated, what options were considered, and why these options were dismissed. And I don't think we're there yet, frankly, and I think part of that was just touched on, I think because a lot of the language is "should language" rather than "shall language," so it's not, you know, necessarily as impactful. There are terms used such as "if feasible" or "assumed" are used repeatedly, so I think the analysis -- there's some acknowledgement of some uncertainty in the impacts and the mitigation measures as well. So I really suggest that -- that as was just mentioned, we look at some way to phase the project, to look at mitigation check-ins or compliance or something along those lines to really better	Thank you for your comment. This comment is noted however it pertains to the Specific Plan and is not relevant to the adequacy of the DEIR, therefore no further response is required.

Commenter	Date	Letter	Comment	Response
			understand what we're doing and what we're getting into as we move through this process. Thank you.	
Planning Commission Hearing	Thursday, September 15, 2022	C192-32	Thank you. Just a few comments. In reviewing this draft EIR, it seemed to me there are a lot of conclusions stated, summaries stated, but not necessarily any supporting information in our studies. I always look for what the study underlying the conclusion in and it was lacking in a number of areas, and I'll cover just four of those. First, with respect to hazardous materials and hazardous waste, there was a phase 2 environmental analysis that recommended further study in quite a few areas that are summarized in a chart on page 464 of the appendix. Those apparently weren't done. Secondly, there's a reference to a W-Trans operational traffic study. If you look in the appendix, that's a one-page study of trip generation. There's no study. I think you want -- may want to look at the Sonoma Valley traffic study that was done in connection with the winery events as something that could be good. Third, as to vehicle miles traveled, I didn't see a study. Again, there's no link to what the study is, so you can't read through the assumptions, so what assumptions were used for household employment, total service segments of vehicle miles traveled where the -- where's the nearest affordable market, where's the nearest medical center, and so on. So that needs to be detailed. And then fourth, as far	Thank you for your comment. This comment is noted. Please see MR-6 on the adequacy of the transportation analysis.

Commenter	Date	Letter	Comment	Response
			as cumulative impacts, that essentially said that all the regional models capture cumulative impacts, and, therefore, we don't need to do a cumulative impact analysis. I urge you to -- urge you, Planning Commission, to ask for further studies that support the summaries and the recommendations because currently the underlying studies have not been provided or have not been done or both. Thanks.	

Commenter	Date	Letter	Comment	Response
Planning Commission Hearing	Thursday, September 15, 2022	C192-33	Thank you, Commissioners. And thank you, Brian for your presentation. Brian mentions that the PAT has supported a product Permit Sonoma has come up with. The PAT does not support this product. In fact, over a year ago, 12 of the 14 PAT members wrote a letter to Permit Sonoma saying this process is going in the wrong direction and is largely broken. As the commissioner asks, is this a done deal? This product, with all of its self-mitigating effects in the draft EIR, this quote-unquote "preferred alternative," appears to have been baked in from the start despite the community's clear preferences for other alternatives now coalescing around the Historic Alternative and as well as the Sonoma Valley Community Plan submitted to the Department of General Services last Friday. This Historic Alternative is clearly the superior alternative, not only environmentally, as is the concern in the draft EIR, but it also largely mitigates community concerns over emergency evacuation and traffic impacts in general, two factors Permit Sonoma identifies as problematic in the Historic Plan, are economic viability and slightly less open space in that plan. Well, the open space -- the housing in that plan was spread out deliberately. It can be easily brought in. There will be way more open space as it's easily brought in and adjusted. The economic viability, builder groups have been looking at the campus and have identified that a profit can be turned at 600, 450 and 385 units, depending on the group looking at it. Other groups that are supportive of this appropriately scaled alternative of 450 units are the North Sonoma Valley MAC, the Sonoma Valley Citizens Advisory Council, the Sonoma City Council, the Landmarks Commission and frankly the Board of Supervisors at their meeting in January. As Commissioner Carr wonders, I believe the whole Sonoma Valley community is supportive of doing the right thing and is committed -- and the community has clearly shown its commitment to participate in as many hearings as needed to get this right. We are with you. We can get this right. Thank you again.	Thank you for your comment. This comment is noted. Please see MR-8 on the adequacy of the Historic Preservation Alternative in satisfying project objectives.

3 Revisions to the Draft EIR

This chapter lists revisions to the Draft EIR by chapter and page, in the same order as the revisions would appear in the Draft EIR. New text is indicated with an underline in red and deleted text is indicated with ~~strikethrough~~.

Project Description

The first paragraph on page 68 is hereby amended as follows:

It also aims to improve multi-modal access from the SDC to Highway 12 (State Route 12 or SR 12) by exploring the feasibility of constructing an additional east-west emergency access connection from the site. Implementation of the Proposed Plan will also expand the existing Sonoma County fire district to serve SDC and identify a location for the fire district to construct a new fire station within the Core Campus.

The first paragraph on page 53 is hereby amended as follows:

Sonoma Valley Regional Park is directly to the north; ~~portions of Sonoma Valley Regional Park,~~ Martin Street~~,~~ and Mill Creek to the south; …

The first paragraph on page 61 is hereby amended as follows:

~~SDC was also the valley's largest employer until its closure~~ For a significant part of the 20th century SDC was Sonoma Valley's largest employer, with ties to adjacent communities of Glen Ellen and Eldridge.

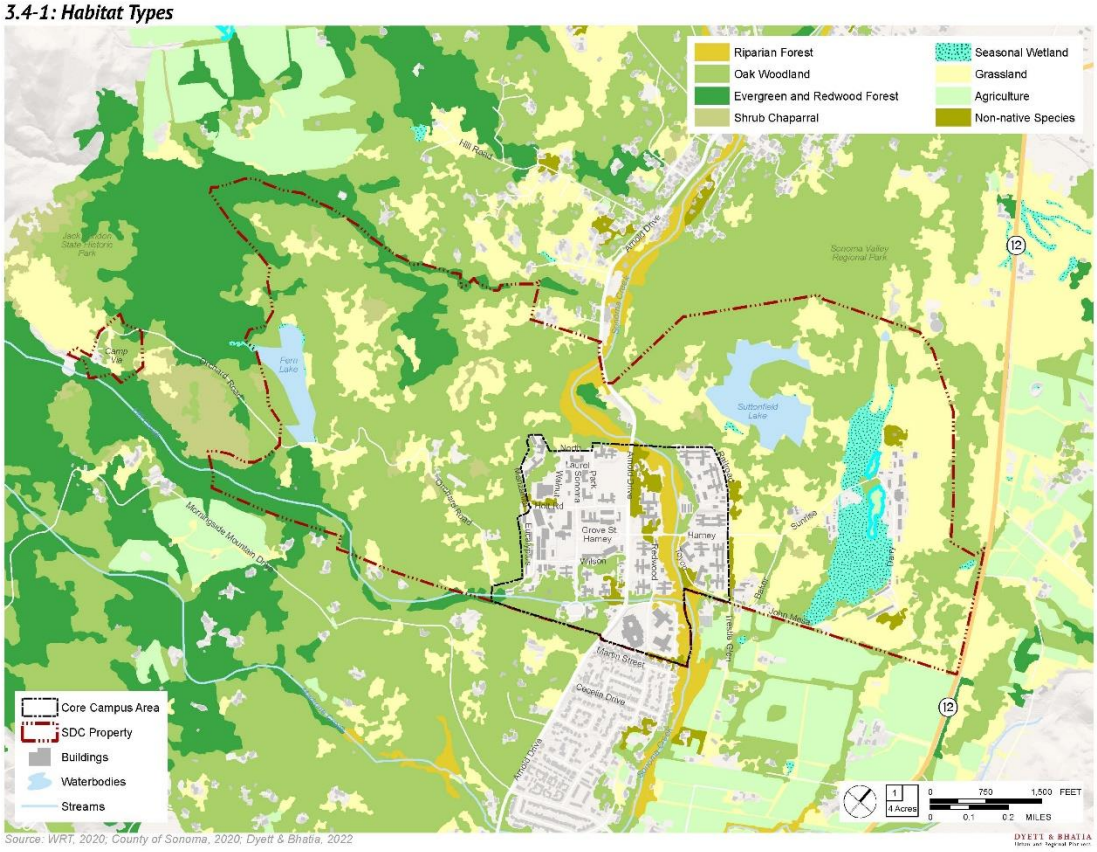
The last paragraph on page 81 is hereby amended as follows:

~~This EIR serves as the environmental document for all discretionary actions associated with development under the Proposed Plan.~~ This EIR is also intended to assist other responsible agencies in making approvals that may result from the Proposed Plan. Federal, State, regional, and local government agencies that may have jurisdiction over development proposals in the Planning Area include: …

Biological Resources

Figure 3.4-1 is hereby amended to change the 'Vernal Pool' label to 'Seasonal Wetland'.

3.4-1: Habitat Types



The first paragraph on page 68 is hereby amended as follows:

Other small patches of seep and swale wetlands on the property are typically beneath forest canopy and support herbaceous species such as mugwort (*Artemisia vulgaris*), horsetail (*Equisetum* spp.), ~~spice bush (*Lindera benzoin*),~~ knotweed (*Polygonaceae* spp.), and ferns.

Table 3.4-2 is hereby amended as follows:

Table 3.4-2: Potential Special-Status Wildlife

Scientific Name	*Common Name*	*Conservation Status*	*Potential to Occur in the Planning Area*
Agelaius tricolor	tricolored blackbird	~~SMBTAT~~ ST	**Moderate Potential.** The Planning Area contains two freshwater reservoirs that could support nesting tricolored blackbird.
Ammodramus savannarum	grasshopper sparrow	SSC	**Moderate Potential.** Grasslands in the Planning Area are potentially suitable to support this species.
Antrozous pallidus	pallid bat	SSC, WBWG High	**High Potential.** Trees with exfoliating bark and some structures within the Planning Area may provide areas suitable for roosting. The species has been documented within a mile of the Planning Area (CDFW 2022)
Aquila chrysaetos	golden eagle	BGEPA, SFP	**Moderate Potential.** The Planning Area contains suitable grasslands for foraging and suitable trees for nesting. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
Ardea alba	great egret	no status (breeding sites protected by CDFW)	**Moderate Potential.** The Planning Area contains some trees near the reservoirs that could support this species.
Ardea herodias	great blue heron	no status (breeding sites	**Moderate Potential.** The Planning Area contains some trees near the

Scientific Name	*Common Name*	*Conservation Status*	*Potential to Occur in the Planning Area*
		protected by CDFW)	reservoirs that could support this species.
Athene cunicularia	burrowing owl	SSC	**Moderate Potential.** Grasslands in the eastern portion of the site could support this species in the winter. The species does not breed in Sonoma County.
Chaetura vauxi	Vaux's swift	SSC	**Present.** This species has been occasionally observed on the site (eBird 2022).
Circus cyaneus	northern harrier	SSC	**Moderate Potential.** The SDC contains open habitats for nesting and adequate areas for nesting.
Contopus cooperi	olive-sided flycatcher	SSC	~~**Moderate Potential**~~ **Present.** The Planning Area does contain coniferous forests that could support this species. An iNaturalist record exists for this species on the site.
Corynorhinus townsendii	Townsend's western big-eared bat	SSC, WBWG High	**High Potential.** Forests and structures within the Planning Area provide potentially suitable habitat for roosting.
Dendroica petechia brewsteri	(Brewster's) yellow warbler	SSC	**Moderate Potential.** The Planning Area does contain adequate riparian habitat to provide nesting habitat for this species.
Dicamptodon ensatus	California giant salamander	SSC	**Present.** This species is known to occupy forested areas near

Scientific Name	*Common Name*	*Conservation Status*	*Potential to Occur in the Planning Area*
			streams on the site, including Ashbury Creek along the northern border.
Elanus leucurus	white-tailed kite	SFP	~~**High Potential.**~~ **Present.** The Planning Area contains suitable grassland and forested habitat for nesting and foraging.
Emys marmorata	Pacific (western) pond turtle	SSC	~~**Moderate Potential.**~~ **Present.** The permanent and perennial aquatic features and surrounding areas on the site contain suitable habitat for this species. There is an iNaturalist record for this species on the site.
Icteria virens	yellow-breasted chat	SSC	**Moderate Potential.** Some suitable habitat is present in riparian areas.
Lanius ludovicianus	loggerhead shrike	SSC	**Moderate Potential.** The Planning Area contains open grasslands and patches of sparse woodlands that could support this species.
Lasiurus blossevillii	western red bat	SSC, WBWG High	**High Potential.** The Planning Area contains some broad-leaved trees that are suitable for roosting.
Myotis thysanodes	fringed myotis	WBWG High	**High Potential.** Forests and structures within the Planning Area provides potentially suitable habitat for roosting. The nearest documented occurrence is along

Scientific Name	*Common Name*	*Conservation Status*	*Potential to Occur in the Planning Area*
			the northern border of the Planning Area (CDFW 2022).
Myotis volans	~~L~~long-legged myotis	WBWG High	**Moderate Potential**. Primarily found in coniferous forests, but also occurs seasonally in riparian and desert habitats. Large hollow trees, rock crevices and buildings are important day roosts.
Nycticorax	black-crowned night heron	no status (breeding sites protected by CDFW)	**Moderate Potential.** The Planning Area contains some trees near reservoirs that could support this species.
Oncorhynchus mykiss irideus	steelhead - central CA coast DPS	FT	**Present.** This species is known to occur within the reach of Sonoma Creek that runs through the Planning Area. Sonoma Creek, and streams in the SDC are designated Critical Habitat for the species.
Oncorhynchus tshawytscha	Chinook salmon - California coastal ESU	FT, RP	~~**Moderate Potential**~~**.** **Present.** This species has been reported to be present within the Sonoma Creek watershed, upstream of the site. ~~Sonoma Creek, and connecting tributaries within and around the Planning Area, provide suitable habitat~~. This species has only rarely been documented in this part of the watershed and it is unlikely that a viable run exists.

Scientific Name	*Common Name*	*Conservation Status*	*Potential to Occur in the Planning Area*
Rana boylii	foothill yellow-legged frog (northwest/north coast clade)	SSC	**Present.** The species has been documented in Asbury Creek and is assumed to be present in the other rocky streams on the site.
Rana draytonii	California red-legged frog	FT, SSC	**Moderate Potential.** The nearest documented occurrence of this species in the CNDDB is located about 2 miles from the site. There is an iNaturalist occurrence that may be closer. Several aquatic features on-site have the physical and biological characteristics that could support CRLF. Despite the presence of bullfrogs and predatory fish in at least some of these features, the presence of CRLF cannot be ruled out without further, site specific analysis that employs ~~CDFW~~ USFWS protocol level surveys.
Strix occidentalis caurina	Northern spotted owl	FT, ST, SSC	**High Potential.** The Planning Area contains forest with suitable complexity necessary to provide nesting habitat for this species. Known occurrences are present in the adjacent Jack London State Park, with contiguous forest into the SDC.
Syncaris pacifica	California freshwater shrimp	FE, SE	**Present.** This species is known to occur within Sonoma Creek on the SDC property. Other streams and creeks in the Planning Area also

Scientific Name	*Common Name*	*Conservation Status*	*Potential to Occur in the Planning Area*
			contain suitable habitat for the species.
Taricha rivularis	red-bellied newt	SSC	**Moderate Potential.** There are nearby occurrences for this species and habitat in and around the streams is suitable to support it.
Taxidea taxus	American badger	SSC	**Moderate Potential.** The Planning Area contains some areas that support fossorial mammals. The species has not 7been detected within the SDC, but grassland habitat is suitable for burrowing.

***Key to status codes:**

FC	Federal Candidate for Listing
FE	Federal Endangered
BGEPA	Bald and Golden Eagle Protection Act Species
FT	Federal Threatened
SC (E/T)	State Candidate for Listing (Endangered/Threatened)
SE	State Endangered
SFP	State Fully Protected Animal
SR	State Rare
SSC	State Species of Special Concern
ST	State Threatened
Rank 1A	CNPS Rank 1A: Plants presumed extinct in California
Rank 1B	CNPS Rank 1B: Plants rare, threatened or endangered in California and elsewhere
Rank 2A	CNPS Rank 2A: Plants presumed extirpated in California, but more common elsewhere
Rank 2B	CNPS Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3	CNPS Rank 3: Plants about which CNPS needs more information (a review list)
Rank 4	CNPS Rank 4: Plants of limited distribution (a watch list)
WBWG	Western Bat Working Group High or Medium-high Priority Species

Potential to Occur:

Moderate Potential: Some of the habitat components meeting the species

Scientific Name	*Common Name*	*Conservation Status*	*Potential to Occur in the Planning Area*
requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site. High Potential: All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site. Present: The species has been observed on the site, or in the case of chinook salmon, it has been observed upstream and would have necessarily transited through the site to get to its observation point.			

Cultural, Historic, and Tribal Cultural Resources

The last paragraph on page 281 is hereby amended as follows:

Chris Wright, Dry Creek Rancheria Band of Pomo Indians.

The last paragraph on page 281 is hereby amended as follows:

Greg Sarris, ~~The~~ Federated Indians of Graton Rancheria.

The last paragraph on page 281 is hereby amended as follows:

~~Dino W.~~ Reno Franklin, Kashia Pomo~~s~~ Stewarts Point Rancheria.

The last paragraph on page 281 is hereby amended as follows:

~~Michael Mirelez, Torres Martinez Desert Cahuilla Indians.~~
~~Michael Mirelez, Torres Martinez Desert Cahuilla Indians.~~

Hazards and Hazardous Materials

The first paragraph on page 257 is hereby amended as follows:

Sonoma ~~County~~ Valley Fire District (SCFD) provides fire and emergency response services to the county.

Hydrology and Water Quality

The third paragraph on page 274 is hereby added as follows:

California Code, Water Code - WAT § 6102
The California Water Code entrusts dam safety regulatory power to DWR, Division of Safety of Dams (DSOD). The Division of Safety of Dams as part of the department inspects and reevaluates its jurisdictional dams and reservoirs for the purpose of determining their safety. In order to ensure the safe operation of dams and to maintain public confidence in dam safety, the Division of Safety of Dams must inspect dams within its jurisdiction once per fiscal year with the exception of low hazard potential dams which will receive inspections every two fiscal years at a minimum. California's dam safety procedures must stay on par with, or ahead of, best practices and must continually update those procedures based on the best available knowledge.

The last paragraph on page 275 is hereby amended as follows:

Policy C-WR-2f: Discretionary projects in Urban Service Areas, where the density of development thus extent of impervious surface area is greater than in Rural Communities, shall be required to maintain the site's pre-development recharge of groundwater to the maximum extent practicable/feasible. Develop voluntary guidelines for development in Rural Communities that would accomplish the same purpose

Policy C-WR-4b: Use water effectively and reduce water demand by developing programs to: (1) Increase water conserving design and equipment in new construction, including the use of design and technologies based on green building principles; (2) Educate water users on water conserving landscaping and other conservation measures; (3) Encourage retrofitting with water conserving devices; (4) Design wastewater collection systems to minimize inflow and infiltration; and (5) Reduce impervious surfaces to minimize runoff and increase groundwater recharge.

Policy C-WR-4f: To minimize generation of wastewater and encourage conservation of Coastal water resources, require use of water saving devices as prescribed by the local water provider in all new developments.

Public Services and Recreation

The text under 'Fire Protection' on pages 387 – 389 is hereby amended as follows:

~~The SDC property constitutes its own fire district served by the Eldridge Fire Department, which operates out of the station located directly on the main campus. The Eldridge Fire Department is a State agency that coordinates with the County as an all-risk department, responding to all emergencies within the district. Due to uncertainty whether the department would continue operation after closure of the developmental center, the fire department lost many of its staff members and is currently understaffed. However, the Eldridge Fire Department was extended to continue full operation and currently covers two of three shifts, supplemented by staff from the neighboring fire protection district Sonoma Valley Fire and Rescue Authority (SVFRA) for the remaining shift, following a 2/4 schedule (two days on, four days off).~~

~~The Eldridge Fire Department maintains a two-minute getaway service standard from the time they receive a service call, which are responded to through a mobile data transmitter (MDT) system. Equipment operated by the department includes a Type 1 fire engine and a Type 3 brush rig. An ambulance is also available through partnership with SVFRA, but it is not used for service calls. The Eldridge Fire Department does not have an ISO (Insurance Services Office) rating but run under SVFRA's Class 1 rating standard. The Eldridge Fire Department continues to operate independently, and it is anticipated that future services will still be provided in coordination with neighboring Sonoma County fire districts including SVFRA, Mayacamas Volunteer Fire Department, and Kenwood Fire Protection District, with which the Eldridge Fire Department has automatic aid agreements. The Sonoma County Local Agency Formation Commission (LAFCO) will also have the responsibility to review and approve or disapprove these proposed changes regarding expanding the existing Sonoma County fire districts to serve the Planning Area.~~

~~The Sonoma County Fire Prevention Division is responsible for programs, procedures, and projects for preventing outbreak of fires and to regulate storage, handling, and processing of hazardous materials in the county. Sonoma County has 25 fire departments that cover the 44 public fire districts in the county, with additional support from Cooperative Fire Protection Agreements with the State Department of Forestry and Fire Prevention (CAL FIRE).~~

~~In 2002, the City of Sonoma and Valley of the Moon Fire Protection District entered into a Joint Powers Agreement creating a public entity known as the Sonoma Valley Fire & Rescue Authority (SVFRA). The SVFRA provides all-risk fire, rescue, and emergency medical services to 58.5 square miles comprised of the communities of Agua Caliente, Boyes Hot Springs, Diamond-A, El Verano, Fetters Hot Springs, Temelec, Seven Flags, and contract services to the City of Sonoma and Glen Ellen.~~

~~As of 2022, there are four career fire stations and two volunteer-staffed stations organized into six companies under the SVFRA—four paramedic engine companies and two ALS ambulances. SVFRA also staffs an assortment of specialized equipment through the supplemental staffing of 41 dedicated volunteer firefighters. This equipment includes a Ladder Truck, two Rescues, three Water Tenders, and nine additional Fire Engines, including six specialized wildland engines. The SVFRA also provides ambulance service to the greater Sonoma Valley, an area of approximately 100 square miles. Station 5, the Glen Ellen Station, is also staffed by SVFRA employees.~~

~~SVFRA maintains standards of response coverage benchmarks of six minutes until the first unit arrives on the scene for urban areas, seven minutes for suburban areas, and 12 minutes for rural areas, with a goal of meeting these standards for 90 percent of all calls for service. Based on the 2017 Annual Report, which represents the most recent data available, there were approximately 5,300 calls for service, most of which were for emergency medical services (68 percent). The District has achieved a one minute and 56 second average improvement in response times.~~

~~Other nearby fire stations include the Mayacamas Volunteer Fire Department in the Mayacamas Range west of the SDC site, and the CAL FIRE Glen Ellen Station located within the Sonoma Valley Regional Park.~~

~~With four SVFRA stations in addition to the Eldridge Fire Department within four miles of the SDC site, fire service is well-established in the area. **Table 3.13-1** lists fire department stations anticipated to serve the Planning Area.~~

The SDC property is served by the Eldridge Fire Department, which operates out of the station located directly on the main campus. The Eldridge Fire Department is a State agency that coordinates with the County as an all-risk department, responding to all emergencies within the SDC property. Due to uncertainty whether the department would continue operation after closure of the developmental center, the fire department lost many of its staff members and is currently understaffed. However, the Eldridge Fire Department was extended to continue full operation and currently covers two of three shifts, supplemented by staff from the neighboring fire district Sonoma Valley Fire District (SVFD) for the remaining shift, following a 2/4 schedule (two days on, four days off).

The Eldridge Fire Department maintains a two-minute getaway service standard from the time they receive a service call, which are responded to through a mobile data transmitter (MDT) system. Equipment operated by the department includes a Type 1 fire engine and a Type 3 brush rig. An ambulance is also available through partnership with SVFD, but it is not used for service calls. The Eldridge FD does not have an ISO (Insurance Services Office) rating but runs under SVFD's Class 2 rating standard. The Eldridge Fire Department continues to operate independently, and it is anticipated that future services will still be provided by the Sonoma Valley Fire District, as the entire SDC Planning Area is within the boundaries of the SVFD. The Sonoma County Local Agency Formation Commission (LAFCO) approved this boundary change first in 1996 and then affirmed by LAFCO when the Sonoma Valley Fire District was formed in 2020.

The Sonoma County Fire Prevention Division is responsible for programs, procedures, and projects for preventing outbreak of fires and to regulate storage, handling, and processing of hazardous materials in the county. Sonoma County has 25 fire departments that cover the 44 public fire districts in the county, with additional support from Cooperative Fire Protection Agreements with the State Department of Forestry and Fire Prevention (CAL FIRE).

The Sonoma Valley Fire District (SVFD) provides all-hazards fire, rescue, and paramedic level emergency medical services to the communities of Agua Caliente, Boyes Hot Springs, City of Sonoma, Diamond-A, El Verano, Fetters Hot Springs, Glen Ellen, Mayacamas, Temelec, Seven Flags, and Kenwood (under a contract for services).

The SVFD is governed by a seven-member Board of Directors, elected at-large by their constituents, and each serving a four-year term. The Fire Chief oversees the District's general operations under the Board of Directors' policy direction. The SVFD serves an area of approximately 114 square miles with a resident population of roughly 52,000. The District includes extensive wildland-urban interface (WUI) areas, large single-family homes, multi-family residential complexes, several hotels, ten schools, a hospital, and a historic downtown Plaza. SVFD also provides ambulance service to an additional 100 square miles, and an additional approximately 5,000 residents, as well as a significant number of visitors in the greater Sonoma Valley.

SVFD is a combination agency that maintains five career-staffed fire stations, three volunteer stations, an administrative office, and a maintenance facility. SVFD has 60 full-time personnel and over 50 volunteer personnel. SVFD's daily staffing includes four paramedic engines, two advanced life support ambulances, and a Battalion Chief. In addition, this staffing is enhanced through the cadre of dedicated volunteer firefighters and an assortment of specialized equipment, including a ladder truck, seven wildland engines, two rescue trucks, three water tenders, and three additional engines.

The SVFD maintains standards of response coverage benchmarks of six minutes until the first unit arrives on the scene for urban areas, seven minutes for suburban areas, and 12 minutes for rural areas, with a goal of meeting these standards for 90 percent of all calls for service. Based on the 2017 Annual Report, which represents the most recent data available, there were approximately 5,300 calls for service, most of which were for emergency medical services (68 percent). The District has achieved a one minute and 56 second average improvement in response times.

Another nearby fire station is the seasonally staffed CAL FIRE Glen Ellen Station located within the Sonoma Valley Regional Park. With five SVFD stations in addition to the Eldridge FD within four miles of the SDC site, fire service is well-established in the area. Table 3.13-1 lists fire department stations anticipated to serve the Planning Area.

Table 3.13-1 on page 389 is hereby amended as follows:

Table 3.13-1: Fire Department Stations Serving the Planning Area

Fire Station	*Services*
Eldridge Fire Department 15000 Arnold Drive, Eldridge	Type 1 Fire Engine
~~SVFRA~~ SVFD Fire Station 1 630 Second Street West, Sonoma	Type 1 Fire Engine ALS Ambulance
~~SVFRA~~ SVFD Fire Station 2 877 Center Street, El Verano	Type 1 Fire Engine
~~SVFRA~~ SVFD Fire Station 3 1 West Agua Caliente Road, Agua Caliente	Type 1 Fire Engine ALS Ambulance
~~SVFRA~~ SVFD Fire Station 5 13445 Arnold Drive, Glen Ellen	Type 1 Fire Engine
SVFD Fire Station 6 9045 Sonoma Highway, Kenwood	Type 1 Fire Engine

Source: Dyett and Bhatia, 2022; Sonoma Valley Fire & Rescue Authority, 2022

The third paragraph on page 400 is hereby amended as follows:

The Eldridge Fire Department continues full operations that service the Planning Area, supplemented by staff from the neighboring fire protection district, ~~SVFRA~~ SVFD. The increased local projected buildout population, employment, and housing units generated by the Proposed Plan would likely result in a subsequent increase in fire and emergency medical service calls to the Planning Area compared to existing conditions. Standards of response coverage benchmarks, as defined in the ~~SVFRA~~ SVFD Standards of Response Coverage report, include six minutes until the first unit arrives on the scene for urban areas, seven minutes for suburban areas, and 12 minutes for rural areas, with a goal of meeting these standards for 90 percent of all calls for service. In order to maintain standards of response coverage benchmarks as a result of buildout under the Proposed Plan, ~~it is anticipated that services will still be provided in coordination with neighboring Sonoma County fire districts including SVFRA, Mayacamas Volunteer Fire Department, and Kenwood Fire Protection District~~ services will be provided by the Sonoma Valley Fire District (SVFD) from the new fire station to be built in the SDC Planning Area as well as from the SVFD's 5 other staffed fire stations.

~~Further, the Proposed Plan will expand the existing Sonoma County fire district to serve the Planning Area and identify a location for the fire district to construct a new fire station within the Core Campus in order to meet the needs of the population under buildout (proposed Policy 6-1).~~ Further, the Proposed Plan will expand the existing SVFD to fully provide fire and EMS services to the SDC Planning Area and identify a location for the construction of a new fire station (to SVFD standards and specifications) within the Core Campus in order to meet the needs of the population under buildout (proposed Policy 6-1). This includes the Plan providing the funding for this new facility, equipment, and ongoing services. The new location of the fire station will be within the Core Campus to ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes. The Proposed Plan will also explore the feasibility of providing an additional east-west connection from the Core Campus to SR 12 to further improve emergency access (proposed Policy 3-5).

Transportation

The last paragraph on page 417 is hereby amended as follows:

To the south of the Proposed Plan area between Harney Street and Madrone Road, daily volumes in 2021 were approximately 6,200 vehicles, as compared to approximately 7,100 vehicles in 2019. Historical daily traffic volumes on this segment Arnold Drive reflect a peak of approximately 8,000 vehicles in 2014.

Utilities and Service Systems

The second paragraph on page 457 is hereby added as follows:

State Regulations for Submetering of Water for Multifamily Residential (Housing Senate Bill SB-7)
Submetering of individual units has been required in new construction of multifamily buildings since 2018 as a conservation measure that provides a rate-based incentive to reduce water use and allows equitable billing based on actual use. Some exemptions exist, including for low-income housing. Enforcement of the submetering requirement falls to the water purveyor as a condition of hook up.

The second paragraph on page 458 is hereby amended as follows:

~~The standards allow small graywater systems to be installed in homes without a construction permit, substantially reducing the barriers to installing small residential graywater systems in California. The purpose of the regulations is to conserve water by facilitating greater reuse of laundry, shower, sink, and similar sources of discharge for irrigation and/or indoor use; to reduce the number of noncompliant graywater systems by making legal compliance easily achievable; to provide guidance for avoiding potentially unhealthful conditions; and to provide an alternative way to relieve stress on private sewage disposal systems.~~ The standards allow single drain systems and washing machine systems that do not alter existing plumbing to be installed in homes without a construction permit, substantially reducing the barriers to installing these residential graywater systems in California. Although allowed under the emergency regulation, the installation of single drain systems without a permit was later removed in the final regulation adopted. The purpose of the regulations is to conserve water by facilitating greater reuse of laundry, shower, sink, and similar sources of discharge for irrigation and/or indoor use; to reduce the number of noncompliant graywater systems by making legal compliance easily achievable; to provide guidance for avoiding potentially unhealthful conditions; and to provide an alternative way to relieve stress on private sewage disposal systems. As of 2017, California's graywater code is found in Chapter 15 of the California Plumbing Code.

The second paragraph on page 464 is hereby added as follows:

Sonoma County Green Building Regulations
The County of Sonoma has only adopted the mandatory measures of CALGreen and the California Energy Code. CALGreen is California's Green Building Standards that apply to all newly constructed buildings as well as additions and certain alterations with building permit applications received on or after January 1, 2020.

The second paragraph on page 466 is hereby amended as follows:

The riparian and appropriative water rights owned by the State for the SDC property limit water use for onsite purposes and no offsite use is allowed under current water rights.

The third paragraph on page 466 is hereby amended as follows:

…SDC could provide limited supplies (two weeks) during an emergency to serve as a back-up water supply source for ~~Sonoma County~~ VOMWD to mitigate water service disruption to retail customers in the Sonoma Valley.

The second paragraph on page 467 is hereby amended as follows:

While the lakes provide water storage, the water treatment plant has been shut down and most of the water transmission and distribution systems (piping) are described as beyond useful life and obsolete by previous studies[1].

…Wilson north of Sonoma, and Eucalyptus streets installed in 1995 that should be able to be preserved as the Sherwood report[1] states…

Table 3.15-1 on page 468 is hereby amended as follows with changes highlighted in blue:

Proposed Project Water Demand Estimates (Revised)

Sonoma Developmental Center Specific Plan, Sonoma County, California

Project	Land Use	Water Use Factor (a)	Water Use Factor Units	Estimated Water Use (AFY) (b)				
				2025	2030	2035	2040	2045
Sonoma Developmental Center Specific Plan	Single Family Residential	244	gpd/du	0	11	25	41	68
	Multi-Family Residential	100	gpd/du	0	0	9.0	29	56
	Missing Middle Residential	172	gpd/du	0	7.7	17	29	48
	Hotel	0.16	AFY/employee	0	28	28	28	28
	General Commercial	1.79	AFY/10,000 sf	0	2.7	4.5	5.4	7.2
	Office	1.79	AFY/10,000 sf	0	3.6	7.2	16	23
	Public / Institutional	1.79	AFY/10,000 sf	0	4.5	13	18	28
	Research & Development	2.35	AFY/10,000 sf	0	0	6	24	30
	Total Open Space	--	--	--	--	--	--	--
	Irrigated Park Area	(c)	--	0	3.5	10	14	21
	Other Irrigated Common Space Areas	(c)	--	0	0	1.4	1.9	2.9
System Water Losses (d)	N/A	9.5%	--	0.0	5.8	12	19	30
			Total (e)	0	67	133	225	342

Abbreviations:

"AFY" = acre-feet per year
"du" = dwelling units
"MAWA" = Maximum Applied Water Allowance
"MWELO" = Model Water Efficient Landscaping Ordinance
"sf" = square feet
"VOMWD" = Valley of the Moon Water District

[1] SDC Existing Conditions Report. Hydrology & Site Infrastructure. Sherwood Design Engineers Jan 8, 2018.

Pages 470 and 471 are hereby amended as follows:

Existing Sewer Flows:

Based on the maximum daily flow records provided in table 4, provided in the July 2021 Wood Rogers report, *the 2015 Peak Wet Weather Flow was estimated as 1,141,670 GPD=1.14 MGD.*

Month	2015
January	170,840
February	552,230
March	158,820
April	211,660
May	147,190
June	163,830
July	144,070
August	147,450
September	171,900
October	303,330
November	104,050
December	1,141,670
Yearly Average	**284,753**

2015 Maximum Daily Flow (GPD) into SVCSD System,
Table 4, July 2021 Wood Rogers report.
The July 2021 Wood Rogers report noted that the current 2020 average dry-weather daily flows are below 10,000 gpd.

Total Wastewater Demand (2045):

Sonoma County Water Agency design and construction standards for sanitation facilities, Standard 138 references the allowance for Inflow and Infiltration as 800 Gallons Per Acre Per Day[2]. Therefore, the Wet Weather Infiltration/Inflow for future development within the approximately 180-acre SDC Planned Core Campus can be calculated as 144,000 GPD.
The 2045 water demand was estimated in the July 2022 WSA report as 342 AFY[3]. Therefore, the 2045 Wastewater Average Dry Weather demand can be calculated based on Proposed Plan buildout water use, excluding the landscape water use, as 318 AFY= 283,704 GPD.
The Peak Dry Weather Flow can be determined by multiplying the average dry weather flow by a peak factor of 2.47 as 700,749 GPD.
The Peak Wet Weather Flow for the proposed buildout can be calculated as the Peak Dry Weather Flow plus the Wet Weather Infiltration/Inflow for future development as 844,750 GPD=0.85 MGD.

[2] Sonoma County Water Agency Design and Construction Standards for Sanitation Facilities, November 2020

[3] Water Supply Assessment for the SDC Specific Plan. EKI / VOTMWD July 2022.

Table 3.15-2: Wastewater Generation in the Planning Area

Wastewater Generation	*Average ~~Gallons per day~~ Dry Weather Flow (GPD)*	*~~Acre-feet per year (AFY)~~Peak Wet Weather Flow (GPD)*
2015 Wastewater Flows to SVCSD	~~284,753~~	~~319~~ 1,141,670
2020 Wastewater Flows to SVCSD	10,000	~~11~~
2045 Total Wastewater Demand	~~336,000~~ 283,704	~~376~~ 844,750

~~1. The 2045 wastewater demand is calculated based on Proposed Plan buildout water use estimates in the WSA with a 10% allowance for inflows and infiltration.~~

Source: Wood Rogers, 2021 & July 2022 WSA,

The above wastewater generation ~~estimate~~ is estimated as 0.85 MGD for buildout of the Planning Area ~~is an average flow. Assuming~~ for the Peak Wet Weather Flow assuming a peak factor of 2.47 ~~2.5, peak flow over a given day count be on the order of 0.85 MGD.~~

Additional studies are needed to evaluate alternatives for ~~rehabilitation and~~ replacement of existing sewer lines described in the 2021 Wood Rogers report and to evaluate the timing of when work can be done in advance of future buildout to reduce infiltration and inflows. The evaluation also needs to assess the SVCSD downstream collection system for Peak Wet Weather Flow contributions from the SDC site. While full buildout of the site is estimated to significantly reduce I&I, and thus PWWF discharges, compared to existing conditions, any interim phases of development completed ahead of full replacement of SDC's on-site sewer system need to be evaluated to ensure no increases in PWWF. In addition, while the increased average dry weather flow contributions from the SDC site to the treatment plant are not anticipated to exceed the plant's current permitted ADWF treatment capacity, further evaluation of impacts to the permitted treatment capacity is needed when considered in combination with other planned developments.

The third paragraph on page 474 is hereby amended as follows:

Project water and sewer demands were analyzed by comparing SDC pre-closure conditions to conditions expected with buildout of the Planning Area as they are similar in magnitude with respect to usage of available onsite water sources ~~and capacity of existing downstream sewer facilities~~. However, under buildout conditions, it is expected that new sewer construction would substantially reduce SDC's wet-weather contributions to sewer compared to pre-closure conditions since the majority of the wet weather sewer contributions are not derived from onsite water (supply) sources. As a result, the existing downstream sewer facilities will experience lower PWWFs and be less susceptible to sewer overflows compared to existing conditions.

The last paragraph on page 481 and the first four paragraphs on page 482 are hereby amended as follows:

~~Existing and projected wastewater generation for the Planning Area is shown in gallons per day and acre-feet per year in **Table 3.15-2**. The SVCSD Treatment Plant is permitted to discharge an average dry weather flow of 3 MGD. Additionally, the SVCSD Treatment Plant can treat, up to 16 MGD and has the ability to discharge 11 MGD. The SVCSD Treatment Plant also has 35 million gallons of equalization storage. Infiltration and inflow are significant issues within SVCSD and within the SDC.~~
~~As shown in **Table 3.15-2**, estimated average wet-weather sewer flow with buildout of the Proposed Plan in 2045 is 0.3 MGD, which represents approximately 2 percent of total available capacity in 2045. Therefore, the Treatment Plant will have adequate capacity to serve the 2045 service population of the Planning Area.~~
~~Excessive infiltration and inflows from structurally deficient sewer pipes and structures can contribute to sewer system backups and overflows. Given the poor condition of much of the site sewer lines, it is important that damaged portions of the existing sewer system continue to be disconnected and abandoned as soon as possible. Should the abandonment work continue prior to buildout of the Planning Area, the risk of sanitary sewer overflows will be minimized.~~
~~To minimize ground disturbance from construction of new sewer mains, these utilities should be installed concurrently with the construction or reconstruction of roadways.~~
~~If the SVCSD trunk sewer capacity is found to be adequate to convey the increase in flows from buildout of the Planning Area, implementation of the Proposed Plan will have a less than significant impact on wastewater facilities as no new wastewater treatment facilities aside from a small-scale recycled water or individual greywater systems have been determined to be required or are proposed to serve the Planning Area.~~

Existing and projected wastewater generation for the Planning Area is shown in gallons per day in **Table 3.15-2**. The SVCSD Treatment Plant is permitted to discharge an average dry weather flow of 3 MGD. Additionally, the SVCSD Treatment Plant can treat up to 16 MGD and has the ability to discharge 11 MGD. The SVCSD Treatment Plant also has 35 million gallons of equalization storage. Infiltration and inflow are significant issues within SVCSD and within the SDC.
As shown in Table 3.15-2, the estimated peak wet-weather sewer flow with buildout of the Proposed Plan in 2045 is 0.85 MGD, which is less than the 2015 record flow and represents approximately 5 percent of total wet-weather treatment capacity of the SVCSD Treatment Plant. Compared to 2020, the average dry-weather flow is estimated to increase by 0.274 MGD in 2045, representing approximately 9% of the treatment plant's permitted ADFW capacity. By itself, this increase is anticipated to fall within the current available ADWF treatment capacity of the plant, but needs to be evaluated further in combination with other planned projects to verify available capacity. The implementation of the Proposed Plan will have a less than significant impact on wastewater facilities as no new wastewater treatment facilities aside from individual greywater systems have been determined to be required or are proposed to serve the Planning Area.
Excessive infiltration and inflows from structurally deficient sewer pipes and structures can contribute to sewer system backups and overflows. Given the poor condition of much of the site sewer lines, it is important that damaged portions of the existing sewer system continue to be disconnected and abandoned as soon as possible. Should the abandonment work continue prior to buildout of the Planning Area, the risk of sanitary sewer overflows will be reduced.
To minimize ground disturbance from construction of new sewer mains, these utilities should be installed concurrently with the construction or reconstruction of roadways.

The last paragraph on page 484 is hereby amended as follows:

Sonoma County's General Plan, and Municipal Code also include multiple provisions that support water ~~conservation~~ use efficiency.

The first paragraph on page 486 is hereby amended as follows:

As shown in **Table 3.15-2**, at build-out, the Proposed Plan is estimated to generate about 0.~~3~~85 MGD of wastewater, …


SDC
SPECIFIC
PLAN
OUR VALLEY
OUR FUTURE